

NTSA's Training Industry *news*

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Current *news*

UAV Gets New Sensor

Reprinted from *Defense News*

Northrop Grumman delivered the first production multi-platform radar technology insertion program sensor to Edwards Air Force Base, California, for integration on the U.S. Air Force's first RQ-4 Block 40 Global Hawk, a high-altitude unmanned aerial vehicle. The first multi-platform radar technology insertion program Global Hawk flight is scheduled for early 2011.

The multi-platform radar technology insertion program sensor can detect multiple stopped, slow and fast-moving objects on the ground in any weather, day or night, according to Northrop. Flying at altitudes of up to 60,000 feet for more than 30 hours per sortie at speeds approaching 340 knots, the multi-platform radar technology insertion program-equipped Block 40 Global Hawk would persistently see through most types of weather, day or night, Northrop said.

Northrop Grumman Aerospace Systems is the prime contractor for the Global Hawk and the multi-platform radar technology insertion program. Northrop's Electronic Systems, Norwalk, Connecticut, teamed up with Raytheon Space and Airborne Systems, El Segundo, California, to develop and produce the multi-platform radar technology insertion program sensor.

U.S. Navy Electromagnetic Cannon

Reprinted from *Defense News*

The U.S. Navy announced a successful test of an electromagnetic cannon capable of firing a projectile 110 nautical miles at five times the speed of sound. Tested at the Navy's Dahlgren Surface Warfare Center in Virginia, the futuristic weapon uses powerful jolts of electric current to propel a non-explosive slug along rails before launching it at supersonic velocities.

The latest test involved a 33-megajoule shot, the most powerful ever attempted and three times that of the previous test in January 2008. "The 33-megajoule shot means the Navy can fire projectiles at least 110 nautical miles, placing sailors and marines at a

safe standoff distance and out of harms way," said Rear Admiral Nevin Carr, chief of naval research.

GeoEye to Acquire 100 Percent of Spadac

Reprinted from *Space News*

Earth imagery provider GeoEye said it has agreed to purchase 100 percent of geospatial services company Spadac for \$46 million in cash and stock in a transaction GeoEye hopes will expand its customer portfolio in defense and intelligence markets. McLean, Virginia-based Spadac, in which GeoEye has held a minority stake since 2007, is expected to report about \$27 million in revenue for 2010, the two companies said in a statement.

"By combining our imagery collection capabilities with Spadac's location-based analytic solutions, we can help our customers gain unprecedented insight about the areas of the world in which they operate," GeoEye Chief Executive Matthew O'Connell said.

Northrop Puts Off Shipbuilding Decision

Reprinted from *Jane's Defence Weekly*

Northrop Grumman expects to reach a decision on the future of its shipbuilding interests during the first quarter of next year. Northrop Grumman spokesman Randy Belote said that the group's "exploration and analysis of strategic alternatives for its shipbuilding business continues," adding: "It is estimated that analysis will be completed and a decision reached in the first quarter of next year."

Whether or not the group eventually decides to sell off the assets, Northrop Grumman is taking the steps required to spin off its shipbuilding business. In a regulatory filing made by the group November 24, Northrop Grumman told shareholders that its spin-off company, New Ships, into which Northrop Grumman put its shipbuilding assets on October 14, would be called Huntington Ingalls Industries and be headquartered in Newport News, Virginia.

U.S. Army Plans Smart Phones for Every Soldier

Reprinted from *Defense News*

The U.S. Army wants to issue every soldier an

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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:

Those of you who have attended I/ITSEC in the past will appreciate that it has become a large and complex undertaking, comprised of a steadily increasing number of moving parts, many of which are interdependent or at least closely related in timing, subject matter, or both. These complex interrelationships pose organizational challenges of no small dimensions. In addition, we must simultaneously be ever mindful of the needs of our constituents, always aware that upon them and their support depends the ultimate success of all our endeavors.

Fundamentally, NTSA exists to inform and educate the public about the vitality and importance of modeling and simulation technology in everyone's daily life and the promise it holds for all our futures. We do this by providing national and worldwide platforms for the entrepreneurial needs of the industry while simultaneously promoting dialogue about future trends and directions. I/ITSEC is of course the annual culmination of these efforts. Our goals at I/ITSEC are to:

- Establish and maintain a climate which is conducive to successful business contacts and transactions among hundreds of exhibiting entities.
- Provide multiple avenues for in depth exploration of the present potential and future promise of the industry.
- Involve as wide a variety of persons and organizations in I/ITSEC as possible, mirroring the expansion of modeling and simulation into ever more diverse fields.
- Mesh these elements into a cohesive whole which is truly greater than the sum of its parts and which advances the interests of the entire M&S community.

Judged by these measures, I am pleased to report that I/ITSEC 2010 was quite possibly the most successful to date. Not only was attendance at an all time high, totaling over 20,000 registrants for the first time, but the number of exhibitors also broke records, as did floor space occupied--nearly a quarter million net square feet. The real value of I/ITSEC 2010, however, lay in the quality of its components.

For the first time, and with the close collaboration of the Society for Simulation in Healthcare, we grouped a number of our increasingly numerous healthcare exhibitors in a Healthcare Pavilion, focussing attention on this rapidly expanding and vitally important simulation field. I am also pleased to note that NTSA and the Society for Simulation in Healthcare recently signed a Memorandum of Understanding, delineating areas of cooperation, including support for and participation in each organization's events, the sharing of information and ideas, and other reciprocal initiatives.

The various STEM components we have incorporated into the I/ITSEC framework also thrived at I/ITSEC 2010. Projects displayed at the Student Leaders' Pavilion were remarkable in their sophistication and variety; entrants in the Serious Games Challenge and

Competition were the most numerous, varied and relevant to date, and K12 educators visiting I/ITSEC from around the nation came away amazed by the technology and the imperative to share their enthusiasm with their students--the next generation of scientists and engineers.

International attendance at I/ITSEC 2010 was also at record highs, and I would like to note that Brazil, in particular, favored us with an unusually large delegation--evidence of the rapid emergence of that nation as a regional power, with a strong and growing scientific base and related industrial capacity. Clearly, the utility of modeling and simulation to its expanding economy is not lost on Brazil. We plan to reciprocate with a visit to the Latin American Aerospace and Defense Exposition (LAAD) in Rio de Janeiro this year, initiating what we hope will be a series of ever more productive contacts in the coming years.

During I/ITSEC 2010, the principals for the International Training and Simulation Alliance (ITSA) met to review programs and upcoming events for 2011. Joining me were Captain John Rees, RN, OBE, Chairman of the European Training and Simulation Association (ETSA), Dr. Steve Yoon, Vice Chairman of the Korea Training Systems Association (KTSA), and Peter Hill, Executive Director of the Simulation Association of Australia (SIAA). The mission of ITSA is to promote a better understanding around the globe of the importance of training and simulation technology in every profession and endeavor known to mankind. The energy of ITSA evolves from the power of the regional organizations which, together, are the constellation of a training and simulation operational framework. Of particular note was the announcement by Dr. Yoon of a planned live, virtual and constructive Workshop in Seoul October 27 and 28, 2011. NTSA will provide two speakers for this event and additional support is expected from ETSA and SIAA. Should there be interest in direct participation from any of our I/ITSEC Newsletter readers, please contact me at flewis@ndia.org or Captain Nelson Jackson at njackson@ndia.org.

In closing, I would like to note further evidence, if any were necessary, of the value of modeling and simulation today. It seems apparent that, however Joint Forces Command is truncated or dissolved under DoD direction, its modeling and simulation component will remain intact, thanks in good measure to the efforts of Senator Mark Warner and Congressman Randy Forbes, among others. That the M&S function is to remain untouched in this era of stringent DoD economies testifies eloquently, in my view, to the general recognition of the indispensable contribution modeling and simulation is making to force readiness.

We are already well into the planning phase for I/ITSEC 2011, and early signs indicate that it will surpass even the high water marks set in 2010. Make plans now to join us this fall in Orlando, with the U.S. Army as the lead Service, for I/ITSEC 2011. We'll make certain you can't afford to miss it.



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The Global marketplace

VR Solutions Uncovers the Latest Head Mounted Displays

Reprinted from VR Solutions Press Release

Head mounted displays have long been seen as an ideal solution for reproducing immersive and reality-based training environments at effective price points. Michael Bosworth, managing director at VR Solutions recently caught up with Virginia-based NVIS virtual reality display manufacturer at the training and simulation trade show, I/ITSEC 2010 in Orlando to see what they had to offer.

“As a supplier to partners working for the Australian Army and various training facilities across Asia, we are always looking to work closely with innovative manufacturers such as NVIS who are able to tailor or deliver products for their intended purpose.”

Mark Foglia, president, NVIS Inc. adds, “We’ve enjoyed working with VR Solutions since 2002 and we’re very excited to see them again at I/ITSEC 2010 and introduce them to our new products.”

Helo Carrier Deal Sealed

Reprinted from Aviation Week & Space Technologies

Russia has agreed to acquire a pair of 20,000-metric-ton-class helicopter carrier/assault ships from France, with an option to build another two locally. Russian President Dmitry Medvedev informed his French counterpart, Nicolas Sarkozy, on December 24 that France’s DCNS-STX and St. Petersburg-based OSK had been selected to meet Russia’s requirement for the vessels. Russia issued an international tender in October for the ships for which Navantia of Spain and South Korea’s Daewoo also competed. The first two ships, worth about \$1.32 billion, will be built by DCNS-STX, with 80 percent French content. If the option is exercised, the second two will be assembled by OSK.

Russia May Relax Stance on Foreign Investment

Reprinted from Jane’s Defence Weekly

Russia has given one of its clearest indications yet that it is preparing to sell stakes in its high-

technology defense companies, raising the question of the extent to which Moscow is likely to slacken its grip on one of its most strategically important sectors. Sergei Chemezov, director general of the monolithic Rostekhnologii (Russian Technologies) conglomerate, said on 19 November that he did not “rule out” the sale of stakes. His comments came during a meeting of the Association of European Businesses in Moscow and were relayed by Russian state media.

State-controlled Rostekhnologii was set up in November 2007 to drive Russian efforts in high-technology domains. Its portfolio is vast, ranging from automobile manufacturer AutoVaz to titanium giant VSMPO-Avisma. It encompasses more than 300 defense companies.

The sale of stakes in Russian defense ventures would help the sector to wean itself off government debt; contribute to the costs of industrial redevelopment; partially fund enhanced research and development efforts; and potentially increase exposure to international defense organizations, thereby offering the benefits of collaborative partnership.

It remains to be seen, however, how much foreign involvement Russia will permit and whether investing in a relatively opaque sector, in which decision making has typically been driven by Moscow’s political objectives rather than the pursuit of profit, will prove attractive.

EADS Gives Go-Ahead for U.S. Acquisitions

Reprinted from Aerospace Daily & Defense Report

EADS is prepared to be more aggressive in making acquisitions as it moves to increase its share of a constrained U.S. defense market. The European aerospace giant had limited any acquisitions in the U.S. to \$500 million or less as it moved to conserve cash after the global economic downturn hit. But with the outlook much improved for its commercial Airbus unit, the company’s board is now prepared to sign off on bigger deals if the right opportunity comes along.

“We’re not restricting ourselves to [the \$500 million] level exclusively anymore,” EADS North

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iPhone or Android cell phone—it could be a soldier's choice. And to top it off, the Army wants to pay their monthly phone bills. To most soldiers, it sounds almost too good to be true, but it's real, said Lt. Gen. Michael Vane, director of the Army Capabilities Integration Center. He said the Army would issue those smart phones just like any other piece of equipment a soldier receives.

"One of the options, potentially, is to make it a piece of equipment in a soldier's clothing bag," Vane said. With the backing of officials like Vane, efforts are underway around the Army to harness smart phones to revolutionize the way the service trains and fights. The Army plans to roll out wireless Common Access Card readers for the iPhone in January and for Android phones in April. This would give soldiers secure access to their email, contracts and calendars.

At war, smart phones would let soldiers view real-time intelligence, video from unmanned systems overhead and track friends and enemies on a dynamic map, officials said. But the Army must first work through the complex task of securing the data and the network before it sanctions smart phones on the battlefield. The goal is for soldiers to get information when they need it, wherever they are, said Mike McCarthy, director of the mission command complex of Future Force Integration Directorate at Fort Bliss. The directorate is one of the agencies leading the connecting soldiers to digital applications project.

India to Install High-Tech Coastal Surveillance System

Reprinted from Aerospace Daily & Defense Report

A high-tech coastal surveillance system that can detect movement up to 20 kilometers (12.5 miles) offshore is ready for installation in India. The system was indigenously developed by Bharat Electronics Ltd. (BEL) and will be used by the Indian Coast Guard. The entire data link will be networked to a command-and-control center in New Delhi. The Phase 1 order is worth Rs 600

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America Chief Executive Officer Sean O'Keefe said during a November 22 media roundtable in Washington. "The direction I'm getting now from [parent company chief executive officer] Louis Gallois and the board is that we're prepared to entertain more aggressively companies that can give us market access we don't currently have ... which would apply to companies with bigger-dollar volumes."

London Unofficially Eyes Eighth Boeing C-17

Reprinted from Aerospace Daily & Defense Report

The U.K. government has been briefed by Boeing on its ongoing production line rescheduling for the C-17, and given detailed options for potential acquisition of an eighth airlifter. U.K. government and Royal Air Force officials were updated prior to the

crore (\$132.4 million).

"This will be a path-breaking installation for India's security," BEL Director (R&D) I.V. Sarma said before the Bangalore Defense and Aerospace Journalist Forum. "Civil work is underway to install the radar, electro-optic sensor and command-and-control software." BEL hopes that following the second and third phases of installation, the entire Indian coast will be under constant surveillance.

X-37B Wraps Up 7-Month Mission Shrouded in Secrecy

Reprinted from Space News

After seven months in space, the U.S. Air Force's X37B unmanned space plane on December 3 returned to Earth to wrap up a debut flight shrouded in secrecy. The robotic X-37B space plane made a middle-of-the-night landing at Vandenberg Air Force Base in California to end its maiden voyage. The space plane, also known as orbital Test Vehicle 2, glided back to Earth over the Pacific Ocean before landing at the revamped Vandenberg runway at 1:16 a.m. PST. In all, the X-37B space plane spent more than 220 days in orbit. The Air Force kept the exact nature and cost of the X-37B's mission a closely guarded secret, but some analysts and skywatchers have speculated that the spacecraft served as an unmanned orbital spy platform.

Navy Shipbuilding Plan Could Fall Short Over Long Term

Reprinted from Aerospace Daily and Defense Report

The recent congressional authorization of the U.S. Navy's 2011 shipbuilding acquisition plan is both good and bad news for the service. Of course, like any service, the Navy could not be happier that lawmakers supported all of its major shipbuilding and conversion requests for the year, to the tune of \$16 billion. But in approving the plan, lawmakers also kept the Navy on a collision course with its long-term fleet goals, according to analysts. The

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official handover of the RAF's seventh—and at this point possibly final—aircraft at the company's Long Beach, California, facility on November 16. Following the ceremony, the aircraft was flown to the U.S. Air Force's San Antonio Air Logistics Center at Kelly Air Force Base, Texas, for installation of the Northrop Grumman large aircraft infrared countermeasures system.

British Defense Equipment, Support and Technology Minister Peter Luff says the U.K. officially has no plans to acquire further C-17s, but he adds that it has been made aware of the shortened time span over which any further aircraft could be delivered. "I don't rule it out, but none are planned at this point. We must look carefully at what our future needs will be, and we've had an honest briefing from Boeing that sets that out," he says.

Training & Simulation *report*

JTLS and NATO Exercise Support

Reprinted from Rolands & Associates Press Release

Steadfast Juno 2010, a NATO Command Post Exercise which ran from 6-15 December 2010, was supported by the joint theater level simulation and a cadre of modeling and simulation engineers from Rolands & Associates Corporation. The exercise was instantiated at six different locations simultaneously in Italy, Belgium, Norway and Turkey.

Steadfast Juno 10 was designed to train and validate the deploying NATO forces in planning and conducting crisis response operations to restore peace and security, prevent further destabilization, and support reconstruction and humanitarian assistance efforts in a remote area.

It was conducted by Allied Joint Force Command Headquarters Naples and involved approximately 2,000 personnel from various headquarters and units including SHAPE, JFC HQ Naples; Joint Warfare Center, Ulsness, Norway; Force Command Land Madrid, Spain; NATO Rapid Deployable Corps, Italy; Air Component Izmir, Turkey; Special Operation Component, Ankara, Turkey; Maritime Component, U.K.; Chemical Biological Radiological Nuclear Defense Battalion, Hungary; Command Post, Slovenia; Combined Air Operation Center 5, Italy; and Multinational CIMIC Group, Italy.

Personnel who participated in the exercise represented the full spectrum of NATO nations and observers from Partnership for Peace, Istanbul Cooperation Initiative and other nations (Azerbaijan, Bosnia-Herzegovina, Morocco, the former Yugoslav Republic of Macedonia, Sweden, and United Arab Emirates).

The exercise utilized the NATO response force design, which is the enabler for a larger follow-on force. The NATO response force is NATO's rapidly deployable, multinational and joint force. By using this command structure, NATO retains the ability to conduct the full range of missions, from high to low intensity. Joint theater level simulation is the simulation of choice for training and certifying deployable forces to meet a variety of emergent threats or other potential situations, including disaster relief, responding to current and future needs, and still being able to conduct the most demanding missions.

Fleet Synthetic Training

Reprinted from U.S. Fleet Forces Press Release

Commander, U.S. Second Fleet, conducted a fleet synthetic training event with units from the *USS Enterprise* carrier strike group, U.S. Air Force, Air National Guard units and coalition partner Germany. The synthetic exercise, called "operation Brimstone" provided valuable training to a range of ships and commands at various stages in their pre-deployment training cycle. It was a

group commander-level event which encompassed critical mission areas including maritime intercept and security operations and missile strikes against onshore targets.

The fleet synthetic training program is administered by U.S. Fleet Forces Command in Norfolk. Fleet synthetic training is in-port training that combines shipboard trainers, aircraft and submarine simulators and high-tech simulation centers into an interoperable network. Fleet synthetic training helps the Navy maximize at-sea training opportunities by conducting some training in pier-side events.

"Operation Brimstone demonstrates the ability of fleet synthetic training to help prepare a range of training audiences in critical mission areas and provided a venue for deployment certifications," said Capt. C.J. Deni, head of the U.S. Fleet Forces joint sustainment training branch.

Emergency Events Management Training System Inaugurated

Reprinted from Elbit Systems Press Release

The Israeli Home Front Command recently inaugurated Elbit Systems' emergency events management training system (the System) by holding its first large scale exercise. The System is stationed at the Home Front Command's headquarters and supports a unified effort to effectively mitigate any large scale emergency event and continually prepare for the Home Front Command's mission to prevent, detect, and respond against all hazards.

The System includes training capabilities for all types of forces such as nuclear, biological, chemical and search and rescue, as well as the Home Front Command's other internal training needs. The System also provides training for all the emergency organizations that are involved in response recovery from disaster events in complex, heavily populated urban scenes and strategic infrastructures.

The innovative System simulates reliably and realistically for integrated responses to complex emergency events occurring simultaneously in various scenes and sites. The assorted emergency scenarios include intervention of various rescue and life-saving forces that need to coordinate their operations, such as municipal forces, etc. The System also allows for rehearsing communication, C4I, management and inter-coordination capabilities to improve force readiness for emergency situations.

Joint Forces Training Center Staff Receives JTLS Training

Reprinted from Rolands & Associates Press Release

Rolands & Associates Corporate delivered a tailored training event for members of the NATO Joint Forces Training Center, Bydgoszcz, Poland, from 6 to 17 September 2010 at their facil-

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math simply does not add up, the analysts say, for what the Navy has planned now and what it expects its force structure to be in coming years, financially or operationally.

That is a point that federal analysts have tried to hammer home for some time. “The planned size of the Navy, the rate of Navy ship procurement, and the prospective affordability of the Navy’s shipbuilding plans have been matters of concern for the congressional defense committees for the past several years,” the Congressional Research Service states in its recent report on Navy force structure and shipbuilding plans.

Analysts: India Should Modernize Training

Reprinted from *Defense News*

The Indian military is working to replace aging weapons with more advanced ones, but defense planners have not paid proper attention to the task of training the country’s 1.5 million troops to use such modern gear, a senior Army officer said. Mahindra Singh, a defense analyst, agreed that the Indian defense ministry has not yet begun the exercise of augmenting the military’s training capabilities.

“The Indian armed forces are still a long way away from being digitized for net-centric warfare,” said Gurmeet Kanwal, director of the Center for Land Warfare Studies, a think tank. “As such, training methodologies for a digitized force need to be developed from scratch.”

A senior Defense Ministry official, however, said that wargaming centers are planned and simulators are being acquired for the Army, Navy and Air Force. The wargaming requirements for each service are being drawn up by a special branch at the headquarters in India. A new university also will be established, where military and civilian leaders will be educated to evaluate national and international security challenges through multi-disciplinary research and professional exchanges.

China Looks at Space Plane

Reprinted from *Defense News*

China’s aviation industry is nurturing the design of stealthy, hypersonic combat aircraft that might fly beyond the borders of space. Revealed at the recent 8th China International Aviation and Aerospace Exhibition (2010 Zhuhai Airshow), the winners of the 4th National Future Aircraft Design Competition were the Merlin fighter-bomber, SkyNet airship, Wolf Rider unmanned combat aircraft and the Shadow Dragon unmanned bomber.

Though the four design concepts are well beyond China’s technical capabilities and “smack of science fiction fantasy,” all four represent a real effort on the part of the People’s Liberation Army to militarize space, said Ian Easton, a specialist in Chinese aeronautics at the Washington-based Project 2049 Institute.

Easton said a lot of intellectual capital and time went into the designs. “Clearly, the People’s Liberation Army is demonstrating

a well-developed interest in a hypersonic near-space platform here—something you could also refer to as a space plane,” he said.

Technology Projects Target Automated Imagery Analysis

Reprinted from *Space News*

With U.S. analysts buried under surveillance imagery and facing the mind-numbing tedium of watching hour after hour of footage, some U.S. technologists are working on software tools that would assign the dreary but vital task to computers. Two tools in development by the Pentagon’s Defense Advanced Research Projects Agency and Kitware, a 65-person company based in Clifton Park, New York, highlight the obstacles and potential benefits of automatically scanning imagery for suspicious behavior. The video and image retrieval and analysis tool would focus on narrow targets, such as a doorway under video surveillance. The more ambitious persistent stare exploitation and analysis system would detect indicators of suspicious behavior by searching for links between events that occur over a wide area and at different times.

NASA Panel Warns of Danger from Space Policy Confusion

Reprinted from *Aerospace Daily & Defense Report*

Continuing uncertainty over U.S. civil space policy is increasingly a safety and economic risk to the nation, according to a new report by the independent review panel charged with overseeing safety at NASA. The Aerospace Safety Advisory Panel finds a lack of “clarity and constancy of purpose among NASA, Congress and the White House” its primary concern, with repercussions across the space agency.

“A key point has been made by each center that the Aerospace Safety Advisory Panel has visited over this past year—the lack of guidance, clarity, and mission has increased the potential for risk, negative consequences to the workforce, and additional expense resulting from duplicative efforts or efforts that are ultimately determined to be unnecessary due to a change of course,” the panel says in its 2010 annual report, released January 13.

Panel members urge civilian space policy players to “quickly reach a consensus position on the future of the agency and the future of the United States in space.” Among the questions they say need answers soon are just exactly what is NASA’s exploration mission, and what specific destination should it target next—an asteroid, the moon or Mars.

China Reveals Aircraft Carrier Ambitions

Reprinted from *Jane’s Defence Weekly*

China has stated publicly for the first time its intention to acquire two or more indigenously designed and built aircraft carriers for the People’s Liberation Army Navy. A brief reference to the strategy appeared in an annual report from the State Oceanic Administration. Although it was published in May, the reference was buried at the end of the 570-page document and has only now

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Contracts

QinetiQ NA Wins \$1.98B NASA Support Contract

Reprinted from *Space News*

QinetiQ North America of McLean, Virginia, will provide engineering services and products at NASA's Kennedy Space Center in Florida, under a \$1.959 billion contract, the U.S. space agency announced November 18. Work on the new cost-plus-award fee contract begins March 1, 2011. The contract has a five-year base period of performance and three one-year option periods. Under the contract, QinetiQ North America will support an institutional capability for the engineering and development of ground systems and equipment for handling testing, servicing and other ground processing of launch vehicles, spacecraft and payloads.

UAV's to Carry Cargo

Reprinted from *Defense News*

Boeing won a U.S. Navy contract to use unmanned helicopters to transport cargo for Marines fighting in Afghanistan. The company announced that the Naval Air Systems Command awarded Boeing a \$29.9 million contract for unmanned aircraft cargo services to support the Marine Corps. Boeing said it

will provide two A160T Hummingbird unmanned helicopters, three ground stations, spare parts, training and support. This government-owned, contractor-operated deal is the first for Hummingbirds built on a company-funded production line at Boeing's plant in Mesa, Arizona. The contract calls for pre-deployment operations at a military base in the U.S., followed by options for a six-month deployment in Afghanistan.

Training from Cubic

Reprinted from *Defense News*

The U.S. Army has awarded Cubic Applications, a subsidiary of San Diego-based Cubic, \$17 million in contracts for logistics and transportation training at two installations in Virginia. Cubic Applications will continue providing field, classroom, computer and hands-on training support for the U.S. Army's Sustainment Center of Excellence at Fort Lee. The contracts vary from eight months to five years, Cubic said. Under these contracts, Cubic Applications also will assist the Quartermaster School and Army Logistics University at Fort Lee, and support convoy simulator training at Fort Eustis and Fort Lee.

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ity. The requirement was to provide a two-week seminar, lecture and hands-on, to lead the participants through an in-depth exposure to the joint theater level simulation. Ellen Roland designed and delivered the material.

The first week's sessions ranged from the general system design, basic model concepts (air, land, navy, log, intel) and altering the configuration during game play, through WHIP training and feeding C4I systems. The second week focused on exercise organization, roles, and responsibilities; major scenario event list, STARTEX, and checkpoint procedures; after action review tools and accomplishing MSEL tasks. A practical exercise was included.

Joint theater level simulation is the world's premier theater level simulation. Its use includes decision analyses, contingency/management plan testing, experimentation, emergency preparedness training, command post exercise support, and coalition training among civil-military agencies. It has been used for analysis of border security, illegal immigration, and human trafficking issues. Joint theater level simulation users gain insight into the problems and importance of effective information sharing, interoperability, and coordination in response to disasters requiring regional response efforts. The simulation can be connected to most common operation pictures and easily interfaced with many C4ISR systems.

Local Simulators Backbone of Turk Training

Reprinted from *Defense News*

A decade ago, simulators played little role in conventional Turkish Army training concepts. Today, simulators, especially locally made ones, compose an essential part of training doctrine. "Today, we are talking about indigenous efforts for simulators for several platforms, including fighter aircraft, basic trainer aircraft, helicopters, submarine electronic warfare suites and fire and damage-control systems for military vessels," a senior procurement official said.

The military command is generally content with the performance of locally made simulators, he said. "Most recently, the Navy has turned to the local suppliers, ending its tradition of buying imported simulators," the official said. A military official said that simulators save more than 10 percent in training costs. "Generally speaking, one simulator more or less equals the cost of one platform. But simulators have several advantages, including training and maintenance costs, time and personnel safety," he said. "Thanks to technological advancements, new simulators can give first-grade training."

Circle the Virtual Wagons

Reprinted from *Defense News*

U.S. Army convoy regulations from 1861 say that if a convoy is
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halted and an attack is feared, the wagons should form a square, with the rear wheels on the outside and the horses on the inside. Today, it is still common for halted convoys to assume a box formation. "The only difference is the technology," said Arnold "Buck" Shaw, a convoy protection training specialist with the U.S. Army Combined Arms Support Command. "Convoy doctrine itself has remained virtually unchanged for 150 years."

Virtual convoy training, however, has advanced considerably since its inception seven years ago. In 2003, with roadside bombs accounting for one-third of U.S. casualties in Iraq, the Army issued an urgent plea to industry rather than a set of formal requirements so that a life-saving system could be fast-tracked into the field. Two companies, Lockheed Martin and Raydon, quickly developed the virtual combat convoy trainer.

The Army Program Executive Office for Simulation, Training and Instrumentation received government funding within 10 days of its request, and Lockheed and Raydon each fielded two simulators within 45 days of the contract award. Today, the Army is replacing its virtual combat convoy trainer with the reconfigurable vehicle tactical trainer, a helmet-mounted sim that gives soldiers a 360-degree view. Students sit at different stations within the trailer, but in the virtual world they are all in the same Humvee, heavy expanded mobility tactical truck or whatever kind of vehicle the sim is set up to emulate.

Virtual Building Blocks

Reprinted from *Defense News*

The U.S. Navy's construction force, the legendary Seabees, has embraced simulation in training, often setting the pace for the rest of the Navy's enlisted work force. By using simulation to help teach welding, heavy-equipment driving and even engine mechanics, the Navy Construction Training Center in Gulfport, Mississippi, better prepares sailors for what they'll find in the field. In many cases, simulation also saves money, equipment and even lives.

A Navy inspector general study completed in March 2009 determined that the fleet's heavy reliance on computer-based training produced sailors who didn't grasp basic concepts and weren't ready for their jobs at ships and squadrons. However, many of the problems cited in the report related to "passive" learning, in which a sailor would quickly scan a computer screen and click past it, retaining the information only until he had passed a virtual test at the end of the learning module.

Instructors at the Gulfport training center say the construction force simulators stress physical interaction with teaching tools, helping Seabees develop muscle memory for specific tasks or practice tricky movements until they feel confident executing them. The school uses a welding simulator developed by VRSim Simulator of East Hartford, Connecticut, which provides a personal computer-based simulation of the welding process based on Lincoln Electric's welding gear.

The Seabees also have enhanced training through driving simulators, specifically for the medium tactical vehicle replacement family of vehicles as well as for the M12 road grader. According to Equipment Operator 2nd Class David Baklarz, putting simulators into the equipment operator course has improved training by allowing students to develop the muscle memory needed for driving prior to being exposed to the dangers of the road or driving range. It has also reduced wear and tear on vehicles, he said, and has helped save lives in Iraq and Afghanistan by allowing drivers to experience the limits of the vehicle in a virtual world before driving in tactical situations, he said.

Jobs Saved at JFCOM?

Reprinted from *Defense News*

Southeast Virginia might retain a large chunk of the jobs once feared lost when in August U.S. Defense Secretary Robert Gates announced he would shutter Norfolk-based U.S. Joint Forces Command, according to Pentagon and Commonwealth officials. After a November 23 meeting with senior Pentagon brass, Virginia officials and congressional members said Gates gave them "strong indications that some parts of Joint Forces Command would likely remain in the Tidewater area." Commonwealth officials said the command's modeling and simulation directorate, as well as NATO's Allied Command Transformation, could remain intact.

Kuwait to Acquire Hornet Simulators

Reprinted from *Jane's Defence Weekly*

The Kuwait Air Force will receive two F/A-18C tactical operational flight trainers and associated training equipment under a contract negotiated between the U.S. Navy and L-3 Communications, the company said in a statement. "These F/A-18 simulators will provide the Kuwait Air Force with a significant increase in training capability," Lenny Genna, president of L-3 Link Simulation and Training, said. "The trainers will be built on a proven and reliable U.S. Navy and U.S. Marine Corps F/A-18 simulator baseline, enabling Kuwaiti F/A-18 pilots to enhance their tactical skills over a full range of mission areas."

The Kuwait Air Force operates two squadrons of Boeing F/A-18 Hornet multirole combat aircraft. It has an emerging requirement to replace its Embraer EMB-312 Tucano to bring its basic flying training resources up to modern standards. A longer-term requirement concerns replacement of Kuwait's BAE Systems Hawk aircraft, but this will not be a priority unless glass-cockpit-standard fighters are purchased.

The \$24.1 million contract, which was awarded under the U.S. Foreign Military Sales program, includes two instructor operator stations, a brief/debrief system, associated computational systems, night-vision training systems and a theater-specific visual system database. The networked simulators will enable pilots to jointly conduct air-to-air and air-to-ground tactics, normal and emergency procedures and night-vision-goggle operations.

Major Program *report*

Lockheed Martin, USMC Committed to F-35 STOVL Variant

Reprinted from *Jane's Defence Weekly*

Lockheed Martin and the U.S. Marine Corps remain “firmly committed” to the short take-off vertical landing version of the F-35 Lightning II Joint Strike Fighter despite a series of setbacks that have threatened to derail it.

There has been speculation in some quarters that the U.K.'s recent decision to switch its planned Joint Strike Fighter buy from the short take-off vertical landing F-35B to the carrier variant F-35C, coupled with problems in the flight-test campaign, might cause the U.S. government to pull the plug on the short take-off vertical landing variant so as to focus its efforts on the carrier variant and conventional take-off and landing F-35A version.

Speaking at the F-35 manufacturing facility at Fort Worth, Texas, on 29 November, Director of F-35 Dave Scott said that, while he concedes that there have been “issues” with the F-35B, “the [four] aircraft [currently in the flight-test program] are performing extremely well; we’re just flying at a slower rate than we projected.”

U.S. Army Restarts Ground Combat Vehicle Project

Reprinted from *Jane's Defence Weekly*

The U.S. Army officially restarted its anticipated ground combat vehicle program by releasing a new request for proposals on 30 November. An original request for proposals for the multi-billion dollar infantry fighting vehicle project was issued in February but was cancelled in August after a review showed the program could suffer from the immaturity of the required technologies.

Aside from “opening trade” by calling for fewer developmental systems, the revamped acquisition program is also setting specific affordability requirements, Col. Andrew DiMarco, ground combat vehicle project manager said.

Ground combat vehicle's average unit manufacturing cost, including hardware and software, should be between \$9 million and \$10.5 million per vehicle, with an initial target for operation and maintenance costs of about \$200 per mile, he said. According to DiMarco, the effort will start with a two-year technology demonstration phase for which up to three contractor teams are expected to be awarded fixed-price incentive fee contracts in the third quarter of Fiscal Year 2011. He said that these initial contracts are to have a ceiling of \$450 million and the industry will be responsible for any cost overruns but can share in any savings.

Following the technology demonstration phase, up to two contractor teams will be selected to compete in a four-year engineering, manufacturing and development phase. Finally, a production decision is slated for Fiscal Year 2017 and the army will downselect to one contractor team's vehicle, DiMarco said.

U.S. Air Force May Buy 175 Bombers

Reprinted from Defense News

A few details have emerged about the U.S. Air Force's nascent plan to develop a new bomber. It should be able to fly unrefueled more than 5,000 nautical miles and be stealthy or well-equipped enough to operate independently inside enemy air defense, current and former Air Force officials and analysts said.

The service will likely seek to buy about 175 of the new aircraft, according to retired Lt. Gen. David Deptula, who until recently was the Air Force's ISR chief. Boeing, Lockheed Martin and Northrop Grumman are the leading contenders for the job of prime contractor, according to analysts. All three companies declined to comment until the program is formalized, which is expected to happen in the 2012 budget proposal slated to be unveiled around February 14.

Air Force officials have been tight-lipped about the new aircraft, announced January 6 by Defense Secretary Robert Gates. Air Force Secretary Michael Donley told reporters January 12 that it would be an “optionally-manned,” nuclear-capable, long-range aircraft that is part of a “family of systems” and will conduct ground surveillance and electronic attack.

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been picked up by news outlets in the Asia-Pacific region.

A translation of the State Oceanic Administration's 2010 Ocean Development Report, published by the Hong Kong-based *South China Morning Post* on 19 December, stated: “In 2009, China put forward an idea and plan for building aircraft carriers. These indicate China has entered the historical era of building a maritime superpower.” The translation continued: “Building China as a maritime power is the mission of China in the whole 21st Century, and 2010 to 2020 is the critical period for accomplishing this strategic mission, with the goal to place China among mid-tier maritime powers.”

In addition, unconfirmed reports published in the region are suggesting that construction of a conventionally-powered carrier may have started. Japan's *Asahi Shimbun* stated on 17 December: “Construction has already begun at six military-affiliated companies and research institutes in Shanghai and other locations.” *Asahi Shimbun* quoted unidentified Chinese military sources as saying that initial plans had called for the launch in 2015 of a conventionally-powered carrier displacing between 50,000 and 60,000 tons, but that construction was progressing quickly and the launch due date had been brought forward to 2014. The procurement plan also called for a nuclear-powered carrier to be launched by around 2020, the newspaper said.

M&S awards



The Winners of the 2010 NTSA Modeling & Simulation Awards

NTSA Presents 2010 Modeling & Simulation Awards at I/ITSEC Executive Dinner

On Tuesday, November 30, 2010, the National Training and Simulation Association (NTSA) presented its annual NTSA M&S Awards for Outstanding Achievement in Modeling & Simulation. The awards were presented by Rear Admiral Fred Lewis, USN (Ret), President, NTSA, during NTSA's annual Leadership Reception & Executive Dinner, held at the Peabody Orlando Hotel in Orlando, Florida, during I/ITSEC 2010.

NTSA presents awards each year for outstanding achievement in the development or application of models and simulations. Awards may be given for outstanding achievement in the following categories: Training, Analysis, Acquisition, Cross-Function (multiple uses) and Individual/Lifetime Achievement; and nominees may come from government, industry or academia. The number of awards varies from year to year, but there are usually between three and six; in addition, the winners of the NTSA M&S Awards constitute the slate of nominees for the annual Governor's Award. The Governor's Award recognizes the individual or team whose achievements in Modeling & Simulation are the most noteworthy, significant and innovative.

Before presenting the awards, Admiral Lewis noted that over sixty nominations had been received, and added that the awardees truly represent the "best of the best" in terms of creativity, innovation, advancing the state-of-the-art, and the value and impact of their work.

NTSA is proud to announce the following winners of the 2010 NTSA Modeling & Simulation Awards:

Acquisition

Iraqi 35-Meter Patrol Boat Integrated Project Team (IPT), NAWCTSD

The NAWCTSD Iraqi 35-Meter Patrol Boat Integrated Project

Team (IPT) successfully planned and executed an extremely high risk, highly visible acquisition effort in a two-phased approach that culminated with the initial operational capability of the patrol boat program for the Iraqi Navy. This achievement will have a direct impact on the mission transfer of Iraqi coastal and oil platform security from the U.S. Navy to the Iraqi Navy in December 2011.

Analysis

Ms. Diane K. Mitchell, U.S. Army RDECOM, Army Research Laboratory

Ms. Diane Mitchell conducted analyses that predicted the complex relationship among Soldier cognitive performance, system design and overall mission performance for crews of ground vehicles. She provided combat vehicle developers with the capability to include Soldier cognitive performance considerations in their determination of vehicle crew size requirements. She extended the analytical state of the art for Army crew size analysis by using a combination of human performance modeling tools, cognitive task analysis, and elicitation techniques.

Cross-Function

MSgt Kevin R. Furtick, USAF, 315th Training Squadron, 17th Training Group, U.S. Air Force

MSgt Furtick led the expansion of the M&S footprint in Operation Lone Star to meet all conventional warfare and symmetric operations training objectives. He planned and executed an AFSERS (Air Force Synthetic Environment for Reconnaissance and Surveillance) expansion that quadrupled the 315th Training Squadron's ability to support complex training requirements. Additionally, he helped stand up the first-ever M&S-driven distributed mission training between 17 TRG and JICTC (Joint Intelligence Combat Training Centers). MSgt Furtick's efforts enabled the school house to double the output of intelligence analysts prepared for full spectrum combat operations.

Lifetime Achievement

Mr. Richard L. Schaffer, Lockheed Martin

Beginning with his pioneering work in SIMNET, Richard Schaffer has had a tremendous influence on DoD training and simulation. He has led the development of community standards including SIMNET, DIS, and the HLA RPR-FOM. He is one of the "fathers" of JSAF and has led the development of many influential and ground breaking simulations, including the VE LCAC, the AAV Turret Trainer, the DVTE CAN, the Helicopter Control Officer Vertical Flight Deck Trainer, and the Infantry Immersion Trainer.

M&S Awards cont. on page 11

Who's where

■ **Peter Marquez**, former director of space policy for the White House National Security Council and a central figure in shaping President Barack Obama's national space policy, has joined Orbital Sciences Corporation as vice president of strategy and planning.

■ L-3 Link Simulation & Training, a division of L-3 Communications, New York, announced the appointment of **Lenny Genna** as L-3 Link's vice president of rotary-wing, unmanned aerial and ground training systems. He was the division's director of engineering.

■ Through a partnership with NASA to reinvigorate space-related research critical to the agency's mission, astronaut **Rick Linnehan** has joined the research staff of Texas A&M University, College Station, Texas, on temporary assignment as director for space science, policy and education.

■ BAE Systems announced that **George Rose** will retire March 31 after 13 years as group finance director. **Peter Lynas**, director of financial control, reporting and treasury for the group, will succeed Rose. Lynas will be appointed as execu-

tive director of BAE and serve on its executive committee.

■ **Brig. Gen. Otis G. Mannon**, USAF, has been nominated for promotion to major general. He is special assistant to the commander of U.S. Air Force Special Operations Command, Hurlburt Field, Florida.

■ **Luiz Carlos Aguiar** has been named president of Embraer Defense and Security, a new unit of the Brazilian aerospace company Embraer. He was Embraer's chief financial officer.

■ The New England Chapter of the Human Factors and Ergonomic Society, Cambridge, Massachusetts, recognized Draper Laboratory Fellow **Hui-Ying Wen** for her research into a simulation framework to evaluate options for automating tasks or assigning them to the onboard crew in lunar landing missions. Wen's simulation framework would enable engineers to examine the benefits of various levels of automation early in the design process. While her research addresses the issue of automation in the context of lunar landing, the simulation concept could be applied to other missions in space or other domains where humans need to work with complex systems.

M&S Awards from page 10

Training

VESSEL Team

Raytheon BBN Technologies, Alion Science and Technology, IDSI, UCF and IDEAS

The VESSEL development team, led by Raytheon BBN Technologies, has demonstrated outstanding achievement in three major areas: the creation of a fully-deployed, award-winning serious game; the advancement of the science of game-based learning; and the development of an active community of interest within the Modeling and Simulation community. They have addressed a major training gap for every U.S. Navy recruit, using low-cost technologies, and have advanced the general understanding of how to design effective training games.

Border Hunter Research Team

USJFCOM, UCF-IST, PSE, Anacapa, CPG and NAWCTSD

The multidisciplinary, multiagency Border Hunter Research Team embodied the spirit of collaborative research. They executed a uniquely robust training evaluation, and delivered detailed results in six months. They developed cognitive models of expert "Combat Hunters," metrics for trainees, and a domain content model of relevant skills. The team's research lays the groundwork for well-informed, systematic extensions to similar future training systems.

NTSA Presents 2010 Governor's Award to **RICHARD SCHAFFER**

After announcing the winners of the 2010 NTSA Modeling & Simulation Awards, NTSA presented the 2010 Governor's Award for Outstanding Achievement in Modeling & Simulation to Mr. Richard Schaffer of Lockheed Martin.

RADM Fred Lewis, USN (Ret), who presented the award, noted that the Awards Committee vote for Mr. Schaffer was unanimous — a first for the Awards Committee.



Mr. Dale Bennett, Lockheed Martin; Mr. Richard Schaffer, Lockheed Martin, the recipient of the 2010 Governor's Award; and RADM Fred Lewis, USN (Ret), NTSA

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

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