



Welcome to the December/January 2008 Edition of the Modeling and Simulation Information Analysis Center (MSIAC) M&S Newsletter. In this issue you will find a variety of M&S Articles and Events from communities enabled by M&S within the Department of Defense and beyond. We hope you enjoy the December/January Edition, and look forward to your comments.

The MSIAC notes that the wordings in the excerpts do not always correspond to official DoD usage, but that the full articles (available through the links) provide valuable insight into the applications of M&S technologies throughout the community.

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Mr. Alan R. Shaffer, Director of Plans and Programs, Office of the Director, Defense Research and Engineering, has received the Distinguished Senior Professional Presidential Rank Award. This is the highest award a career SES can receive.

The following is an excerpt of an article that appeared on the U.S. Office of Personnel Management website and offers information on the Presidential Rank Awards and the official winners.

PRESIDENTIAL RANK AWARDS

Each year, the President recognizes and celebrates a small group of career Senior Executives with the President's Rank Award for exceptional long-term accomplishments. Beginning with awards granted in 2003, eligibility for this award is extended to other categories of high-performing senior career employees. Winners of this prestigious award are strong leaders, professionals, and scientists who achieve results and consistently demonstrate strength, integrity, industry, and a relentless commitment to excellence in public service.

Award winners are chosen through a rigorous selection process. They are nominated by their agency heads, evaluated by boards of private citizens, and approved by the President. The

evaluation criteria focus on leadership and results.

For a list of the Presidential Rank Award Winners, click [here](#).

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The following article is from the Department of Defense website news, announcing John J. Young, Jr. as the new Under Secretary of Defense for Acquisition, Technology and Logistics.

DoD NAMES UNDER SECRETARY OF DEFENSE FOR ACQUISITION, TECHNOLOGY AND LOGISTICS

The Department of Defense announced John J. Young Jr. has taken over the duties as the Undersecretary of Defense for Acquisition, Technology and Logistics.

Young, who has been acting in the position since July of 2007, was nominated to be the Pentagon's Acquisition Chief by President Bush on June 20th, 2007, and confirmed by the Senate on Nov. 16, 2007.

Before his appointment to USD (AT&L), Young served at the Department of Defense as the Director, Defense Research and Engineering. As the Director, Young was the principal advisor to the Secretary of Defense on technical matters and acted as the Department's Chief Technology Officer.

Young is also the former Assistant Secretary of the Navy for Research, Development and Acquisition. As the Navy's Senior Acquisition Executive, Young implemented a wide range of innovative organizational and business practices to increase the effectiveness and efficiency of Navy and Marine Corps procurement and research programs.

Prior to joining the Defense Department, Young served as a professional staff member of the Senate Defense Appropriations Subcommittee. He also previously worked for Lockheed Martin and for Rockwell International Corporation.





Young earned a Bachelor's Degree in Engineering from the Georgia Institute of Technology, and a Master's Degree in Aeronautics and Astronautics from Stanford University.

His biography is available at <http://www.defenselink.mil/osd/topleaders.aspx> . For original article, click [here](#).

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The following summary, written by the MSIAC staff, describes the appointment of Mr. Jesse Citizen as the new Director of the Modeling and Simulation Coordination Office (M&S CO).

APPOINTMENT OF NEW DoD MODELING AND SIMULATION COORDINATION OFFICE DIRECTOR

The DoD Modeling and Simulation Coordination Office (M&S CO) is pleased to announce that Mr. Jesse Citizen has accepted the position of M&S CO Director. Mr. Citizen arrived to assume his responsibilities in August 2007, bringing with him a wide expanse of both professional military operations and modeling and simulation experience. Prior to assuming his role as the M&S CO Director, Mr. Citizen was an Air Force Colonel with over 33 years of service, with his last military position as Chief, Modeling and Simulation Policy Division, in the U.S. Air Force Headquarters, Washington DC. In this position he was responsible for developing all modeling and simulation policy for the Air Force and providing oversight for all Air Force centrally managed M&S programs.

Originally from Beaumont, TX, Mr. Citizen gained his commission as a Second Lieutenant in the U.S. Air Force in 1979 after graduating from Wayland Baptist University in Plainview, TX. He comes to the M&S CO Director position with an extensive educational background, including three Masters degrees and attendance at both the prestigious Marine Corps Command and Staff College and the Air War College.

Mr. Citizen has held a wide variety of high responsibility military positions, including Air Battle Manager with over 1700 hours onboard the NATO AWACS command and control and early warning aircraft. His international experience includes Chief of the Air Command and Control Interoperability Section in the Supreme Headquarters Allied Powers Europe, where he oversaw the development of NATO Air Defense Systems political-military policy and operations requirements. His experience as Chief of the M&S Policy Division, Office of the Secretary of the Air Force, and his role as a consultant supporting M&S activities in the Department's Training Transformation Program gives him a deep appreciation for the direct benefits of M&S to the Warfighter.

Mr. Citizen's extensive and varied background, rich in both technology and senior-level management expertise, will help him generate a new emphasis on inter-Service and inter-M&S community coordination. In addition, Mr. Citizen is known for his innovative and consensus-building leadership style that empowers those under his direction to articulate and advance the DoD M&S vision and goals. This promises to promote an M&S CO that is the premier M&S coordination hub for those communities enabled by M&S across the Department.

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The following is an article that appeared on USJFCOM's website news about their new Super Computer - the Scalable Parallel Processor (SPP) system.

NEW USJFCOM SUPER COMPUTER WILL ENHANCE COMMAND EFFORTS

(SUFFOLK, Va. – Nov. 16, 2007) - Imagine if you had the computing power of more than 1,000 PCs, what would you do with it? U.S. Joint Forces Command (USJFCOM) will use this computing power to better prepare the Warfighter so they know what to expect before entering the battlespace.

The super computer, known as the Scalable Parallel





Processor (SPP) system, is built from 256 nodes or central modules providing the simultaneous processing capability of 1064 personal computers. It is much larger and more powerful than most machines used today which allows it to yield finer details when it comes to modeling at a faster speed.

Jack Winger, technical director for experimentation engineering at the Joint Concept Development and Experimentation Directorate (J9), explained how it will be used to better prepare the Warfighter.

"The Scalable Parallel Processor system will be used to simulate future and current battlespace environments, homeland defense and homeland security scenarios, and other experimental situations. It will also be used to support training objectives," he said.

As far as the Warfighter going to theater is concerned, the more accurate the M&S of the battlespace, the better the preparation they have for when they actually deploy.

For complete article, click [here](#).

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The following is an article that appeared in the Government Executive Magazine about the development of World Analysis Tools and is reprinted with permission of the author, Mr. Bob Brewin.

INTELLIGENCE COMMUNITY DEVELOPING VIRTUAL WORLD ANALYSIS TOOLS

The research arm of the U.S intelligence community has kicked off a project to tap into virtual world technologies, such as Second Life, to develop innovative decision support systems for intelligence analysis.

The Intelligence Advanced Research Projects Activity project is directed by Jeffery Morrison, who runs the Analyst Space for Exploitation (A-SpaceX) program. Morrison says his project is designed to harness technologies to help the 15 agencies that report to the Office of the Director of National

Intelligence to change from a "need to know" culture to a "need to share" culture.

Under development is a new workstation to help analysts marshal and screen data, formulate data, and tell stories. It will support a creative process much like that used by a journalist, Morrison told Government Executive. He said he wants to find tools and technologies that support the analytical thought process, a true killer application that does not exist today. Bits and pieces of various synthetic world technologies can aid in development of such an application, Morrison believes.

Morrison hopes the new analyst workstation will support that thought process through information organization and decision support tools he called "mind snaps," involving visualization of information.

Analysts often start a project and then are shunted off to another, and "clean desk" security rules require them to put already organized work away. That means they have to start the organizational process all over again when they return to the first task. Morrison said he would like to create a synthetic workspace where ongoing projects can be easily stored and then reaccessed.

A-SpaceX also is working on developing a virtual time machine that could include a virtual representation of the real world, and real-world events, backed up video streams and other tools that would allow analysts to move back and forth in time as they studied events and places, Morrison said.

For the complete article from Government Executive Magazine click [here](#).

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The following is a summary article about the U.S. Institute of Peace simulation SENSE.

THE UNITED STATES INSTITUTE OF PEACE BRINGS SIMULATION TECHNOLOGY TO IRAQ AND POLAND

The United States Institute of Peace has a long history of working with simulations. One of the



simulations that the Institute currently deploys is the Strategic Economic Needs and Security Exercise (SENSE). SENSE, which was originally developed by the Institute for Defense Analyses (IDA) for use in Bosnia, is a computer-based simulation that focuses on negotiations and decision-making in a post-conflict environment, and simulates the resource allocation challenges confronting national and international decision-makers.

The sophisticated computer program provides participants with rapid feedback on the results of their time-sensitive decisions aimed at building political stability, social justice, and a foundation for economic progress. That said, the primary activity in SENSE is negotiation between and among those participating in the simulation. SENSE has been used by USIP in the U.S. as well as the Balkans, the Caucasus, Iraq and Poland.

For example, In 2006 USIP successfully transferred to the Polish Academy of National Defense the capability of administering the SENSE simulation. By doing so, USIP was able to permit civil society and government leaders in countries that were once part of the Soviet Union or Warsaw Pact to benefit from this important conflict management tool. For their part, the Poles are expanding the use of the SENSE simulation to the Belarusians and intend to reach into the Caucasus by offering SENSE training to participants in Georgia in September and in Azerbaijan in October.

To read more on how SENSE has been used across the world, click [here](#).

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The following is an article that appeared on USJFCOM's website news about aid in battlespace for convoys. U.S. Joint Forces Command's Distribution Network Analysis provides warfighters at U.S. Transportation Command with an intelligence capability to simulate different real world scenarios in the joint battlespace and plan better routes for moving important convoys.

NEW INTELLIGENCE CAPABILITY TO AID IN BATTLESPACE PREPARATION FOR CONVOYS

(Sept., 2007 - SUFFOLK, VA) - U.S. Joint Forces Command's (USJFCOM) Joint Transformation Command - Intelligence (JTC-I) recently completed the final stage of development on an intelligence capability designed to better prepare the warfighter for theater.

Distribution Network Analysis (DNA) began in 2005 when U.S. Transportation Command's (USTRANSCOM) Intelligence Directorate (J2) enlisted JTC-I's Joint Intelligence Laboratory (JIL) to assist in defining processes and developing a capability to provide joint, global deployment and distribution intelligence.

DNA processes, enabled by Distributed Common Ground System - Army (DCGS-A) technologies, offer a capability that allows planners to recreate the battlespace by providing them with a geospatial view of it on a computer screen. A distribution network includes transportation routes, possible areas of threat, political trends in the region, and even weather patterns. DNA allows users to anticipate certain circumstances and devise alternate plans if needed.

The goals behind this task were to gain a better understanding of the worldwide distribution network, to understand the political, environmental, military or terrorist threats related to it, and to assess the impact of these threats.

Justin Thurber, project lead for DNA, explained the role of the project and how it helps USTRANSCOM J2.

"Simply put, it is intelligence support to the distribution process owner, USTRANSCOM. USTRANSCOM moves everything in DoD," he said. "They are the owner of that process, whether it's packs, beans, bullets, or Band-Aids."

For complete article, click [here](#).





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The following is an excerpt from an article that appeared on the Wright-Patterson Air Force website about Numerical Simulations.

NUMERICAL SIMULATIONS HOPED TO ONE DAY CUT EXPENSIVE TEST COST

(Sept., 2007 - ARLINGTON, VA) - An Arizona State University scientist, together with colleagues from Boeing Commercial Airplanes and Cobalt Solutions and funded by the Air Force Office of Scientific Research here, is working on computer simulations hoped to one day save precious defense dollars used for flight experiments and tests.

"In general, we call it computational simulations. It is a method that uses simulations to study many kinds of problems," said Dr. Kyle D. Squires, a mechanical and aerospace engineering professor at ASU.

"A number of scientists believe simulations will become the standard method of evaluating a system before it's ever built," said Squires. "In that respect, simulations have great potential in showing problems and flaws before a system is constructed. That's important because the savings could be substantial when you consider the costs associated with repair after a system has been fielded."

Building upon previous and related AFOSR-funded studies, Squires has been working on this project at ASU for about 4 years. Squires works with Drs. Philippe Spalart at Boeing and James Forysthe of Cobalt Solutions on simulations that involve highly-accurate mathematical computations. In this study, Squires hopes to eventually build or contribute to building a computer model capable of integrating and analyzing real-time information coupled with a variety of complex, military-relevant problems. The information could include weather conditions, aircraft capability and aerodynamics, and mission parameters. Based on the data entered, the computer model could accurately predict an outcome just as it would have occurred in real life. For that

reason, simulations are very intriguing in a number of ways.

"For one thing simulations help us learn at a much more detailed level than, let's say, using wind tunnels or flight tests," said Squires. "We can learn, for example, air flow's affect on flight performance," something that can be hard for a wind tunnel or flight test to mimic.

"Second, simulations can be performed at the same conditions - weather, altitude, etc. - as experienced by an aircraft. In a wind tunnel, that's difficult to do," Squires said. "You can, of course, duplicate (real world) conditions in a flight test, but the level of detail tends to be more general." A third benefit of simulation is that it can expand ability to see depth in limitations or vulnerabilities in, for example, a weapons system - vulnerabilities that might only be detectable through simulations. That sort of information could be of great value to engineers, aircraft designers, and others.

For complete article, click [here](#).

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The following is an excerpt from an article from TSJ Online about U.S. Marines' immersive technologies.

ULTIMATE SHOOT HOUSE Blend of live training and virtual technologies immerses U.S. Marines in the urban fight

The days of video combat games that dual-hatted as simulated battle training for U.S. Marines may be history as advanced technologies propel virtual combat training into a different dimension.

The Marine Corps and the Office of Naval Research (ONR) plan to unveil an advanced infantry training simulator at Camp Pendleton, Calif. — a prototype that would be the first showcase of what they're calling immersive training. A second trainer is planned for the Marine Expeditionary Rifle Integration Facility at Quantico, Va.

"We show what the art of the possible is," said Navy Cmdr. Dylan Schmorrow, a program officer who is helping lead the project for ONR. "You're able to



operate temporarily through three-dimensional space.”

Immersive training is a relatively new term for the Corps that incorporates live and virtual — and eventually constructive — training (LVC) into the training environment.

The Institute for Creative Technologies (ICT) at the University of Southern California, meanwhile, has developed FlatWorld, which incorporates sounds and simulated high-resolution imagery projected on digital flat-screen displays with real physical objects inside movable props and reconfigurable rooms and buildings.

It's a far cry from a decade ago, when the Marine Corps turned to “Marine Doom,” a military version of the popular two-dimensional personal computer-based game, to use as a portable training tool for its gunslingers to sharpen their battlefield tactics at the individual and fire-team levels. As the Corps looked to develop concepts of quasi self-sufficient squads of infantrymen to operate on a broader distributed battlefield, it's been seeking new ways to improve training and simulations for them.

For complete article, click [here](#).

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MSIAC JOURNAL CALL FOR PAPERS

The MSIAC is currently accepting submissions for the MSIAC Journal, a compendium of papers tailored to the interests of individuals in the DoD M&S community. The MSIAC Journal, published quarterly, provides a forum for innovative approaches, solutions, ideas, and philosophy originating in DoD, non-DoD U.S. Government, industry, academia, or foreign countries.

For information on how to subscribe and/or submit papers to the Journal, please email: msiachelpdek@dod-msiac.org, or visit: <http://www.dod-msiac.org/>.

MSIAC M&S NEWSLETTER

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