

NTSA's Training Industry *news*

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Current *news*

Military Energy-saving Initiatives Gather Pace

Reprinted from Jane's Defense Weekly

The U.S. military's energy security initiatives appear to be picking up steam as volatile oil prices increasingly lead to budget shortfalls and threaten troop readiness. In the past few years, the U.S. Air Force has taken the lead on efforts to reduce the U.S. military's reliance on oil-based fuels, launching an ambitious synthetic fuels initiative. Now, however, the U.S. Army and U.S. Navy are also jumping into efforts to reduce energy consumption after oil prices jumped from \$70 to \$150 and then retreated back to \$70 in 2008.

"The change in the price per barrel for fuel was dramatic, and [for] all the services it was a difficult thing to accommodate in the budget, but we know we should be able to get our arms around it," said Pat Tamburino, assistant deputy chief of naval operations, fleet readiness and logistics. "We don't want to make energy a barrier to warfighting readi-

ness. That is our primary goal."

Navy officials say that every \$10 increase in the price of a barrel of oil translates into a \$400 million increase in operating costs. The service is planned to complete a draft energy strategy in January that would lay out ways that energy consumption can be reduced both at sea and on land. The strategy focuses on best practices to save energy during naval operations; new energy-saving designs for ships and measures to improve the security of oil shipping routes. U.S. Army officials are also ramping up their energy-saving efforts, focusing heavily on saving energy at domestic military bases.

Training, Lack of Workers Top Concerns

Reprinted from Defense News

The number one recommendation that U.S. acquisition experts have for the Obama Administration: improve the acquisitions work force, according to a

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DoD M&S Corporate and Crosscutting Business Plan Provides Focus Looking Towards 2015 Strategic Outcomes

By COL Michael Sanders, Deputy Director, Modeling and Simulation Coordination Office (M&S CO)

For the past several months, the Department of Defense Modeling and Simulation community has continued improving the way the Department funds and develops corporate and crosscutting M&S technology at the enterprise level. Among its top priorities is an evolving enterprise M&S approach to investment, development and deployment that meets the needs of its customers, while adapting to new and emerging technology developments. The DoD has also published the "Strategic Vision for Modeling and Simulation" that includes five enterprise-level goals for M&S. The vision and goals are currently incorporated into a draft enterprise-wide business plan called the Corporate and Crosscutting Business Plan (C&CC BP).

The draft C&CC BP is both a top down and

bottom up derived business plan using input from management and community business plans to provide an enterprise voice and direction for M&S across all of DoD. The C&CC BP provides a two-year focus looking towards FY 2015 outcomes. The plan also identifies four strategic challenges that are aligned with the QDR 2006 strategic challenges, plus three strategic objectives. The objectives answer: "What are the three areas which we can focus on over the next 24 months that will most improve M&S capabilities within DoD?"

The strategic objectives selected involve standards, interoperability, and visibility. These meet the three decision criteria:

- Truly "corporate and crosscutting" – recognizing a need across multiple services and communities enabled by M&S
- Providing potential to drive significant improve-

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A non-profit organization that serves the interest of the simulation, training services, training support, and computer-based training systems industries.

President's *notes*

Rear Adm. Fred Lewis, USN (Ret.)

For NTSA Members:

It has by now become traditional to characterize each I/ITSEC event as exceeding the last in every respect, even as we set the bar even higher for the following year. This continues to be possible thanks to my habitually overachieving NTSA staff, as well to countless hours of dedicated work contributed by many volunteers whose sole purpose is to help assure the continued dominance of our armed forces and the safety and wellbeing of its members. I/ITSEC 2008 followed this well-established pattern by exceeding all previous records for exhibition floorspace, number of exhibitors, and quality and diversity of events.

This was all the more remarkable because I/ITSEC 08 took place against a backdrop of the gloomiest economic outlook in decades. Looking around the floor at the size, quality and diversity of the exhibitions, attending the special events, and observing the paper presentations made you feel as though you were in an oasis of growth, innovation, initiative, energy and imagination that appears to have ebbed a bit in some other sectors of the American economy.

Is the modeling and simulation industry and community of practice that supports it largely immune from the most severe effects of the downturn? While my crystal ball is as cloudy as most others and I claim no expertise in economics of either the macro or micro variety, I have observed our industry and technology closely enough to offer some thoughts. For a long time, we have said simulation, modeling and related applications “save money, time and lives”. While saving time—and, above all, lives—continue to be vital attributes, the saving of increasingly scarce funds during these times has assumed redoubled importance. For example, the Air Force estimates that training tanker pilots in simulators is one-tenth as costly as in the aircraft. And these are savings across the board—fuel, maintenance and repair, down time for aircraft, airframe flight hours, and personnel costs. The same of course holds true throughout our Armed Forces and in civilian sectors as well.

A second, and I believe equally important, advantage held by our industry is its accelerating expansion into areas in which only a few years ago it was not a factor. This has created new demand for simulation in fields as diverse as cultural and language learning, construction, and medical applications in emergency care, surgery and diagnostics. Predictive applications are also becoming more robust and in demand. Any businessman or woman knows that the more diverse their product suite, the more resistant

they tend to be to an economic earthquake. This fortunate and timely trend toward diversification, moreover, has not implied that simulation technology is any less important to its traditional areas of strength. All this, I believe, bodes well for our community. While we may need to shorten sail a bit, we're far off the lee shore threatening so many sectors.

This is not to say that all is clear sailing. The M&S community will continue to be challenged by the need to respond with creativity and agility to new realities. For example, we must do a better job of bringing non-kinetic training up to the remarkable level we have achieved in the kinetic realm, and according it the high priority it deserves. Only in this way can we be fully responsive to the demands of asymmetric conflict in all its dimensions, which will be the hallmark of our national security concerns for the foreseeable future.

Among the many innovative aspects of I/ITSEC 2008, I think the redoubled effort by NTSA to strengthen the STEM components of the event deserve special note. I hope we're all by now familiar with the emphasis the new administration, like its predecessor, is placing on the importance of achieving excellence in science, technology, engineering and math in our school system nationwide. Our industry is of course dependent on a consistent influx of talented, well-trained scientists and engineers. With this in mind, we reinforced our STEM component by uniting the Student Leaders and Student Tours programs with a new initiative to bring teachers from across the country to I/ITSEC to experience first hand the excitement and importance of the technology on display. The results exceeded our expectations. It was clear that the six teachers who experienced I/ITSEC will return to their classrooms as torchbearers for modeling and simulation and we hope and expect they will ignite the enthusiasm of their students as well. This “America's Teachers” program will now become a fixture at future I/ITSEC events as we continue to build out STEM as one of the most important components of NTSA's efforts.

The well-known Chinese curse says “May you live in interesting times”. We indeed live in interesting—and challenging—times. But we do not feel in any way cursed—rather, fortunate that we have the opportunity to work within a community of practice that is making such an important contribution to the safety and security of our nation and its citizens at a truly defining time in our history.



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The Global marketplace

South Korea's Defense Exports Top \$1B

Reprinted from Defense News

South Korea sold more than \$1 billion worth of weapons and defense goods overseas in 2008, the largest amount since it began exporting defense articles in 1975, according to the Defense Acquisition Program Administration (DAPA). The \$1.03 billion in exports, a 22 percent increase from the previous year's \$844 million, is the second consecutive sharp rise following DAPA's creation.

South Korea expanded its arms trading partners last year by 12 to 58 nations, including African and South American countries such as Egypt and Peru, a spokesman said. The sale of world-class advanced weapons, such as self-propelled howitzers, aircraft and ships, is a dramatic departure from the rifle ammunition and spare parts that were more common in the past, he said.

EU to Simplify Cross-Border Transfer

Reprinted from Jane's Defense Weekly

The European Union will soon finalize a ground-breaking piece of legislation to free up the cross-border transfer of defense products and components among its 27 member countries. It will remove any distinction of "foreign" arms exports between them, while accelerating the movement of weapon systems and parts within the European Union via simplified national licensing procedures.

The European Commission's proposed "directive on intra-European Union transfers of defense products" is set to become European Union law in early 2009, now that the European Parliament has thrown its weight behind a draft text approved by the Council of Ministers, the European Union branch that directly represents the 27 national capitals.

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ment in DOD M&S – if well executed, they will result in real value

- Offering a foundation for future M&S-enabled community M&S business plans.

The DoD M&S management expects that projects supporting the strategic objective of standards will achieve a set of standards for the development, integration, and conduct of DoD modeling and simulation activities. Results from projects for improved interoperability should drive the Department towards integrated modeling and simulation (tools, data, and services) across the spectrum of DoD activities. Finally, the outcome from projects supporting visibility will increase the management's capability to discover and reuse modeling and simulation (tools, data, and services) across the Department.

The DoD M&S management has identified and approved nine critical high level tasks and their associated implementation plans. These high level tasks include four supporting the standards objective, three supporting the interoperability objective, and two supporting the visibility objective. The completion of

the task implementation plans will provide a basis for the further identification and vetting necessary to allocate resources against the most critical gaps permitting crosscutting M&S capabilities. Completion of these steps will also support development of updated M&S Community Business Plans in FY09 and an updated Corporate and Crosscutting Business Plan in FY10.

The FY 2009/2010 Corporate and Crosscutting Business Plan, through its use of the M&S Strategic Vision, Goals, and Objectives, serves as an important step in furthering a focused, collaborative and adaptive approach to M&S within the Department of Defense. The plan has identified the most pressing modeling and simulation requirements of the Department at this time and indicates the path ahead to meet them through standardized, interoperable, and transparent tools, data and services wherever possible. The results will help balance investments, reduce costs, increase capability, and promote re-use while ensuring an environment focused on commonality of purpose and commitment to the warfighter.

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recent survey by the Professional Services Council.

Training gaps, a decline in the number of skilled experts, and other work force shortfalls remain the biggest concern of the federal acquisition community—just as they were in the Professional Services Council's three previous surveys. The Professional Services Council, Arlington, Virginia, is a trade group that represents U.S. government contractors.

The dollar value and complexity of federal procurement has greatly increased, but the size of the acquisition work force hasn't nearly kept pace, Professional Services Council officials said.

USN Seeks Nonlethal Arms to Ward Off Small-Boat Attackers

Reprinted from Defense News

After an urgent request from U.S. Navy Vice Adm. William Gortney, the commander of 5th Fleet, for more nonlethal weapons to fight off pirates, the Navy says it's on the case, developing a slate of tools to help keep small-boat attackers at a distance.

Navy and Defense Department developers tested a set of new "softkill" weapons in mid-November at Naval Supply Center Yorktown, Cheatham Annex, Virginia, and are within a few weeks of sending them to the fleet, along with a standardized concept of operations. The aim is to set up three progressive, nonlethal layers around a ship so its crew can determine what to do about a small

boat coming close aboard. By the time an attacker comes within the innermost layer, a ship's sailors can be very confident it's hostile before they open fire, said Capt. Barry Coceano, who heads development of nonlethal weapons for the Navy.

A typical load-out for a surface warship will likely include the earsplitting long-range acoustic device, which is already in the fleet in lesser quantities; a green-beam laser dazzler; and a new flash-bang shotgun round. Although a warship could use some of these systems to dissuade pirates from attacking a civilian vessel the Navy is escorting, Coceano said they're primarily intended for ship self-defense.

Smart Fellows

Reprinted from Aerospace Daily & Defense Report

Six university faculty scientists and engineers have been named by the Defense Department as the 2009 class of its National Security Science and Engineering Faculty Fellowships (NSSEFF) program. Last year was the inaugural for the program, which provides grants for top-tier researchers from U.S. universities to conduct long-term, unclassified, basic research of strategic importance to the Defense Department. The Defense Department fielded 659 nomination letters from 156 academic institutions. A rigorous technical review of 468 white papers resulted in 17 semifinalists

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Who's where

■ L-3 Communications announced that **Robert P. Birmingham** has been appointed president of its Link Simulation and Training business. He will be based in Arlington, Texas, and report to **James W. Dunn**, senior vice president and president of L-3's Integrated Systems Group. Since joining the company in 2006, Birmingham has been the senior vice president for Army programs and strategic planning for the Sensors and Simulation Group. Prior to L-3, Birmingham served as vice president for Computer Sciences Corporation's Southeast Region. He also served as the program manager for the U.S. Army Comanche helicopter program before retiring from the U.S. Army after 25 years of service.

■ On January 1, 2009, **Dr. Michael van Lent** became president and chief executive officer of Soar Technology, Inc. He was the company's chief scientist and will continue to fill that role in addition to his new responsibilities. Soar Technology also named **Katherine B. Harding** to be chief operating officer and executive vice president. She was vice president, operations.

Dr. van Lent received a Ph.D. at the University of Michigan in 2000. As chief scientist, Dr. van Lent has worked to raise

awareness within the defense community about innovative applications of Soar Technology's intelligent software agents in areas such as robotics, cultural behavior modeling, educational games, and mission planning. Before joining Soar Technology,

Dr. van Lent was the associate director for games research at the University of Southern California's Institute for Creative Technologies. Dr. van Lent specialized in artificial intelligence research and the development of educational games. He has led or participated in the development of more than 15 educational games for military and intelligence organizations. Dr. van Lent serves on various editorial boards and edits the IEEE Computer Entertainment Computing column.

■ **Greg Masciana** has been appointed director of quality for the Electronics Group of Crane Aerospace & Electronics, a segment of Crane Company. He held director and manager roles at Tektronix, Tyco Electronics and Teledyne.

■ Computer Sciences Corporation appointed **Michael Mancuso** as vice president and chief financial officer. He replaced Donald DeBuck, who had served as interim chief financial officer since February 2008 and will continue in his role as vice president and corporate controller.

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being invited to submit full proposals outlining their research plans. The Defense Department may elect to announce additional winners of 2008's NSSEFF at some other time.

More Patrol Aircraft Needed to Counter Somali Pirates

Reprinted from Jane's Defense Weekly

The multinational naval effort to deter acts of piracy off Somalia's coast is lacking a sufficient number of maritime patrol aircraft, according to a senior European Navy Captain.

Speaking to Jane's on board the Dutch-flagged *HrMs De Ruyter* as it escorted World Food Program vessels into the ports at Mogadishu and Merka, Cdr. Peter Reesink said that more maritime patrol aircraft would be able to provide a "better recognized surface maritime picture to determine where the [pirate-operated] skiffs are located."

Speaking amid competing suggestions of an amphibious or blockade operation in the Gulf of Aden, Cdr. Reesink said that the widespread nature of piracy would necessitate a substantially greater commitment of warships for a blockade or a "huge amphibious force" operating under an international mandate.

Iran Projects Naval Power with New Bases and Vessels

Reprinted from Jane's Defense Weekly

Iran is expanding its naval presence in the Persian Gulf east of the Strait of Hormuz with a host of new bases and the launch of new strategic vessels in line with threats to close the vital shipping passage should its nuclear installations come under attack.

Chief of the Iranian Navy Rear Adm. Habibollah Sayyari announced the launch of two new fast attack craft and a midget submarine as part of efforts to establish an "impenetrable defense line" that is set to include a string of new bases along the coast from Bandar Abbas to Pasa Bandar.

In remarks reported by the official news agency, Rear Adm. Sayyari also plans for a series of naval maneuvers in and around the Strait of Hormuz, through which 40 percent of the world's crude oil passes.

Obama Faces Key Test Over F-22 Production

Reprinted from Jane's Defense Weekly

The U.S. Air Force is continuing to push the U.S. Defense Department to pay for more Lockheed Martin F-22 Raptor fighter jets, leaving President Obama with a stark strategic decision that is likely to set the tone for this administration's management of the Pentagon.

U.S. Air Force officials have told U.S. lawmakers they want funding for somewhere between 50 and 60 additional Raptors, bringing the total to somewhere between 240 and 250, according to two separate sources. Ultimately, however, according to some experts with Air Force experience, the actual number is less important than keeping the F-22 production line open until the

Lockheed Martin F-35 Lightning II Joint Strike Fighter is ready for production.

The main problem for Obama is that U.S. military officials and Washington defense analysts alike are divided over whether buying additional Raptors beyond the 183 already ordered falls into the category of wasteful spending.

Each stealth fighter costs about \$140 million in FY08—not including development costs—a relatively large sum compared with the unit costs for other fighter aircraft. On the other hand, penetrating enemy airspace with an alternative to the F-22 might be even more expensive; more aircraft would be needed to do the same mission and they may not be successful because they lack radar-evading stealth characteristics.

USN's X-47B UCAV Makes First Showing

Reprinted from Jane's Defense Weekly

Northrop Grumman unveiled its X-47B unmanned combat aerial vehicle for the U.S. Navy during a ceremony at the company's Palmdale facility in California in December. The new aerial vehicle, designated the X-47B Navy unmanned combat air system, is the first of two that Northrop Grumman will manufacture for the U.S. Navy to demonstrate unmanned combat aircraft operations from the deck of an aircraft carrier.

The Navy awarded the demonstration contract to Northrop Grumman in 2007 and assembly was completed in just over a year. The aircraft will now undergo subsystem and structural testing in preparation for first flight at the end of the third quarter of 2009. Unmanned combat air system carrier demonstration sea trials are planned to begin in late 2011.

Tough Economic Year Not Too Bad for Defense Firms

Reprinted from Defense News

In a year that some said was the worst economically since the Great Depression, defense companies, for the most part, fared relatively well. With plenty of cash and not a lot of debt, they weren't as susceptible to the constricted credit markets as other sectors.

Yet there were some soft spots for the industry, particularly for companies with exposure to commercial aerospace, and there were job cuts. Boeing plans to ax 800 jobs in its defense sector. Rockwell Collins, which makes electronics and aviation systems for aerospace and defense, plans to lay off 300 workers and cut 100 contractor jobs. Jet engine maker Pratt & Whitney cut 350 jobs.

But job cuts in defense are "really more case-by-case, the loss of a particular program or the winding down of a particular program," and defense spending overlay has remained strong so the reductions haven't been significant, said Phil Finnegan, director of corporate analysis for the Teal Group, Fairfax, Virginia.

Modeling & Simulation *awards*

On Monday, February 2, 2009, the National Training and Simulation Association (NTSA) presented its annual M&S Awards for Outstanding Achievement in Modeling & Simulation. The awards were presented during a lunchtime ceremony at the 2009 Modeling & Simulation Leadership Summit, held at the Norfolk Waterside Marriott in Norfolk, VA. The awards were presented by Rear Admiral Fred Lewis, USN (Ret), President, NTSA, and two members of the Congressional Modeling & Simulation Caucus: Congressman J. Randy Forbes (VA-04), Caucus Founder and Co-Chair, and Congressman Robert J. Wittman (VA-01).

Six awards were given this year, more than in some years past, due to the large number of impressive nominations received. The judges focused on recognizing those nominees whose accomplishments were especially noteworthy in terms of innovation, creativity, superb management of resources, and the savings of both costs and, more importantly, lives.

An Individual Award was given to Mr. Rick Boggs, Joint Strike Fighter Training Systems Chief Engineer, Lockheed Martin Simulation, Training and Support, who introduced an advanced centralized training environment where simulation stations are interlinked with a Learning Management System, a concept that was subsequently adopted by other JSF partnering countries like the UK, the Netherlands and Australia.

In the Analysis category, The Raytheon Non-lethal Effects and Crowd Behavior M&S Test Bed Team was recognized for its ground-breaking work in modeling and analyzing crowd reactions to non-lethal effects in varying scenarios, which will help to reduce the incidence of fratricide in an environment in which friendly, neutral, and hostile forces are all in close proximity.

In the Cross-Function category, The Forterra Systems, IDSI and Rustici Software Team won an award for development of the OLIVE™ software platform, which enables developers to rapidly generate realistic, collaborative, 3D Internet solutions that easily scale from single user applications to large-scale simulated environments supporting thousands of concurrent users.

In the Training category, three teams received an Award: The Alion Science and Technology TCOIC (Training Counter-IED Operations Integration Center) SIMS (Systems Integration Modeling and Simulation) Support Team, for their innovative approach for rapid replication of IED events in Iraq and Afghanistan for use in the operational, institutional, and self-development training domains; The Combat Convoy Simulator (CCS) Team, led by Lockheed Martin Simulation, Training and Support, for their innovative and creative technical design features which accurately represent complex scenarios and intense, realistic training; and Environmental Tectonics Corporation, for the development of the ATFS-400™ “Phoenix,” a first of its kind, high fidelity, interactive, reconfigurable, networkable, tactical flight simulator system integrated into a state-of-the-art, high performance “flyable” and high sustainable “G” motion system.

“These awardees demonstrate the numerous ways in which Modeling & Simulation saves money, time and lives by providing unique tools that enable better decision-making, and improved and more realistic training,” said Admiral Lewis. “All the awardees have made a significant impact in their respective arenas by applying new concepts and technologies to problems facing their customers and partners,” said Lewis. “And this is happening in every facet of our society - medicine, energy, transportation, urban planning, food production, manufacturing, and more. Modeling & Simulation is an indispensable tool. The recent “Miracle on the Hudson” showed very clearly that modeling & simulation saves lives. The scenarios and simulations that the pilots, air crew, and first responders had gone through as

M&S Awards cont. on page 11



Pictured, left to right: Congressman J. Randy Forbes (VA-04), Congressman Robert J. Wittman (VA-01), Mr. Paul Wade, Environmental Tectonics Corporation, and Rear Admiral Fred Lewis, USN (Ret), President, NTSA



Pictured, left to right: Congressman J. Randy Forbes (VA-04), Ms. Tina Gaumont, Raytheon Company, Congressman Robert J. Wittman (VA-01), Mr. Steve Hansen, Raytheon Company, and Rear Admiral Fred Lewis, USN (Ret), President, NTSA



Each of four Panel Sessions featured speakers from a specific geographic region. (Pictured: Northeast/Atlantic)

Training & Simulation *report*

Beyond Cathode Ray Tubes

Reprinted from Defense News

Technology fixes have finally dragged the latest and greatest in high-definition projector display systems out of the realm of home theater and into the simulator, pitting the commercial world against the military-industrial complex in a contest of who can make liquid crystal on silicon (LCoS) more practical and affordable first and leaving some companies banking on other technologies. The move away from the decades-standard cathode ray tube (CRT) technology has been afoot for some time already.

In 2007, industry leader CAE—the Canadian company that provides most of the world's commercial aviation simulators—switched from cathode ray tubes to LCoS, selecting Barco as its projector provider. L3 Link also selected Barco projectors for its new SemiSphere HD system, expected to deliver in 2009.

U.S.-based SEOS, picked by Lockheed Martin to make out-of-the-window display systems on F-35 Joint Strike Fighter pilot trainers, will use Zorro LCoS projectors.

At the training and simulation industry's biggest trade show of the year, the Interservice/Industry Training, Simulation and Education Conference in Orlando, all of CAE's presentations were shown on Sony's latest LCoS displays. The company already has about 30 LCoS simulation systems fielded and another 30 to 40 in the pipeline for delivery early this year.

"The transition from CRT is complete. The CRT age is done," said Philippe Perey, CAE's technology director.

U.S. Embeds FCS Training in Vehicles

Reprinted from Defense News

The U.S. Army is developing software that will allow soldiers to conduct virtual training missions inside the combat vehicles they will use for real, service officials said. Early versions of the software, now under construction as part of phases two and three of the Future Combat Systems network, will be ready to deploy by 2011.

"The FCS network will update training packages and embed them into vehicle's software programs, giving the Army the ability to train anywhere, anytime on the equipment a soldier is going to fight on," FCS spokesman Paul Mehny said.

The software is designed to accept information about a combat zone, helping soldiers rehearse for actual missions during training. Currently, soldiers do most of their training on simulator devices separate from their combat vehicles.

"With embedded training, the platform you use in combat becomes the simulator versus a separate stand-alone device," said Rickey Smith, director of Army Capabilities Integration Center-Forward. "This unprecedented capability has the potential to alter the way units prepare for operations from the crew level up."

UK Carrier Training

Reprinted from Defense News

In early November, the U.K. Ministry of Defense concluded an 11-day exercise that evaluated all aspects of air operations from the Royal Navy's new *Queen Elizabeth*-class aircraft carriers—a full six years before the vessel is scheduled to enter service.

Using a full spectrum of synthetic training aids and mechanisms to simulate every aspect of the complex operations environment of an aircraft carrier, the mission system simulator developed by BAE Systems INSYTE for the aircraft carrier alliance enables planners to investigate how operations planning will need to evolve for what will be the largest vessels ever operated by the Royal Navy.

Equally important, however, is the fact that use of this synthetic facility makes it possible for the shipbuilders to take the risk out of important elements of the design program well in advance of having to cut metal, thereby saving money and other resources.

This is one of the major reasons that simulators, in all their shapes and sizes, have achieved the increasingly dominant position they hold within the training community. But live training, for which there remains a robust continuing requirement, has not died.

"Only when you smell the sweat, hear the bang and feel your heart skip a beat can you begin to understand how to react in a 'live' situation," said Fleming Christense, senior vice president of land combat systems for Saab in Sweden.

Israel Upgrades Training Center Capabilities

Reprinted from Defense News

Israel's improved tactical training center won't be officially operational until this year, but dozens of brigades already have conducted extensive maneuvering force-on-force drills at this sprawling, multidisciplinary desert training site.

Known as MATBAT-B, the fully-instrumented tactical training center ventures well beyond capabilities provided in earlier versions of the site used since 1998. Not only does the upgraded center provide brigade and division-level force-on-force training, but it is connected via satellite links and the military's encrypted Mountain Rose cellular network to Israel's National Urban Training Center, a 100,000-acre site used to train infantry in the type of house-to-house and subterranean combat expected in Gaza, southern Lebanon and other theaters.

Moreover, to accommodate units deployed along Israel's tense northern border with Lebanon and Syria, Israel's Ground Forces Command made sure the tactical training center capabilities could take to the road.

MATBAT-B includes two oversized trailers for theater-based

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Contracts

Austal USA Wins Competition for JHSV

Reprinted from Jane's Defense Weekly

Austal USA has won out in the three-way race for the detail design and construction of the new joint high speed vessel to meet the combined needs of the U.S. Navy, Marine Corps and Army. The Naval Sea Systems Command announced in November the award of a \$185.4 million Phase II contract modification to Austal USA for the joint high speed vessel. Options exist for building up to nine additional ships, plus associated shore-based spares. Managed by PMS 385 NAVSEA, the program is a joint service effort to acquire a high-speed, shallow-draft vessel for rapid intra-theater transport of medium-sized cargo payloads. The craft, leveraging commercial fast ferry technologies, will reach speeds of 35-45 kt and allow for the rapid transit and deployment of conventional or special forces as well as equipment and supplies.

L-3 Wins F-16 Mission Training Center Program

Reprinted from L-3 Press Release

L-3 Link Simulation & Training has been awarded a \$68.2 million multiple-year contract to develop the U.S. Air Force's F-16 mission training center program. L-3 Link received the contract award from the Aeronautical Systems Center's Simulator Systems Group at Wright-Patterson AFB, Ohio. The program includes options for the production, delivery and sustainment of up to 20 four-ship F-16 mission training centers at Air Force installations in the U.S., Europe and Pacific region. High-fidelity F-16 mission training center simulators, which will accurately model all of the fighter aircraft's weapon systems and ordnance, will be delivered in Block 40/42 and 50/52 configurations to support basic and advanced pilot mission training, tactics validation and mission rehearsal.

Loss to JSF Weakens Gripen's Nordic Hopes

Reprinted from Defense News

Saab's failure to land Norway's multirole fighter jet contract weakens Sweden's ambition to have the Gripen NG adopted as a standard fighter by Nordic and Baltic countries, analysts said. "The loss of the Norwegian contract is disappointing for Saab, but the reality is that the Joint Strike Fighter was always the most probable alternative all along, said Björn Enarsson, an industry analyst with Carnegie in Stockholm. "The most negative aspect is the question as to where this leaves Saab for remaining contracts, and especially across in Denmark, which will most probably also choose the Joint Strike Fighter."

Saab will need to work extremely hard if it is to win the Danish multirole fighter contract, said Mats Liss, an analyst

with Swedbank Markets in Stockholm.

Fleet Support

Reprinted from Aerospace Daily & Defense Report

The U.S. Navy's Space and Naval Warfare Systems Command has awarded ITT Corporation a \$160 million contract for engineering support services. Under a five-year contract (one base year and four one-year options), ITT will provide services to the Navy's fleet systems engineering team, a division that provides command, control, communications, computers, intelligence, surveillance and reconnaissance support to Navy afloat strike groups and shore-based commands worldwide.

SAIC, USAF Ink Deal

Reprinted from Defense News

SAIC announced it has been awarded a prime contract by the U.S. Air Force to provide research and development of new infrared countermeasure technologies to help protect U.S. military aircraft. This single-award, indefinite-delivery/indefinite-quantity contract will support the Air Force Research Laboratory's Electro-Optical Warfare Technical Analysis Effort II program. The five-year contract has a ceiling of \$45.6 million.

ETC Simulation Receives ADMS Contract

Reprinted from ETC Simulation Press Release

Environmental Tectonics Corporation's simulation division announced the signing of a contract with the Netherlands Institute for Safety, NIFV, to add new capabilities to their ADMS-ARFF, advanced disaster management simulator for aircraft rescue fire fighting. The contract consists of the development of a new military helicopter scenario consisting of AH-64 Apache helicopters parked in a flight line on an airbase. The scenario will be used to train firefighters, crew commanders and airport fire officers of the Royal Netherlands Air Force. The training objectives defined for this scenario are incident command and airport fire truck operation for incidents involving Apache helicopters during refueling or weapons loading.

The company has also been awarded a contract to deliver multiple ADMS-Command advanced disaster management simulator systems to a national training institute in the Middle East. The contract includes several team training systems, customized scenarios, regionalized environments, and models of appropriate vehicles, equipment, responders, and citizens. The systems will be delivered in Arabic with specific evaluation, scoring, and record keeping components to train and assess individuals and teams according to national standards. A two-year service, support, and scenario expansion package is also included.

Cutting-Edge Applications Win the I/ITSEC 2008 Serious Games Showcase & Challenge

High School, Military and Commercial Serious Games Developers Take Contest to New Levels with STEM, Medical and Military Applications

The Interservice/Industry Training Simulation and Education Conference Serious Games Showcase & Challenge is proud to announce the winners of the 2008 competition. The 2008 challenge saw dramatic growth fueled by the industry sponsorship of Autodesk, Adobe, SAIC, Presagis, the Lockheed Martin Virtual Worlds Lab, DISTI, D&SCI, Mymic, ECS, VMASC, Hewlett Packard, and NTSA, and produced an entrant field that nearly tripled the previous year's.

After a multi-step evaluation process, the top 12 entries in three categories were selected for showcasing at the annual I/ITSEC conference from December 1-4, 2008, in Orlando, Florida. The finalists displayed a wide variety of serious game applications for all skill levels and backgrounds including: vehicle maintenance, geo-location, preventive medicine, emergency response management, environmental management, creature identification in a natural habitat, chemical interactions, ancient civilizations, and urban warfare.

The finalists were eligible for five awards: Best Overall Serious Game, Best Small Business Serious Game, Best Government Serious Game and Best Student Serious Game, selected by a panel of nearly 50 distinguished serious game experts from academia, government and industry. In addition, there was one award — The People's Choice Award—which was determined by votes cast by the 17,800 attendees of the I/ITSEC conference itself.

The winner of both the Overall Best Serious Game and Best Small Business Game was *Burn Center*, developed by 360Ed. *Burn Center* is a fast-paced, medically-accurate simulation of a mass-casualty disaster involving multiple burn victims. Developed to electronically recreate established medical procedures and tactics, it follows patients over the course of 36 hours of treatment in an intensive care unit.

The winner of the Best Government Game was *GeoCommander*, developed by Intelligence Gaming for the U.S. Navy's

SPAWARSSYSCOM's PEO C4I, PMW 120. Built to address the problem of identifying an accurate geographic location of hostile forces, *GeoCommander* uses advanced competitive gaming simulation technology to address the most challenging military geo-location operator shortfalls prevalent today.

The winner of Best Student Game was *Age of Ecology* developed by High School interns Alexander Wein of Palo Alto, California, and Carl Jackson of Andover, Maryland, while working as interns at the United States Geologic Survey. As part of their award package, Wein and Jackson each received a copy of Adobe Director 11 and Autodesk 3ds Max 2009. *Age of Ecology* is inspired by the environmentally non-sustainable aspects of existing strategy games. Players buy and zone land, invest in the productive capacities of land use, and mitigate natural hazards like floods and earthquakes. Through the addition of population, infrastructure and capitalistic development they generate pollution and revenues. The goal is to find the optimal balance between industrial capacity and the needs of the environment.

The winner of the People's Choice award was *Canadian Forces: Direct Action*, developed by the Army Learning Support Center, Canadian Armed Forces. *Canadian Forces Direct Action* is a tactical first person shooter that accurately mimics the real-world rules of engagement of the Canadian Army. Real-world Canadian weaponry and tactical aids such as flash-bang grenades and pepper spray are used to carry out missions in the simulated urban environments which have been created to accurately represent real-world locations using geo-location data. *Direct Action* is a mod of the commercial game SWAT4.

The 2009 Serious Games Showcase & Challenge will be held at I/ITSEC in Orlando, Florida, from November 30- December 3, 2009. The game submission deadline is September 15, 2009. For more information, please visit www.sgschallenge.com.

Major Program *report*

Defense Department Releases Additional F-22 Funding

Reprinted from Jane's Defense Weekly

The U.S. Defense Department has released funding to build an additional four F-22 Raptor fighter jets beyond the 183 already purchased. The Pentagon's procurement chief, John Young, announced in an email to reporters that he would release \$50 million for the additional four fighters. He also said he would seek funding for the production of the four F-22s in the next supplemental spending bill.

U.S. lawmakers have called on the Pentagon to release \$140 million in advanced procurement funds that have already been appropriated to pave the way for the purchase of an additional 20 F-22s. They, along with some U.S. Air Force officials, have argued

that failing to robustly fund the F-22 would lead to the shutdown of the world's only fully-operational fifth-generation fighter production line. However, Secretary of Defense Robert Gates and Pentagon officials have until now resisted efforts to fund the F-22 beyond the 183 already purchased, preferring to focus funding on the F-35 Lightning II Joint Strike Fighter.

As of now, there is no F-22 funding in the draft Pentagon budget for 2010, nor is there any in the U.S. Air Force's "program objective memorandum," a five-year budget outlook. Young is meeting both sides half way by keeping the line open in the short term but leaving long-term decision about F-22 production to the Obama Administration.

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drills, each accommodating up to 42 workstations. Another two 25-station mobile systems, each consisting of a communication truck, an exercise monitoring truck and a maintenance Hummer, are ruggedized for off-road deployments with forward-based forces.

Developed and integrated to Israeli Army specifications by San Diego-based Cubic and Israeli subcontractors Rafael and Bynat Technologies, MATBAT-B is estimated at \$60 million, most of which is funded through annual U.S. military aid. The MATBAT-B fixed site, as well as the exportable systems, are built upon Cubic's PC-based range-instrumentation system.

NATO Develops Training Package

Reprinted from Defense News

A NATO project designed to create a joint network and training capability at the strategic, operational and tactical levels will include advanced distributed learning; constructive simulation; shared scenarios; and a blend of live, virtual and constructive simulation.

"In the old days, we used to do wargaming with big map boards, and you'd have little pieces," said British Army Lt. Col. Mark Shelford, project manager of the NATO project called Snow Leopard. "Now it is on a computer. You do an estimate, generate a plan, then you fight the plan against a computer-based enemy."

"Because it is computer-based and interactive, it needs positive input that paper-based aspects didn't. Now people have to work much harder; the databases have to be more carefully developed. While this generates a higher-quality exercise, it also requires higher-quality inputs."

A NATO Allied Command Transformation news release said Snow Leopard "allows NATO and NATO partner nations the options to target their live training. They can choose not only the type of training but where they will do the training, with a freedom not readily available before."

NATO is also looking to build up a central training library at Joint Warfare Center where scenarios (e.g. arctic, jungle or desert scenarios) and databases can be stored and then reused. In addition, the project's advanced distributed learning program can be used on International Security Assistance Force missions so that individuals can be trained on sites where they have not received the training before.

Lockheed Martin to Buy UNITECH

Reprinted from The Washington Post

Lockheed Martin of Bethesda said it agreed to buy UNITECH (Universal Systems & Technology) of Centreville, Virginia, which provides training and simulations for U.S. and international government agencies. Terms were not disclosed. The company said the deal is subject to government approval and is expected to close by early 2009.

Rockwell Collins Buys Simulator Display Company

Reprinted from Jane's Defense Weekly

Rockwell Collins announced in November that it purchased U.K.-based SEOS, a supplier of visual display solutions for commercial and military full-flight simulators. The deal, terms of which were not disclosed, makes Rockwell Collins' first acquisition since agreeing to purchase unmanned aerial vehicle specialist Athena Technologies in March of 2008. SEOS, which will become part of Rockwell Collins' Simulation and Training Solutions business, is expected to be "slightly accretive" to FY09 earnings.

Researchers Study Underground Storage of Carbon Dioxide

Reprinted from the M&S Newsletter

About seven billion tons of man-made carbon dioxide escape into the Earth's atmosphere every year, contributing to global warming, scientists say. Storing the greenhouse gas underground has emerged in recent years as a potential and promising solution in the fight against global warming. But is it safe? Four University of North Texas professors, with a \$717,000 grant from the U.S. Department of Energy, hope to find out using computer modeling and simulation. By simulating and modeling the chemical reactions that occur when carbon dioxide is injected underground, University of North Texas scientists can speed up a process that would take eons in nature.

Thai Armed Forces Representatives Attend JTLS Training

Reprinted from Rolands Press Release

Thailand's Royal Thai Armed Forces, Joint Staff College recently completed functional and system training for the joint theater level simulation. The training was conducted by Rolands & Associates Corporation engineers at the Rolands' M&S Simulation Center in California. It included classroom presentations, live demonstrations and hands-on practice with all of the significant software improvements. Specific topics included joint theater level simulation system installation and improved Oracle database updates or Linux servers and Linux virtual machines. Functional model improvements included weapon damage representation, damage algorithms and lifeboat generation for ships, and improvements to the web hosted player interface program. Related presentation materials and recording ("how to" movies) were provided to the attendees as additional support material to practice installations at their site post training.

Fleet Synthetic Training

The Navy recently completed its first joint fleet synthetic training event, or FST-J, designed specifically for forward-deployed units of the U.S. Seventh Fleet and including elements of the Japan Maritime Self Defense Force. The three-day joint event, with nearly a week of testing, trained hundreds of U.S. sailors, soldiers and airmen and several members of the Japan Maritime

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Self Defense Force on two joint tasks: conducting missile and air defense operations and synchronizing information and knowledge in a joint environment.

The FST-J focused for the first time on ballistic missile defense, providing a template for future synthetic training for both the Pacific and Atlantic Fleets, according to the joint and sustainment training branch at the U.S. Navy's U.S. Fleet Forces Command in Norfolk, Virginia. The branch manages Navy synthetic training. The event was part of the Navy's growing program of live, virtual and constructive training. It used virtual trainers, constructive models and distributed training architecture to connect the participants in the complex battle problem.

Boeing Helps Create University Programs in M&S

Reprinted from Boeing Press Release

Boeing is supporting the development of educational programs at two leading U.S. universities that offer courses in modeling and simulation engineering. The University of Alabama in Huntsville and Old Dominion University, Norfolk, Virginia, have each received a \$100,000 educational grant from Boeing. The University of Alabama will develop a new modeling and simulation degree program, while Old Dominion University will use the grant to refine and expand its current modeling and simulation curricula.

The programs are available to qualified students in accordance with each university's admission process. Boeing is also supporting the programs by providing financial reimbursement to company employees who choose to enhance their modeling and simulation skills through the programs. Boeing Advanced Systems' Analysis, Modeling, Simulation Experimentation (AMSE) organization is

sponsoring the grant effort.

"Boeing has a growing need for highly qualified modeling and simulation practitioners," said Guy Higgins, Boeing vice president of AMSE. "By partnering with academia, we can play a role in ensuring that the next generation of modeling and simulation professionals has the skills it needs to be successful."

FSI Acquires Glass Mountain Optics

Reprinted from FlightSafety International Press Release

FlightSafety International has acquired Glass Mountain Optics Incorporated located in Austin, Texas. Glass Mountain Optics is a leading provider of visual display systems for simulation applications and massive optics for a variety of industrial markets.

"The acquisition of Glass Mountain Optics further enhances FlightSafety's position as a world leader in the design, manufacture, and support of advanced technology simulators and visual systems for civil and military aviation training programs," said Rick Armstrong, Vice President, Simulation, FlightSafety International.

Glass Mountain Optics' advanced display systems will enable FlightSafety to expand its product line with the development of new display technologies including wide angle single pilot (WASP) systems for Military fast jet applications and high fidelity systems for use in transportable, containerized applications for military vehicle and flight simulation. They will also facilitate FlightSafety's integration of glass and other hard and flexible mirror technology into its VITAL Visual Systems.

"We are pleased that the Glass Mountain Optics management team, led by Don Conklin and Bart Sloane, will remain with the company and welcome their highly capable and experienced group to our simulation and visual systems team," added Armstrong.

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part of their training had prepared them to deal with such a disaster." "Of course," Lewis added, "the survival of everyone on that plane would not have occurred without the incredible skill, calmness, and courage of all involved."

Congressman Forbes and Congressman Wittman were on hand not only to help present the NTSA M&S Awards, but to make some remarks to the audience gathered at the M&S Leadership Summit. The Summit, now in its fourth year, is an annual event that brings together the leaders of the Modeling & Simulation Community of Practice to focus on issues facing the industry. A detailed report and specific recommendations are prepared after the event and forwarded to the Congressional Modeling & Simulation Caucus. "This event is vital to the success of the Congressional M&S Caucus," said Forbes. "The report and recommendations that come out of this event provide us a blueprint for action for the year ahead." Forbes added that "it was a pleasure to participate in the presentation of the annual NTSA M&S Awards for Outstanding Achievement in Modeling & Simulation.

These people (the winners) do incredible work that has a tremendous impact, and they are highly worthy of recognition."

The theme of the 2009 Modeling & Simulation Leadership Summit was "Modeling & Simulation: A National Enterprise," and the event featured four panel sessions, each focused on a specific geographical region: Northeast/Atlantic; Southeast/SouthCentral; Southwest & Midwest; and Far West. Speakers included senior military and industry leaders, gaming and medical simulation experts, and representatives from several Universities that offer graduate degree programs in Modeling & Simulation. Congressman Bobby Scott (VA-03), another active member of the Congressional M&S Caucus, provided some opening remarks, and Dr. Anita Jones, former Director of Defense Research and Engineering at the Department of Defense, and now a Professor of Engineering and Applied Science at the University of Virginia, gave the Opening Keynote Address.

To view the presentations from the 2009 M&S Leadership Summit, and to see complete details on the winners of the 2009 NTSA M&S Awards, please visit www.trainingsystems.org.

NTSA would like to recognize the following company members for their support throughout the year.

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