

# NTSA's Training Industry *news*

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## Current *news*

### Interest Rises in Arming Ground Robots

Reprinted from *Defense News*

Pentagon officials haven't hesitated to arm unmanned aerial vehicles and strike targets in Afghanistan, Pakistan and even Africa this past decade. But those same leaders start hemming and hawing when the discussion turns to arming ground robots — a topic that military officers and industry leaders say the services need to reconsider.

Lt. Col. Stewart Hatfield, chief of the U.S. Army's lethality branch, finished a year in Afghanistan, where he helped oversee the service's unmanned ground fleet. Now he works on requirements and said it's time the service considers the requirement for an armed unmanned ground vehicle. Too often, the discussion over armed unmanned ground vehicles falls into an ethical debate that some, like Hatfield, admit is colored by Hollywood movies such as "The Terminator." Hatfield fielded questions about the potential for future Terminators joining squads of Army soldiers.

"Are we going to get to a point where we have a Terminator as a member of the squad? Maybe," Hatfield said. Rather than an ethical debate, Hatfield calls arming ground robots more an accountability concern because he expects accidents to happen. "We can't expect perfection," he said. "If we want perfection, we are never going to field."

### Defense Contractors: A Case for Top-Tier Consolidation

Reprinted from *Aviation Week & Space Technology*

In Washington, it is now widely accepted that cuts to U.S. security spending will go well beyond the \$330 billion, 10-year haircut approved by Congress early this month. If bitterly divided lawmakers cannot agree this year on a way to cut another \$1.5 trillion from the U.S. budget, the Pentagon's baseline budget will automatically be returned in 2013 to its fiscal 2007 level—and remain there for another eight years.

That is a worst-case scenario, and there are many theories about what could happen. One of the more interesting scenarios is being laid out by consultant

Martin Bollinger, the global practices leader at Booz & Co. He predicts that Congress will settle on \$450 billion in additional cuts to Pentagon spending. Adjusting for inflation, that would put the Pentagon's top line about where it was at the peak of the Reagan buildup in the mid-1980s. "It's not the end of the world," Bollinger says.

The problem is that research and weapons procurement accounted for half of the budget back then. Today it is just a third, squeezed by mushrooming personnel expenses such as health care. The bottom line, Bollinger says, is research and procurement funding could fall by 40 to 50 percent from its peak in 2008, not far from the gut wrenching 51 percent decline seen after the Cold War.

And here is where his theory gets really intriguing: While the Obama Administration has said it will not allow further consolidation among first-tier contractors, Bollinger believes some segments of the industry might ultimately be permitted to consolidate and become the sole provider of a given product. "We may buy a lot of Joint Strike Fighters [from Lockheed Martin], but if there aren't more competitions how does somebody else stay in that business?" he asks.

This "arsenal model" is hardly a new idea. U.S. nuclear weapons production is centered in government-owned labs. Six years ago, antitrust regulators allowed Lockheed Martin and Boeing to combine their rocket launch operations into United Launch Alliance when there was not enough demand to sustain two providers. And Russia is finishing a massive round of consolidations under an arsenal model to sustain its defense capabilities.

Then again, it is hard to imagine taxpayers benefiting from a lack of competition. EADS's dogged presence in the U.S. Air Force's tanker competition, for example, forced Boeing to lower its bid by more than \$10 billion to win. But with few new platforms in the development pipeline, Bollinger says there may be no other choice but to allow top-tier consolidation. "We may get there whether we want to or not."

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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.

## For NTSA Members:

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Although I/ITSEC 2011 is fast approaching, a number of other events have recently taken place which demonstrate that the pace of developments in the world of modeling and simulation is ever faster and more exciting. Not surprisingly, many of these deal with new applications for M&S--evidence of how rapidly the technology is morphing into regions that only a few years ago were not imagined.

I recently visited the Nicholson Center for Surgical Advancement at Florida Hospital, where the daVinci surgical robot is transforming the way several critical procedures are performed. This remarkable device makes microscopically precise laproscopic surgery possible through a machine that faithfully traces the movements of a surgeon's hands. The implications for accuracy in the procedure itself, and for post-operative recovery, are dramatic. It is not an exaggeration to say that these devices are revolutionizing how several life-saving cancer interventions are conducted. But the Nicholson center is more than merely a stand-alone facility, no matter how advanced. It is, rather, a center for dissemination to the global surgical community of minimally-invasive surgical techniques through advanced teleconferencing. Each of a number of learning stations mirrors a typical surgical suite and is equipped with teleconferencing technology, enabling procedures to be monitored anywhere in the world. While the Nicholson Center is not unique in its use of robotic technology nor in its global learning program, it is a perfect example of how learning technologies are being revolutionized.

MODSIM World 2011, held in Virginia Beach in mid-October, provided another example of the pervasiveness of the technology today. The theme for 2011, "Overcoming Critical Global Challenges with Modeling and Simulation" testifies to the centrality of M&S to everything we imagine, produce or manipulate in any way. I was honored to be asked to offer a few remarks during MODSIM, and to attend a number of the remarkably diverse sessions held during the three-day event. Topics addressed at MODSIM ranged from distance training to human behavior to just in time delivery for manufacturing. Signifying the importance the Commonwealth of Virginia ascribes to M&S as it looks to its economic future, Governor Bob McDonnell delivered the keynote address at MODSIM.

As a consequence of the obvious advancement of modeling and simulation into every corner of our daily lives, we at NTSA have decided that now is the time to bring together all the diverse ele-

ments of the technology into an inter-disciplinary, inter-agency, inter-organizational framework to advance the interests, goals and objectives of the technology and community of practice in a more unified, orderly manner. We are therefore in the process of establishing the National Modeling and Simulation Coalition (NMSC). An interim board has been named, and the mission and objectives of the new organization have been set out in preparation for an inaugural event to be held in Washington, DC on 6 February 2012. This event will be open to all who are involved in modeling and simulation in any way. Further details will be forthcoming; please check the web site and plan to attend the inauguration of what we intend will be the creation of a unified national community dedicated to the advancement of the technology and the fulfillment of its remarkable promise.

Finally, it is always a pleasant duty to announce that I/ITSEC is almost upon us once more. This year, we have further enlarged the Healthcare Pavilion to accommodate the ever-increasing number of exhibitors in that field. The "America's Teachers" program has likewise been expanded to include administrators along with teachers from three schools representing different regions of the country. By inviting teams with decision-making capability from each school, we hope that the information they obtain at I/ITSEC can be more directly translated into productive action once they return to their individual school districts.

Remarkably, I/ITSEC 2011 will again break all records for amount of exhibition hall space occupied by corporations, government organizations, and academic and research institutions from around the world. I say "remarkably" because this growth is being achieved in the face of what may well become reductions in defense and basic research of Draconian proportions. I can only conclude that there exists a general belief that modeling and simulation is so fundamental to our existence as an advanced society, and has such inherent advantages as to overcome any misgivings about its continued viability and dynamic growth. This is being manifested, I believe, by the large number of first-time exhibitors at I/ITSEC 2011. By making the decision to spend human and capital resources to be represented at I/ITSEC, these corporations are giving the technology a strong vote of confidence. I welcome all exhibitors, new and those returning, to what will clearly be another signal event for our community and industry.



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# The Global *marketplace*

## **U.S. Defense Firms Turning To Commerical Space for Revenue**

Reprinted from *Aerospace Daily & Defense Report*

U.S. defense cuts have led major players such as Lockheed Martin to try to make up for some revenue shortfalls by investing in their commercial satellite businesses, Arianespace Chairman and Chief Executive Officer Jean-Yves Le Gall observes. Boeing already made the transition several years ago when it pushed into the market by securing a deal to produce satellites for Inmarsat's Global Xpress, Le Gall said. This offering provides global high-speed mobile broadband services. In more recent times, Lockheed Martin executives signaled that their company will be boosting its investment substantially in commercial satellite technology, he added.

Arianespace sometimes works quite closely with Lockheed Martin. One such project is Vietnam's second telecommunications satellite, Vinasat-2, which Lockheed is building. Le Gall says Vinasat-2 will be lofted in the first half of 2012 aboard an Ariane 5 from the European spaceport in Kourou, French Guiana. In Le Gall's view, U.S. companies are formidable commercial competitors against European firms, thanks partly to a depreciating U.S. dollar.

## **Japan Looking Locally for F-X Fighter**

Reprinted from *Aerospace Daily & Defense Report*

Aiming for first delivery in 2016 of whichever foreign fighter wins its F-X competition, Japan will choose three primary local manufacturers for the aircraft. Established suppliers likely to be chosen include Mitsubishi Heavy Industries for the airframe, IHI for the engine and Mitsubishi Electric for the fighter's systems. A major challenge confronting the defense ministry is to preserve the country's fighter industrial base. The Eurofighter Typhoon, Lockheed Martin F-35 Lightning and Boeing F/A-18E/F Super Hornet are the contenders for the order of 42 aircraft.

The choice of local manufacturers was announced September 26 after the evaluation of open bids in which companies must set out their production capacity and details of their plant and engineering resources, a defense ministry spokesman says.

Japan needs to settle this issue quickly so it can get on with negotiations with the foreign governments that would have to clear the manufacturing licenses. It plans to conclude those negotiations by next year. The need to get the licenses nailed down by then is, in turn, driven by Japan's aim of receiving the first F-X fighter in 2016.

## **U.S. to Sell Global Hawk UAVs to South Korea**

Reprinted from *Jane's Defence Weekly*

The Obama Administration plans to sell four Northrop Grumman RQ-4B Global Hawk Block 30 high-altitude long-endurance unmanned aerial vehicles to South Korea, U.S. officials told Jane's. "We're in the final process of proposals and just waiting to do the congressional notification," said one U.S. official. "That should come in the next few weeks." Under the terms of the pending deal—of which the White House plans to notify the U.S. Congress within weeks—Seoul would receive two RQ-4s and an accompanying ground control station in 2015, with the remaining two aircraft to be delivered the following year. The production contract is expected to be worth \$850 million, a U.S. official said.

## **Russia Sees 1,000 T-50 Sales**

Reprinted from *Aerospace Daily & Defense Report*

Russia is projecting it may sell as many as 1,000 T-50 fighter aircraft in the coming decades. In addition to sales to the two countries already signed onto the program, Russia and India, the Tsamto analysis center associated with the Russian defense ministry sees at least 274-388 aircraft being sold to more than ten other countries. Algeria, Kazakhstan and Syria are seen as potentially among the first export buyers of the fifth-generation Sukhoi fighter currently in flight testing. Sales to those three countries could come as early as 2025. Two aircraft are now participating in the flight test program. In Latin America, Tsamto sees prospects for sales to Brazil, Venezuela and Argentina. Venezuela is seen as the first potential buyer, in the 2027-2032 timeframe. Iran is seen as a prospect assuming the arms embargo now over the country is dropped.

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*Current from page 1*

### **China Claims Strides in Engine-Related Metallurgy**

Reprinted from *Aerospace Daily & Defense Report*

Chinese missile and space group Casic is claiming significant but unspecified advances in titanium-aluminum intermetallics, a form of metallurgy used in gas turbines, such as aircraft engines. The No. 159 factory attached to the state company's Third Institute began researching the smelting and casting of titanium-aluminum intermetallic compounds at the beginning of the year, Casic said in a statement. "This technology offers excellent characteristics in withstanding high temperatures and a density lower than that of titanium alloys," Casic said. "The material is suitable for military and civil uses and prospectively has wide market applications."

### **Cloaked in Pixels**

Reprinted from *Defense News*

An enemy combatant picks up his hand-held infrared camera and scans the terrain. What he thinks he sees are some trees and a Toyota pickup truck. The trees are real enough, but the innocent-looking truck is actually an armored vehicle mimicking the heat signature of the civilian machine. It may sound like the stuff of science fiction, but the Swedish armored vehicles arm of BAE Systems has developed and field-tested a system that effectively makes vehicles, ships, aircraft and even buildings invisible to infrared surveillance and targeting sensors.

With a flick of a switch, the Adaptiv system of hexagon-shaped, thermally controlled pixels fitted in panels to the outer surface of your machine can turn you into a boulder or tree, or mimic another vehicle. You can pick the signatures you want from a pre-designed mission library covering desert, urban or other terrain, or you can do what BAE executives describe as "grab and copy" to instantly replicate the thermal signature of another vehicle or the surrounding countryside or town.

### **Sensors Provide Edge in Finding Explosives in Afghanistan**

Reprinted from *Aviation Week & Space Technology*

Newly-developed sensor technologies are helping U.S. forces take the fight against the Taliban to bomb-making factories, where insurgents craft improvised explosive devices (IEDs) before those lethal explosives reach the streets. Using hyperspectral sensors, commanders could locate the facilities where IEDs are made, a key step toward crippling the Taliban's logistics operations and withdrawing allied forces as planned by 2014. This sensor market is also budding, a rarity in an increasingly austere budget climate.

Hyperspectral sensors are unique because they collect data on a target across the electromagnetic spectrum, beyond the visible light and infrared bands typically targeted by optical sensors. New hyperspectral sensors can collect data in a far greater number of bands. For example, the sensor is able to discriminate between camouflage and a tank because it can separate the spectral prop-

erties, or "signatures", of the substances comprising the different targets. Pentagon officials have been building a database of the spectral signatures of specific substances that they are seeking in Afghanistan; this allows the sensors to "filter" their results and tailor them for a mission.

### **U.S. Voices Its Continued Concern Over China's Rise**

Reprinted from *Jane's Defence Weekly*

The United States believes that China's continuing military development has allowed it "to pursue capabilities that are potentially destabilizing to regional military balances, increase the risk of misunderstanding and miscalculation and may contribute to regional tensions and anxieties." That was the message put out by Michael Schiffer, U.S. Deputy Assistant Secretary of Defense for East Asia, on August 25 as he introduced "Military and Security Developments Involving the People's Republic of China", the Pentagon's 2011 report to Congress on the emerging Asian superpower.

Noting that China sees the next decade as a period of "strategic opportunity", the report said Beijing was unlikely to stray from "Deng Xiaoping's dictum from the early 1990s that China should... 'hide our capabilities and bide our time.'" However, it does note that "China's growing economic and military confidence and capabilities occasionally manifest in more assertive rhetoric and behavior when Beijing perceives threats to its national interests or feels compelled to respond to public expectations."

### **China Adds an ICBM Brigade**

Reprinted from *Defense News*

China is boosting its ICBM capabilities, while Washington is reassuring Chinese officials that its ballistic missile defense systems are not deployed against them. China has added a new road-mobile brigade whose Dong Feng 31A (DF-31A) missiles can reach any location in the continental United States, according to a paper released on September 12 by the Project 2049 Institute. Authors Mark Stokes and L.C. Russell Hsiao said the 805 Brigade, located in Shaoyang City, Hunan, is the second brigade in the Second Artillery Corps to get the 11,200-kilometer DF-31A. The first was the 812 Brigade in Tianshui, Gansu province, which achieved initial operational capability in 2001. In 2006, SAC's 813 Brigade in Nanyang, Henan Province, received the basic DF-31, whose 7,200-kilometer range allows them to hit all of Asia, Russia and the western half of the Pacific, including Alaska and Guam. SAC, which is responsible for China's ballistic missiles and nuclear weapons, has been slowly replacing older liquid-fueled silo-based DF-4s with solid-fueled road-mobile DF-31s. China now has around 30 DF-31s and DF-31As.

### **Indian Shipbuilders Join Forces On Warships**

Reprinted from *Aerospace Daily & Defense Report*

Indian state-run shipbuilder Mazagon Dock Ltd. has entered into  
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# Training & Simulation *report*

## SimCom Acquires Simulators

Reprinted from *Aviation Week & Space Technology*

The down economy is producing new opportunities for SimCom, which is picking up 14 more simulators and associated courseware from FlightSafety International. SimCom executives decided when the downturn hit to continue to build the business through acquisition of equipment already on the market, even while they slowed down the purchase of new simulators, says founder and Chief Executive Officer David Wally. The company was able to pick up simulator and training programs from CAE and the former PrestoSim facility in Dallas. The FlightSafety deal, however, will be its largest in terms of equipment, with flight trainers up to 59 from the 26 the company operated in 2006.

## NATO Training Federation Configuration Control Board Extends JTLS Capabilities

Reprinted from Rolands & Associates Press Release

NATO has identified an initial set of simulations that will be the nucleus for training in their areas of operations for the foreseeable future. These simulations, the joint theater level simulation, the joint conflict and tactical simulation and the Virtual Battlespace 2 comprise the NATO Training Federation. The first NATO Training Federation Configuration Control Board was held in Rome, Italy, in September 2011. The purpose of the meeting was to establish configuration control board procedures for the continued development and fielding of the NTF.

Dr. Cayirci, NATO/JWC chaired the meeting. Attendees included representatives from the NATO's JWC, JFTC, M&S COE and C3A, the U.S. JS J7 JCW, ACT, the United Kingdom, Rolands & Associates Corporation and Lawrence Livermore National Laboratory. The preliminary results of this meeting included having the joint theater level simulation serve as the umbrella model in the NATO Training Federation. A procedure to capture user requirements was offered and future validation and prioritization techniques were discussed. The requirements and recommendations by other nations are welcome and should be sent to the NATO Training Federation Configuration Control Board members for consideration.

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 operational pictures and has been interfaced with many C3 systems.

## L-3 Wins Contract

Reprinted from *Defense News*

L-3 Link Simulation & Training has been awarded a foreign military sale contract from the U.S. Navy Naval Air Systems Command's Training Systems Division to upgrade Canadian Air Force CF-18 flight simulators at Cold Lake, Bagotville and Ottawa, an L-3 statement said. "This upgrade effort will enable Canada to rapidly gain training system concurrency with its CF-18 aircraft while increasing simulation fidelity at the lowest risk and cost," said Leonard Genna, president of L-3 Link.

The upgrade of Canada's six full-fidelity air combat emulators and 10 part task trainers will incorporate the same level of fidelity integrated today on L-3 Link-built U.S. Navy and Marine Corps tactical operational flight trainers. In addition, the C-18 training systems will be integrated with Canadian-unique aircraft capabilities, according to L-3.

## Upcoming events

REGISTRATION IS OPEN FOR THESE UPCOMING EVENTS.

NOVEMBER 28 - DECEMBER 1, 2011  
I/ITSEC CONFERENCE • ORANGE COUNTY  
CONVENTION CENTER • ORLANDO, FL

JANUARY 27 - FEBRUARY 1, 2012  
INTERNATIONAL MEETING ON SIMULATION  
IN HEALTHCARE (IMSH) 2012 • SAN DIEGO, CA

FEBRUARY 6, 2012  
NATIONAL MODELING & SIMULATION  
CONGRESS • L'ENFANT PLAZA HOTEL  
WASHINGTON, D.C.

FEBRUARY 21-22, 2012  
TESTING & TRAINING CROSS TALK  
FORUM: MAXIMIZING TEST & TRAINING  
COLLABORATION ON SHARING OF RANGE  
RESOURCES • SANDESTIN GOLF AND BEACH  
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### **India Opens Fighter Bids in October**

*Reprinted from Aerospace Daily & Defense Report*

India opened commercial bids of its two short-listed vendors for the \$11 billion medium multi-role combat aircraft in the middle of October, with the deal likely to be finalized by the end of this year, the Indian Air Force chief said. "We have a meeting of the Defense Acquisition Council, where some of the issues are going to be discussed. Once those issues are cleared we should be in a position to open the bids," Air Chief Marshal Norman Anil Kumar Browne said. "We are in final stages of this process and hopefully [will] be done by the end of the year."

In April, India downselected the Eurofighter Consortium's Typhoon and Dassault's Rafale as the final contenders for the 126-fighter deal. The two bidders have extended their offers until December; the Indian government has to decide the final winner by then or the bids will expire. The medium multi-role combat aircraft tender was issued in August 2007. Boeing's F/A-18, Lockheed Martin's F-16, the MiG-35 and Saab's Gripen were rejected by the Indian government.

### **Thales Bolsters Brazil Presence**

*Reprinted from Aerospace Daily & Defense Report*

In a further sign that aerospace and defense companies are shifting their focus in hot growth markets, Thales has taken full ownership of Omnisys, a Brazilian electronics firm it already had a stake in. The goal is to use Sao Bernardo do Campo-based Omnisys as a broader route into the potentially lucrative Brazilian market. "The company will manage transfers of technology for the major programs that are due to be launched in Brazil in the coming years," says Laurent Mourre, Thales's director for Brazil.

The cost of the transaction has not been disclosed. The deal could be particularly important if the Dassault Rafale fighter prevails in Brazil's F-X2 fighter competition against the Boeing F/A-18E/F and Saab Gripen, because of the extensive technology sharing and offset requirements. However, French aerospace and defense companies also are chasing other Brazilian programs, so a route to deliver the requisite offset packages is vital.

### **RAND: Aircraft Deals with Western Firms Help China's Military**

*Reprinted from Defense News*

A new RAND Corporation report warns that European and U.S. civil aerospace companies are inadvertently improving China's military by providing dual-use technologies and expertise while doing business with Chinese commercial aviation firms. "Ready for Takeoff: China's Advancing Aerospace Industry," by RAND researchers Roger Cliff, Chad J.R. Ohlandt and David Yang, follows the recent unveiling of the J-20 Black Eagle stealth fighter jet and confirmation that China will begin sea trials of its first aircraft carrier this year.

China's market is far too lucrative to be ignored by Western

aerospace companies, especially as European and U.S. military and civil aviation budgets shrink. The nation's airlines will add 4,000 jetliners in the next two decades to the 1,400 they already operate, while the helicopter market will grow from the current 200 aircraft to 1,200 by 2018, the report says. But the economic opportunities come with dangers, the report said. High-bypass turbofan jet engines sold to Chinese airlines share components of low-bypass turbofan engines used on high-performance aircraft. Autonomous flight-control systems can be used on military unmanned aerial vehicles. Many satellite types, including communications, weather forecasting, and positioning, navigation and timing, have both military and commercial applications. In addition, the rockets that put them in orbit can be used for either purpose.

### **Oto Melara: Canards Double the Range of 76mm Guns**

*Reprinted from Defense News*

It is a small munition, just five kilograms, and is designed to be fired from the widely used 76mm naval cannon, but designers in Italy think it is big enough to shake up the rules of naval warfare. The secret to Oto Melara's Vulcano 76 new munition is moveable fins, or canards, and GPS to hit targets with precision up to 40 kilometers away, doubling the range of standard, nonprecision 76mm gun munitions. And that, the designers argue, will allow any of the 55 navies that use the 76mm gun to punch above their weight and become viable providers of precision naval fire support, from a safe range, as littoral operations become increasingly frequent. "We looked at how many littoral ships already have the 76mm gun and estimate that there are 300 guns which could be eligible for this technology in the next 10 years," said Massimo Gualco, Oto Melara's head of naval systems, launchers and ammunition.

### **Iraqi F-16 Buy Moving Forward**

*Reprinted from Aerospace Daily & Defense Report*

Iraq has sent its first payment to the U.S. for the purchase of 18 F-16 fighters, according to Pentagon officials, marking a major step toward rebuilding the country's air force. Baghdad is buying the Block 52 variant of the Lockheed Martin single-engine aircraft in a deal worth \$3 billion, adding roughly one more year of work for Lockheed Martin's Fort Worth assembly facility. Company officials recently voiced concern that slow activity on the Iraq sale as well as a pending deal with Oman was forcing the company to fund some of its suppliers.

Deliveries of the Pratt & Whitney F-100-PW-229-powered aircraft will take place in 2014 and 2015, according to Lockheed Martin officials. "These aircraft will help provide air sovereignty for Iraq to protect its own territory and deter or counter regional threats," according to a senior defense official. "They are also a symbol of the commitment to a long-term strategic partnership between the United States and Iraq.

# Contracts

## Overhaul Wartime Contracting: U.S. Panel

Reprinted from *Defense News*

The Commission on Wartime Contracting is calling for major reforms in contract planning, oversight and enforcement after concluding that as much as \$60 billion in U.S. government contract spending was wasted or lost over the past decade in Afghanistan and Iraq. The commission estimated in its final report that waste accounted for up to 20 percent of the \$206 billion spent in the two countries between fiscal 2002 and 2011, and up to another nine percent was lost to fraud. But some U.S. contractor industry representatives are bristling at some of the recommendations, saying they overlook the “messy realities” of war and redevelopment efforts.

Professional Services Council President Stan Soloway agreed with the commission’s recommendations that better acquisition planning and an improved contract management and oversight workforce would improve contingency operations. But he criticized a commission finding that long-term task orders that avoided competition led to some of the waste.

The U.S. Army awarded billions of dollars worth of uncompleted task orders under its primary logistics contract in Iraq, LOGCAP III. The commission recommended limiting the length of task order performance periods and expanding competition when only one bid for a task order is received. Pentagon spokesman Col. Dave Lapan said the Defense Department qualified more vendors under the LOGCAP IV contract. LOGCAP IV is being used for wartime support and reconstruction in Afghanistan.

But the commissioners said the small vendor list—of only DynCorp, KBR and Fluor—makes competition inadequate. The contract provides little incentive for contracting officers to break out subcontracts or hold competitors for new requirements, the panel said. Soloway said having such contracts in place allows the government to respond quickly with contractor support, without having to wait for what can be a lengthy and complex procurement process.

## Lockheed Martin Lands Finnish Contract

Reprinted from *Jane’s Defence Weekly*

Lockheed Martin Missiles and Fire Control has been awarded a \$45.3 million contract to upgrade the complete fleet of 22 Finnish Army M270 tracked multiple launch rocket systems. The company will provide kits for the systems to be upgraded in Finland under a technical assistance agreement with local company Millog Oy. Modifications will include the installation

of the universal fire control systems (UFCS). Finland becomes the third international customer for the UFCS upgrade, with the others being Bahrain and the UK, which operates the system in Afghanistan.

## USN Awards DDG 1000 Contracts

Reprinted from *Defense News*

Contracts to begin primary construction of the second and third DDG 1000 Zumwalt-class destroyers for the U.S. Navy were awarded September 15. Work on long-lead items for both ships—the Michael Monsoor (DDG 1001) and yet-to-be named DDG 1002—already has begun at General Dynamics Bath Iron Works in Bath, Maine, but the most recent awards allow primary fabrication to be carried out.

The \$1.8 billion contract is valued at more than \$2 billion should all options be exercised, the Navy said. The new contract does not cover work being done for the ships by other major contractors such as Raytheon, which is building the combat systems and much of the electronic gear, and Huntington-Ingalls Industries, which is building the composite-construction superstructure. The new, fixed-priced incentive contract includes firm-fixed-price line items for class-common equipment, the Navy said.

“The pricing approach shares the risk of over-target cost growth between the government and industry and establishes a ceiling on the government’s liability,” the Naval Sea Systems Command said in its announcement of the contract award. “If the cost exceeds the ceiling, industry would have to bear those additional costs.”

## Saab Radar for LCS

Reprinted from *Defense News*

Saab and U.S. subsidiary Saab Sensis have been awarded contracts to supply the Sea Giraffe agile multi-beam (AMB) multirole naval surveillance radar for the U.S. Navy’s littoral combat ship program. Saab did not disclose the deal’s value. Saab Sensis will provide U.S.-based program management hardware and software adaptations, system integration, testing and total life-cycle support to General Dynamics Advanced Information Systems, which is responsible for the design, integration and testing of the ship’s combat and sea frame control systems. The Sea Giraffe AMB 3-D naval surveillance radar provides medium-range, multi-mission capability including 3-D surveillance of simultaneous air and surface targets and weapons.

# Who's *where*

■ **Jack Dorsett** has been appointed vice president, cybersecurity/C4 at Los Angeles-based Northrop Grumman. He was U.S. deputy chief of naval operations for information dominance and director of naval intelligence.

■ **Damon Cram** has been named director of marketing for simulation of FlightSafety International, based at New York LaGuardia Airport. He was business development and sales lead for commercial aircraft training at CAE.

■ **Mitch Alexander** has been promoted to manager from assistant manager of FlightSafety International's Learning Center in Daleville, Alabama. He succeeds **Ralph Hicks**, who has retired.

■ **Christian Marrone**, one of former U.S. Defense Secretary Robert Gates' key staff members, will join 3M as vice president for its emerging defense and federal government business. Marrone spent the past 6½ years with the Defense Department in several roles, including as special assistant and deputy chief of staff to the secretary.

■ **Francis "Chip" Sheller** has joined the Aerospace Industries Association as vice president of communications, the Washington-based industry group said. He was vice president for communications and government relations with Thales USA, Arlington, Virginia.

■ SAIC, McLean, Virginia, said that **Robert Zitz**, has joined its Intelligence, Surveillance and Reconnaissance group as senior vice president and chief systems architect. He was deputy director of mission support for the National Reconnaissance Office.

■ Northrop Grumman has appointed **Charles Phalen**, former CIA director of security, as vice president of corporate and enterprise shared services industrial security. He will also chair Northrop's security council.

■ The U.S. Senate has confirmed **Lt. Gen. Michael Hostage** as the next commander of Air Combat Command. Hostage, the commander of U.S. Air Forces Central who oversees air operations in Afghanistan and Iraq, will take over for **Gen. William Fraser**, who has led the command since September 2009.

■ **Hugh Shelton**, the U.S. Army general who chaired the Joint Chiefs of Staff from 1997 to 2001, was elected to the board of directors of L-3 Communications.

■ **Tim McKnight**, Northrop Grumman vice president and chief information security officer, has been elected chairman of the board for the Internet Security Alliance (ISA). The ISA is a multisector trade association established in collaboration with Carnegie Mellon University that represents an array of organizations, including the defense, security and technology sectors, that are concerned with information security.

■ Northrop Grumman Corporation, Los Angeles, elected **Thomas M. Schoewe** to its board of directors. Schoewe served as executive vice president and chief financial officer for Wal-Mart Stores Inc. from 2000 to 2010. Prior to that, he was senior vice president and chief financial officer for Black and Decker Corporation.

■ **James Cartwright**, former vice chairman of the U.S. Joint Chiefs of Staff, has joined the Center for Strategic and International Studies, Washington, as the inaugural Harold Brown Chair in Defense Policy Studies. Cartwright is a retired Marine Corps general.

■ **Bob Silsby** has become vice president of Chantilly, Virginia-based TASC's Business and Technology Office. He was a senior intelligence officer at the U.S. Central Intelligence Agency.

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a joint venture with Pipavav Defense and Offshore Engineering Company to build warships for the Indian Navy and the export market. The equal joint venture, announced September 12, will create an independent company to be named Mazagon Dock Pipavav Ltd. "This company will be executing the existing orders of Mazagon Dock worth 1 trillion rupees (\$21 .69 billion) and bid for future defense orders jointly," says Nikhil Gandhi, chairman of Pipavav Defense.

The partnership with Mazagon Dock will help Pipavav tap large government contracts for defense ships as well as submarines, boosting its revenue and shipbuilding capabilities, Gandhi says. "We are the first company in the private sector to get orders for frontline warships, and these are priced from \$100 million to \$6 billion each," he says. India has a huge demand-supply gap for warships of all categories. "We see opportunities of about \$25 billion to \$30 billion in India. ... Apart from government contracts,

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# Major Program *report*

## Money Talks

Reprinted from *Aviation Week & Space Technology*

As debate continues in and around the Pentagon about potentially delaying the next-generation CVN-78 Gerald R. Ford aircraft carrier, or canceling the next ship in the class—to be dubbed the John F. Kennedy (CVN-79)—recent contract awards from the Navy may indicate otherwise.

The armed service in late July awarded a \$504 million plus-incentive-fee contract modification to continue engineering associated with the Ford's construction.

Then it followed up this month with a \$56.5 million modification to continue long-lead-time material procurement for construction of the Kennedy. While those awards are barely a down payment on the estimated \$21.8 billion calculated by the Congressional Research Service, the contracts still send a definite signal that the Navy has no plans to retreat on its carrier construction schedule immediately.

More should be known about the Navy's long-term carrier plans when the fiscal 2013 budget plan is unveiled next February.

## Raptor, Lightning II Carry Hope of USAF Dominance

Reprinted from *Defense News*

The U.S. Air Force has bet its future on fifth-generation stealth fighters such as the F-22 and F-35, but the service hopes that developmental delays and falling budgets don't mean it has rolled snake eyes. Production of the F-22 Raptor was once slated to reach 750 aircraft but was capped at 187 after a decade of delay and cost overruns. Similar problems have beset the F-35.

The service, which plans to buy 1,763 aircraft, wanted to buy up to 100 aircraft a year, but available funding limits annual production to 48 for the foreseeable future. The price of the F-35 must come down if the Air Force is to recapitalize its fighter force, said Richard Aboulafia, an analyst at the Teal Group, Fairfax, Virginia. "In order to provide anywhere like the recapitalization rates that are needed, the price needs to get below \$80 million," he said.

## X-47B UCAS Could Remake U.S. Naval Aviation

Reprinted from *Defense News*

Landing a plane on a bobbing aircraft carrier deck is one of the hardest maneuvers for any pilot. It's a tricky dance that's been done for decades, but now that dance is about to get a little trickier. The task: Land an unmanned, persistent, low-observable aircraft on a moving carrier. And after that's done, refuel the drone from a tanker in flight.

For years, the U.S. Navy and Northrop Grumman have worked on precise navigation technology that will make this possible. This

year, the program stepped much closer to making this a reality. The tailless, bat-winged craft, dubbed the X-47B, flew for the first time in February.

And recently, an F/A-18 Hornet fighter jet equipped with an early version of the autonomous guidance software designed for the drone successfully landed on a carrier without a pilot on the stick and throttle.

This precision navigation equipment is a "key technology" that allows the unmanned combat air system demonstration (UCAS-D) aircraft to navigate on approach with an accuracy of less than 10, said Capt. Jaime Engdahl, UCAS-D program manager at Naval Air Systems Command.

While the primary goal of the UCAS-D program is to launch and land the aircraft on the carrier, officials must accomplish much more. Upon touchdown, crews must clear the drone from the runway within 45 seconds—no easy feat—so other aircraft can land.

## USN Starts Building Second Virginia-Class Sub for This Year

Reprinted from *Aerospace Daily & Defense Report*

The Electric Boat unit of General Dynamics started building the yet-unnamed SSS-787 Virginia-class attack submarine—the 13th vessel of the class and the second to begin construction this year.

This is the first time in 22 years the Navy is building two same-class subs in the same year, the service notes. The Navy pursued the two-per-year sub-building contracts to help curb costs and cut construction times. Electric Boat won the \$1.2 billion construction contract in April.

The design-for-affordability program involved redesigning portions of the Virginia class to reduce costs and construction time, the Navy notes. "The program has yielded significant cost savings for the Virginia class, reducing its per-submarine acquisition costs by nearly 20 percent while shortening their construction span from 84 months to 60," the service says. "These efforts significantly contributed to the Navy's transition to building two Virginia class submarines per year."

Navy officials cite the Virginia-class program as a template to procure and build other vessels such as the proposed SSBN(X) and use modified Virginias for ballistic missile missions to save on costs.

The redesigned Virginia would cost about \$3.5 billion, according to naval analyst and author Norman Polmar, compared to the SSBN(X) vessel slated to cost between \$5 billion and \$7 billion per each—provided the design and building of the new class plays out as planned.

## Certified Modeling & Simulation Professional (CMSP) Program Continues to Grow and Evolve

### History

The Certified Modeling & Simulation Professional (CMSP) program was born approximately ten years ago. Under the auspices of the National Training and Simulation Association (NTSA), the Modeling and Simulation Professional Certification Commission (MSPCC) was formed and tasked with developing and overseeing a professional certification program for the M&S profession. The MSPCC consisted of representatives from professional societies such as NTSA, SCS (the Society for Modeling & Simulation International), and SISO (the Simulation Interoperability and Standards Organization), as well as from various universities (University of Central Florida, Old Dominion University, University of Arizona, et al), and numerous corporations and government organizations.

The MSPCC developed – as a starting point - a single certification, the Certified Modeling & Simulation Professional (CMSP) certification. The initial certification was created, however, with an implicit understanding that the program would evolve through time, and would perhaps have multiple levels, tracks, and/or specialties in the future.

As part of the “pre-launch” of the program, two groups of individuals were awarded the CMSP certification:

- Pioneers: members of the MSPCC, Certification Board and Exam Subcommittee who led the establishment of the MSPCC and the subsequent certification process.
- Charter Members: individuals who were nominated by the community to participate in the first round of certification. These Charter Members, who were required to submit

an application detailing their qualifications and activities within the M&S community, provided additional test questions and/or feedback on beta versions of the exam.

### Interim Developments

The CMSP program opened to the general public in 2003. Each applicant was – and still is - required to complete the following steps to achieve CMSP certification, which is then valid for four years:

- Pay the \$250 application fee
- Submit an application meeting the required education and work experience requirements (outlined on the CMSP website at [www.simprofessional.org](http://www.simprofessional.org))
- Submit three professional letters of reference
- Pass the online CMSP exam, which consists of four sections, and which each applicant has thirty days to complete:
  - General M&S Knowledge
  - M&S Applications (Answer questions in three categories of your choice)
  - M&S Technologies (Answer questions in three categories of your choice)
  - Essay Question

Since 2003, approximately 250 individuals have attained the CMSP certification. While this number is not as high as the MSPCC had hoped, the CMSP is gradually achieving recognition as the standard of excellence for the Modeling & Simulation industry.

Over that same time period, many CMSPs have gone through one, or in some cases, two recertification cycles. The CMSP Recertification fee is only \$100, and all that is required is a  
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there are opportunities from offset obligations,” he added.

“Pipavav shipyard is licensed to make five warships a year, but we can enhance that to two dozen in the coming years as our yard is modular,” Gandhi said. “We have a partnership with six of the 10 global leaders for warships and submarines.” He did not name the six countries.

### Virtual Umbrella

Reprinted from *Aerospace Daily & Defense Report*

The U.S. and Australia are adding cyberspace to their Anzus Treaty, marking the first public pledge of allied cyberdefense outside of NATO. U.S. Defense Secretary Leon Panetta said the focus on cyberspace “is in large measure a recognition ... that cyber is the battlefield of the future, and that we are all going to have to work

very hard not only to defend against cyberattacks, but to be aggressive with regard to cyberattacks as well.” The move came via the annual Australia-U.S. Ministerial Consultations in San Francisco. Other topics included space cooperation, cooperation on U.S. missile defense programs, and progress made by the Bilateral Force Posture Working Group established last year in consultations in Melbourne. Australia this year said it was coordinating its force posture review with a global force posture review that the Pentagon has been mulling for U.S. forces.

### U.S. Army Cloaking Project Has Possible Sensor Payoffs

Reprinted from *Defense News*

Exotic sensors could be one of the first fruits from a U.S. Army project to develop materials capable of bending light around

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simple application outlining the individual's work and continuing education experience during the last four years.

### **New Developments**

A reconstituted CMSP Board of Governors has reviewed and revised every aspect of the program – all explained in a new Program Plan outlining every detail of how the program will be governed, managed, and administered.

The CMSP website ([www.simprofessional.org](http://www.simprofessional.org)) is in the process of being revised and updated to highlight this new Program Plan, and other new developments.

A major development is the addition of a second certification “track” and a corresponding revision of the CMSP exam structure. Applicants will now have the option of pursuing either the CMSP-Technical or the CMSP-Management certification. The CMSP-Management track was created for the community of managers, customers and users of Modeling & Simulation, who may have a great deal of expertise in M&S, but are not engineers themselves.

A new exam structure – along with almost entirely new exam questions – is now being implemented. Each exam will consist of randomly generated questions - a group of “core” questions, as well as numerous questions from categories covering more specific applications, domains, methods and techniques. Candidates will have the opportunity to “de-select” a certain number of sub-topics. The exam questions are all drawn from publicly-available, peer-recommended source materials, and have been reviewed by a QA team, as outlined in the Program Plan. Complete details on the new exam(s) will soon be available on the CMSP website at [www.simprofessional.org](http://www.simprofessional.org).

### **Future of the CMSP Program**

The CMSP certification has not yet reached widespread acceptance. But the MSPCC believes that the designation will become the industry standard in the years to come, and that: 1) those within the profession will feel compelled to get the CMSP credential, as it will both provide a concrete symbol of their knowledge and expertise, and also further their careers; and 2) companies will encourage/require their employees to pursue the CMSP credential – both to ensure that their employees are well-educated and certified, and to demonstrate this fact to their customers; and 3) customers will require companies doing work for them to have CMSP-certified employees, so that they have a reasonable expectation of competency and professionalism.

### **Please consider supporting the CMSP program in one of the following ways:**

- The easiest way you can support the CMSP program – and in doing so the stature of the Modeling & Simulation industry as a whole – is to apply for certification. The \$250 certification fee is very low, compared to most other professional certifications, and the way that the exam is structured, and the fact that it is administered online, means that as long as you approach the exam seriously, you should be able to pass it.
- Within your organization, please raise the issue of supporting the certification at the corporate/enterprise level. If your organization could commit – as a start - to requiring its five most experienced M&S professionals to attain the CMSP certification, that would result in tremendous growth and advancement for the program as a whole.

**FOR MORE DETAILS ON THE CMSP CERTIFICATION PROGRAM, PLEASE VISIT [WWW.SIMPROFESSIONAL.ORG](http://WWW.SIMPROFESSIONAL.ORG)**

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objects, a la the cloaking device used by the Romulans in the television series “Star Trek.” The Army Transformation Optical metamaterials project, based at the Army Research Office in North Carolina, is leading academic research on the substances called metamaterials. These composites of metallic and semiconductor components are showing optical properties beyond those of existing materials—hence the term metamaterials.

Army and university researchers are just beginning to understand them, however. “To make an invisible person or tank, that’s the long term. Maybe 10 years,” said Rich Hammond, invisibility research project manager at the Army Research Office in Raleigh-Durham, North Carolina. To disguise an object, the materials would have to channel all colors, or wavelengths, or visible light around the object so the viewer sees whatever lies behind it. Materials that bend all

wavelengths are proving difficult to develop.

Within a few years, however, devices might be able to bend light well enough to serve as alternatives to traditional lenses. Even with their limits, the materials portend a major optics breakthrough. Before metamaterials, light could be bent only “in the ways that nature gave us,” Hammond said. Creating a specific lens meant laborious work to grind it into just the right shape. “Instead, we now make the material do the work,” Hammond said. “For example, taking a big, bulky optical telescope and turning it into a thin slab. You could reduce size, weight and perhaps cost.”

Another possibility would be to create a sensor capable of all-around vision. Instead of having to build a complex lens, metamaterials in a regular lens could bend light to achieve the same effect.

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

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