

NTSA's Training Industry *news*

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Current *news*

India's New Strike Corps to Watch China

Reprinted from *Defense News*

India will create a Strike Corps of more than 30,000 troops to guard the Chinese border, as tensions have grown between the two neighbors in recent years. The Indian Defense Ministry has approved the Strike Corps plan and supported, "in principle," spending \$2.5 billion for the unit, said Defense Ministry sources. The corps should be ready in three years, sources said.

Additional airlift capabilities are part of the spending plan, which could see the purchase of more cargo aircraft, such as the U.S.-made C-17 Globemaster, by the Army, said the sources. In May, India cleared a plan to buy 10 C-17s for \$4.1 billion for the Air Force.

The Strike Corps will be in addition to the two mountain divisions (one division is about 10,000 troops) trained and equipped in the past two years and currently deployed along the Indo-Chinese border. India's military, numbering about 1.2 million troops, traditionally concentrated on the western sector near Pakistan. It is only in the past five to seven years that more focus has been placed on the eastern border with China, said a senior Army official.

Stronger Steel, in a Flash

Reprinted from *Defense News*

A Detroit entrepreneur has invented a heat-treatment that makes steel seven percent stronger than any steel on record—in less than 10 seconds—enabling carmakers to build frames that are up to 30 percent thinner and lighter without compromising safety, or allowing an armored vehicle to be reinforced without weighing it down, according to the journal *Materials Science and Technology*.

The steel, now trademarked as Flash Bainite, has tested stronger and more shock-absorbing than the most common titanium alloys used by industry, according to the journal article. The inventor, Gary Cola, used a process to rapidly heat and cool steel sheets that changed the microstructure inside the alloy to make it stronger and less brittle.

Poll: Majority Views U.S. Space Leadership as Essential

Reprinted from *Aerospace Daily & Defense Report*

A majority of Americans—even in the midst of a battered economy—believe it is essential for the nation to stand at the summit of space exploration, according

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NTSA PRESIDENT FRED LEWIS RECEIVES PRESIDENTIAL AWARD FROM THE SOCIETY FOR MODELING AND SIMULATION INTERNATIONAL

Meeting in the Hague on June 26, the Board of Directors of the Society for Modeling and Simulation International (SCS) awarded its first-ever Presidential Award to NTSA President RADM Fred Lewis USN (Ret.), for "Enabling the Modeling and Simulation Discipline". The Award, which will be given at most once every three years, "recognizes a substantial contribution to establishing Modeling and Simulation as a discipline in academia, industry and/or the government".

Recipients of this award are typically policy makers or high-level managers who, through their policies, have spearheaded efforts in advancing the discipline of Modeling and Simulation and, through their actions, have supported researchers in this discipline in their respective research efforts, according to SCS criteria. The recipient of the Presidential Award is determined by the SCS Awards and Recognition Committee, as part of its Contribution to the Profession Awards program.

Responding to news of the award, Adm. Lewis stated "I am deeply honored by this action as well as grateful for the recognition it implies, particularly emanating as it does from such a prestigious international organization. If I merit such an honor, it is through my day-to-day activities, many of which are unexceptional in and of themselves. I would nevertheless like to think that over the past years, my efforts may have contributed in some measure to the advancement of modeling and simulation—a discipline about which I grow ever more enthusiastic and optimistic."

For NTSA Members:

While I/ITSEC is of course NTSA's flagship event, it is by no means the limit of our activities on behalf of our community of interest. A dynamic and rapidly evolving technology such as modeling and simulation demands constant surveillance to examine trends, detect new opportunities and in general to keep astride of each and every promising development. The numerous and varied events we sponsor throughout the year are therefore as significant in the sum of their contribution to the body of knowledge as I/ITSEC itself. The past several months have witnessed several such events, each of which was remarkably successful in numbers of participants and well as in substance.

The Training and Simulation Industry Symposium (TSIS), held in Orlando in June, attracted attendance from all uniformed Services as well as a record number of participants. Topics covered included current R&D efforts, DARPA developments, medical simulation developments, and the latest on virtual worlds. Ideally placed between I/ITSECs, TSIS is perfectly situated to enable recalibration of knowledge, particularly as regards procurement opportunities within near and longer-term requirement frameworks and acquisition strategies.

The Advanced Distributed Learning Initiative "iFest" further contributed by addressing such diverse topics as prospects for intelligent systems, wounded warrior rehabilitation, games in the ADL environment, and cultural training. Again, quality of discussion and participation was of the highest order.

These and other NTSA-sponsored events throughout the year guarantee a constant intellectual accrual to the overall community of practice that widely spaced annual events such as I/ITSEC, even with its hugely important conference content, cannot alone supply.

On another front, I was pleased and honored to be invited to appear on the Francis Rose interview program on Federal News Radio. Our hour-long conversation covered the current state of M&S, its enormous future potential, and the need of the modeling and simulation community to attract young people so that the United States can maintain its primacy in the field. Federal News Radio targets a key demographic for NTSA—the government, defense and contracting communities, as well as the Washington political establishment.

Finally, international activities and events continue at a brisk pace under the aegis of the International Training and Simulation Alliance. This grouping, comprised of simulation industry associations from Australia (the Simulation Industry Alliance of Australia-SIAA); KTSA (the Korean Training and Simulation Association); ETSA (the European Training and Simulation Association); and NTSA, promotes the worldwide furtherance of modeling and simulation technology through a series of conferences and other events. Recently, the Simulation Industry Association of Australia held SimTecT2011 in Melbourne-- another in a series of very successful

events organized and sponsored by SIAA as part of overall Alliance activities.

Finally, I'd like to comment briefly on the situation in which our industry finds itself as we pass through a challenging fiscal era. Regardless of how the current political/economic melodrama in Washington plays itself out, it is clear that Defense Department funding is in line for substantial reductions. Even without further cuts now quite possible, the Defense Department's FY 2012 funding request is almost 40 billion Dollars below 2011 levels. Further substantial reductions are envisioned for 2013 and beyond. This regardless of whether the threat environment—internal and external—has been reduced or not.

Faced with diminished revenues and a continued and varied threat environment, we clearly must make optimum use of the resources at our disposal. The 2012 DOD budget proposes some 204 billion Dollars be dedicated to the Operations and Maintenance account, for training, personnel, and base construction and maintenance costs. This again is a substantial reduction in what DOD itself identifies as its most important priority—the maintenance of high morale and training excellence.

This need to do more with less in training plays directly into modeling and simulation's strengths. The backbone of our national defense—and indeed our national security as a whole—is the excellence and dedication of our men and women in uniform. This excellence derives for the most part from superb training and recognition of the need for preparedness at all times. Meeting these conditions leads to high morale and the conviction that success is inevitable, regardless of the mission.

How these conditions are to be achieved in a time of austerity becomes a vital concern, and the contribution of modeling and simulation training in this context is invaluable. No other technique allows for the substitution of so many expensive resources—fuel, equipment, maintenance, man hours—while providing training experiences that are as effective, or more so, than real world environments.

Costs for simulation-based training are included within the overall training category, and are therefore inherently difficult to separate and identify. Nevertheless, it is commonly assumed that simulation training saves several billion Dollars over what would be required to achieve the same training levels using only live training. These funds then become available for other badly needed purposes, easing the burden on the overall defense budget.

Dramatic advances in simulation based training, as well as modeling of all kinds, only imply further uses, some of which have only become evident in the past several years. For these reasons I remain not only optimistic about both the present and future of our technology and community, but exceedingly proud of the crucial contribution it is making to our national security and welfare on many levels.



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The Global *marketplace*

Australia Selects MH-60R Seahawk Helo

Reprinted from *Jane's Defence Weekly*

The Australian government has selected the Lockheed Martin/Sikorsky MH-60R Seahawk helicopter to fulfill the Royal Australian Navy's requirement for a new shipborne multi-mission platform optimized for anti-submarine warfare.

Announcing the decision on 16 June, Defense Minister Stephen Smith said that the administration was proposing to buy 24 MH-60Rs—in preference to the NH90 NATO frigate helicopter offered by Australian Aerospace—at a cost of “just over” AUD3 billion (\$3.2 billion).

“This new fleet of Navy combat helicopters will replace the existing [S-70B-2] Seahawk fleet. We expect that to occur over the period 2014 to 2020,” Smith told a media briefing in Canberra. He said that the MH-60R had been selected as the “low risk” option for several reasons: it is an updated version of the Royal Australian Navy's 16 existing Seahawks, its capabilities have already been proven in U.S. Navy service and “we very strongly believe it is value for money.”

To be based at HMAS Albatross Air Station in Nowra, New South Wales, each MH-60R will be armed with eight Hellfire and two Raytheon Mk 54 lightweight torpedoes (a type that lost out in an Australian competition in 1999 to the Eurotorp MU90). The 24-strong fleet will allow the Royal Australian Navy to have eight or more of the type concurrently embarked on the Royal Australian Navy's Anzac-class frigates and new Hobart-class destroyers.

U.S. to Streamline FMS Process

Reprinted from *Jane's Defence Weekly*

The U.S. Defense Department is to streamline its Foreign Military Sales program, which has overseen the delivery of defense equipment worth \$96 billion in the last five years. As part of the “top-to-bottom” review of Foreign Military Sales, the Defense Department has devised 11 “core initiatives” to improve flexibility and speed up the approval and delivery of materiel.

The Defense Department said on 13 June that it was testing a system to acquire pre-approvals for high-demand technologies, such as unmanned

aerial systems. Other proposals include working with customers to ensure they request pre-existing technologies rather than those in development and the Defense Department pre-buying a number of the highest-demand items so they are ready for dispatch. While not viable for larger equipment such as aircraft and ships, pre-stocking could be useful when receiving orders for night vision devices, said the Defense Department.

U.S. Navy Vice Admiral William Landay, director of the Defense Security Agency, which oversees the Defense Department's execution of the Foreign Military Sales program, said on 10 June that while customers were previously willing to forego swift delivery to reduce costs, they now often prefer a faster process.

“This is a different environment,” said Landay. “What we need to do is make sure that the Foreign Military Sales system we are operating is changing with that environment and, preferably, changing ahead of that environment so we can continue to support our customers.”

Obama Export Control Reform Moves Forward

Reprinted from *Defense News*

If approved, a new rule from the U.S. Commerce Department could remove the need for thousands of weapon components to obtain export licenses. The proposed regulation, published July 15, represents the next big step in the Obama Administration's export control reform initiative, which the president began in August 2009. The rule describes how the administration plans to move items off the U.S. munitions list (USML), which is administered by the State Department, and onto the commerce control list (CCL), overseen by the Commerce Department.

Items on the USML—from aircraft to generic parts and components—are all subject to the same controls. However, the CCL's controls are tailored to what the item is and where it is being exported. As items are transferred from the USML to the Commerce Department's jurisdiction, they'll be placed on a new list, which for now is being called the commerce munitions list.

There are 22 categories of items controlled

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to a new Pew Research Center poll. The survey also found that a small majority of citizens believe that NASA's 30-year shuttle program has been a good investment. The issue was a popular topic of news media reporting and commentary as the shuttle Atlantis and a crew of four astronauts fortified the International Space Station for the transition to commercial resupply and crew transportation.

On the top issue of U.S. space leadership, the results were split 58 percent to 38 percent in favor of those who believe it is essential to the nation. The numbers reflect support among those with college degrees (60 percent) as well as those with a high school education or less (57 percent). Support among households with the highest incomes (63 percent) was not that much greater than those that earned less than \$30,000 annually (57 percent). Support was strongest among Republicans at 67 percent and Independents at 57 percent, with Democrats trailing at 54 percent.

Underlying reasons for space program support are somewhat murky. However, 74 percent believe that the endeavor encourages interest in science and technology. A similar percentage believes the program produces scientific advances that result in at least some advantages to all Americans. Sixty-eight percent believe space achievements contribute to feelings of national pride and patriotism.

Czech Republic Backs Out of U.S. Missile Shield

Reprinted from Jane's Defence Weekly

The Czech Republic will not host an early warning center that was to be part of the proposed U.S. ballistic missile defense shield. This announcement was made on 15 June by Czech Defense Minister Alexandr Vondra at a joint press conference with U.S. Deputy Secretary of Defense William Lynn. Vondra said that following the NATO summit in Lisbon in November 2010, which plugged the alliance as a whole into the U.S. system, the entire anti-missile defense shield has been re-evaluated.

"In light of the Lisbon summit and other development, the original offer [to base an early warning center in the Czech Republic] will not be necessary," Vondra said following a meeting with Lynn. "We will examine other ways how the Czech Republic can participate in the [NATO] alliance's [missile defense] system." He added that it was always the desire of the Czech Republic to see the proposed U.S. anti-missile defense shield incorporated into NATO structures.

Defense Department Unveils "Operational Energy Strategy"

Reprinted from Jane's Defence Weekly

The U.S. Defense Department launched a broad effort to reduce the U.S. military's energy dependence on 14 June, releasing a White House-backed strategy that draws a direct link between heavy energy use and decreased combat effectiveness. Deputy Secretary of Defense William Lynn unveiled a new "Operational Energy Strategy" that goes beyond the environmental and eco-

nomics problems often associated with military use of energy supplies. The new strategy calls on the military to reduce the volume of fuel that it uses by improving the efficiency of weapon systems; diversifying energy supplies to avoid an over-reliance on petroleum-based fuels; and building energy security into future campaign planning and weapons acquisition programs.

Innovative New Chinese UAV Emerges

Reprinted from Aerospace Daily & Defense Report

The latest unmanned aircraft pictures from China show a reconnaissance truck with a joined wing and tail that could considerably increase range and payload and produce better handling at high altitudes. U.S. analysts already are suggesting that the new Chinese unmanned aerial vehicle design—with its 60,000-foot cruising altitude, 300-mile radar surveillance range and low radar reflectivity if it uses the right composite structure—could serve as the targeting node for China's anti-ship ballistic missiles. The ASBM threat against carriers finally has U.S. Navy officials worried.

Photographs emerging from Chinese internet sources, depicting the aircraft on what is likely Chengdu Aircraft Corporation's ramp, show a new design featuring a novel joined-wing layout. In the same size class as the General Atomics-Aeronautical Systems Inc. Avenger, and powered by a single turbofan engine, the new unmanned aerial vehicle is the most advanced Chinese design seen to date and the largest joined-wing aircraft known to have been built.

Former NASA Astronauts Request Stay of Execution for Shuttle

Reprinted from Space News

Several high-profile former NASA officials and a half-dozen astronauts made an eleventh-hour plea to save the space shuttle fleet from becoming museum artifacts, even as NASA Administrator Charles Bolden publicly touted the agency's plans for crewed exploration after the orbiter's retirement. The former NASA hands made their case in a June 30 letter to Bolden, warning the space agency's chief that retiring the shuttle fleet "will create an unacceptable flight risk for maintaining safe and reliable operations of the International Space Station." If critical life- or mission-support systems aboard the station failed, the letter writers said, "shuttles are the only spacecraft that can provide independent spacewalks for critical ISS repairs."

A Boost for Turboprop Maker?

Reprinted from Defense News

Aircraft maker Hawker Beechcraft sees increasing opportunities for two of its militarized turboprops in the coming years, especially with a projected decline in Pentagon spending over the next decade. The AT-6 attack plane and King Air 350 intelligence aircraft could complement jets in U.S. and international air force fleets because they can fly similar missions at a fraction of the cost, company officials say. "We think for a lot of reasons it fits in

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Training & Simulation *report*

F-22 Deliveries Halt as Grounding Continues

Reprinted from *Defense News*

Deliveries of F-22 Raptors to the U.S. Air Force have been halted due to the continuing suspension of flight operations for the stealthy fifth-generation air superiority fighter. Even though manufacturer Lockheed Martin continues to build the aircraft at its Marietta, Georgia, factory, the company is unable to do required flight testing for each aircraft as it leaves final assembly. Nor can government test pilots from the Pentagon's Defense Contract Management Agency fly their acceptance flights for new aircraft as they are readied for delivery.

The Raptors have been "stood down" since May 3, according to Air Force spokeswoman Capt. Jennifer Ferrau, due to a suspected problem with the aircraft's oxygen generator. The grounding is hurting the readiness of operational F-22 pilots, who cannot maintain their currency on the twin-engine jet. The Air Force is using simulators to ease the problem as much as it can.

"Pilots and ground crew continue to train in simulators and perform ground tasks to stay as proficient as possible. Once the aircraft are cleared to fly again, there will be a period where the pilots will need in-flight training to become fully proficient on the aspects of flying that simulators cannot replicate, Ferrau said. "Some live flight is required for high-G maneuvering flight, a true outside visual, and in-flight decision-making in a dynamic environment where simulators are lacking."

Aboard Virtual LHD

Reprinted from *Defense News*

Sailors will be able to use 3-D avatars to train on ships that are under construction, thanks to cutting-edge simulation technology being used in Australia. Minister for Defense Materiel Jason Clare visited KBR in Canberra to see a demonstration of the virtual landing helicopter dock ship, created using CryEngine 3 software developed for computer games. KBR has been contracted by Australia's Defense Department to create the interactive, three-dimensional replica of the first landing helicopter dock, scheduled to be delivered in the middle of the decade. Up to 100 personnel at a time can use this virtual ship to participate in simulated exercises from all over the country. In a department news release, Clare described the technology as "PlayStation with a purpose."

Dual-Dome Sim Deal

Reprinted from *Defense News*

ZedaSoft, Fort Worth, Texas, said it has been awarded a contract to provide a dual-dome reconfigurable F-16 simulator system by Lockheed Martin Aeronautics Advanced Development Programs group in support of the automatic collision avoidance technology

(ACAT) fighter risk reduction program (FRRP).

ACAT/FRRP is a follow-on phase to the ground collision avoidance system program developed with the U.S. Air Force Research Laboratories at Wright Patterson Air Force Base, Ohio. This new phase will test similar automatic collision avoidance technologies between U.S. Air Force aircraft. The dual-dome solution provides two F-16C reconfigurable cockpit systems in high-resolution large field-of-view display and projection systems from Immersive Display Solutions, and visual scene rendering software from MetaVR.

UK Draws Up Tri-Service Simulation Network Plan

Reprinted from *Jane's Defence Weekly*

Requirements for a tri-service distributed simulation network are expected to be confirmed by the U.K. Ministry of Defense during this summer. The project, known as the defense operational training capability, aims to link up all the simulation centers of the U.K. armed forces into a single network to allow inter-service training between units and personnel at separate locations. A tentative target of 2020 has been set for the network and its air, land and maritime components to be up and running, according to industry executives familiar with the project. Chris Mace, the ministry's director general for science and technology operations, is leading a study into the viability of the project and, once complete, requirements will be set by "customers" across the U.K. armed services. A procurement competition is also expected to be launched.

The project is described by industry executives as potentially one of the most important U.K. procurement efforts during the coming decade and one that will eventually require all the existing simulator devices in use by the U.K. armed services to be replaced or significantly modified. The main users of the service will be tri-service front-line units rather than organizations carrying out basic or recruit training. The project is expected to cost several hundred million pounds over its life, say industry sources. It is also expected that the defense operational training capability would save the Ministry of Defense several billion pounds in fuel and other running costs by allowing live training events to be replaced by networked or distributed simulations. The concept also envisages linkages between simulated and live training events. Contenders to bid for the project are expected to include BAE Systems, Lockheed Martin and Boeing. QinetiQ has also already created a team of personnel to work on the project.

Shifting Market

Reprinted from *Defense News*

The U.S. Defense Department sees more international companies

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becoming players in the modeling and simulation field in the coming years, but for now, U.S. corporations remain the dominant providers. Still, the Defense Department expects an increase in foreign corporations purchasing domestic modeling and simulation companies, said a March report by the Office of the Assistant Secretary of Defense for Research and Engineering. The report was mandated by the 2010 Defense Authorization Act.

Moreover, the Pentagon sees these multinational companies providing more competition in the Defense Department modeling and simulation marketplace, the report said. "Hence, the already-global modeling and simulation marketplace will continue becoming less U.S.-centric as hardware, software and intellectual capital will be increasingly shared," the report said.

A number of companies, particularly in the United Kingdom, want to enter the modeling and simulation market, according to Jeffrey Houle, an attorney and chair of DLA Piper's Defense and Government Services Transactional practice. "The most efficacious manner in which to enter the market is to acquire an existing U.S. platform," Houle said.

This is because a "small fraternity" of U.S. companies perform this technical work and have, over time, built up a trust factor with the Pentagon. Years of leadership in modeling and simulation research and development has allowed the United States to set global standards. The U.S. modeling and simulation industry has driven research in computer hardware, software, visualization and display systems, communications, and in operations.

The simulation workforce is "unmatched," and the best scientists and technologists in the field have tended to remain in the United States, the report said. But that could be changing. "Other countries have developed effective processes that insert U.S.-developed technology into their own products, which are sold globally," the report said. "Other countries are also improving their academic and industrial research and development capabilities while reversing the historic 'brain drain' by growing a new generation of researchers in modeling and simulation-enabling fields and welcoming home more graduates of U.S. institutions."

Despite this shift toward more international participation, the U.S. modeling and simulation industrial base is "robust and fully able to meet the current defense requirements," according to the report.

F-35A Testing Moves Into High Speeds

Reprinted from Defense News

Even as U.S. Air Force test pilots put the F-35 through its training syllabus at Edwards Air Force Base, California, they are gradually pushing the Lightning II to its limits. Later this year, the first training F-35s will head to Eglin Air Force Base, Florida, where the Air Force, Navy, Marine Corps and international partners will train operational pilots to fly the new stealth fighter.

"We expect the first jet to be delivered to the 33rd Fighter Wing in

June, and that by the end of September, six F-35As would be delivered to the base to train pilots and maintainers," said Michael Rein, spokesman for F-35 manufacturer Lockheed Martin. But first, the F-35 must complete "maturity testing," said Lt. Col. Hank "Hog" Griffiths, an F-35 test pilot and director of the integrated Joint Strike Fighter test force. "What we're going to do is we're going to take the airplane here at Edwards and fly it in the exact envelope and configuration that Eglin is going to fly it in and then we're going to go out there and execute the Eglin syllabus here at Edwards."

The tests will determine how well the aircraft performs in the training envelope and whether that envelope is sufficient for initial training, Griffiths said.

Crypto Training at Sea

Reprinted from Defense News

It started off as a U.S. Navy trainer, a simple shipboard simulation so crews at sea could practice their cryptologic skills. Now it is becoming a cornerstone of Navy cryptologic training. The system is called Stallion, a name that connotes speed. Stallion had better be fast, because threats appear rapidly in the frenzied cat-and-mouse world of cyberwarfare, and countermeasures don't dare lag far behind. Yet computer network security is only as good as the training of its operators, and right now, it's difficult for the Navy to create quick, realistic training scenarios. The Navy also is struggling to create sufficient training capacity.

"There is clearly a need for more trainers and simulators," said Rich Voter, training and education director for Navy Cyber Forces, which oversees the service's cyber training, personnel and equipment. At the same time, the feedback from the fleet is that "they want more realistic scenarios for our cryptologic and cyber training," Voter said.

Developed by the Navy's Space and Naval Warfare Systems Center in San Diego, Stallion is basically a scenario generator. Users create scenarios through two graphic user interfaces. One is a time-based events manager that inserts various events at designated times, including radio emissions, track data and messages from friendly forces. The other interface is a geospatial editor that allows the scenario to be placed in a given geographic area, such as the South China Sea.

So far, so good, though nothing particularly cutting-edge. But CID officials had an "ah-ha" moment when they saw Stallion demonstrated last year to stimulate COBLU, the cooperative outboard logistics update. If Stallion could be used for COBLU, why couldn't it be used for other information operations systems that desperately needed a way to quickly modify training scenarios?

"With the old scenario generation capability, it cost me half a million dollars to add one event, because, oops, I forgot to put it in," Dickinson said. "Now, we just go in, put it in there, load it up and we're running." Dickinson said he sees Stallion being used for all levels of information operations training. "We were able to take

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Contracts

New Round for Abrams

Reprinted from *Defense News*

ATK, Minneapolis, said it has received a \$77 million, three-year contract to develop and qualify the M829E4 120mm advanced kinetic energy tactical tank round for the U.S. Army, which will complete the second phase of the engineering manufacture design work required to qualify the new round. Upon qualification, the round will enter full-rate production. The M829E4 is the Army's fifth-generation 120mm kinetic energy cartridge. It is being developed to provide the Abrams M1A2 system enhancement package with capabilities that allow the tank crew to destroy enemy tanks protected with advanced, explosive reactive armor at extended ranges, and in urban mountain and non-traditional battlefields.

2011 Budget Battle Still Dogs Small Contractors

Reprinted from *Defense News*

Many smaller U.S. contractors are still reeling from the 2011 budget battle, which slowed contract awards to a trickle for half a year. Now, as Defense Department contracting officers fight to complete six months' worth of backlog, small firms are seeing revenues dip and contemplating job cuts.

"We've had to look at laying people off," said George Eanes, vice president of business development for Modus Operandi, a company of 60 employees based in Melbourne, Florida, that primarily produces software for intelligence applications. "Because we're a small business, we can't absorb the impact of that. We can't afford to have staff that is not directly billable to the government."

Even with new contracts rolling in after the taps were turned back on in April, Eanes anticipates that the delay will keep 2011 revenues 10 to 15 percent below expectations. More than 90 percent of the company's contracting is with government agencies. Part of the problem is that the contracting process requires a great deal of time and can't be significantly accelerated. "The small ones require just as much work as the big ones to close," Eanes said.

With the budget deal reached in April, contracting offices are attempting to draft and sign a year's worth of contracts in half that time. "They're definitely swamped," said David Berseau, who directs the defense-industrial initiatives group at the Center for Strategic and International Studies. Experts said the offices have too few people to radically increase their rates of contracting, pushing contracts later — some into 2012.

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a capability built for on-board training and say, "Wait a minute, we can use this across the entire spectrum of training."

EDA Helicopter Training Reaches New Heights

Reprinted from *Jane's Defence Weekly*

Transport and combat helicopters from different European nations will train in small mixed-formation sorties for the first time during a two-week exercise in Italy organized by the European Defense Agency (EDA). Flying under partial "Red Flag" realistic combat conditions (named after the U.S. Air Force exercise of the same title), the exercise will prepare the way for larger mixed formations and fuller simulated combat conditions in Portugal in 2012, according to EDA officials. Called "IT CALL 2011", the 23 May-4 June exercise is taking place in Viterbo, just north of Rome, and at the Italian Army's Monte Romano firing range. With 300 participants and 30 helicopters from six EDA countries (Austria, Belgium, the Czech Republic, Germany, Italy and Slovenia), it is the third such exercise sponsored by the agency. The previous two were in France and Spain in 2009 and 2010 respectively, with the former focused on high-altitude snow conditions and the latter on hot and dusty conditions.

Upcoming events

Registration is open for these upcoming events.

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Who's *where*

■ **Lt. Gen. Ellen Pawlikowski** took command of the U.S. Air Force Space and Missile Systems Center, Los Angeles Air Force Base, California. She is the first woman to lead the 5,000-person command, the Air Force said.

■ L-3 Communications, New York, said it has promoted **Richard Cody** to corporate senior vice president. He will continue to lead L-3's Washington operations. Cody retired from the U.S. Army in 2008 as a general and the service's vice chief of staff.

■ **Stephanie Lefebvre** has been appointed vice president, finance and chief financial officer of CAE in Montreal, succeeding **Alain Requepas**. Lefebvre was vice president, finance, military and new core markets.

■ **Rear Adm. Craig E. Steidle**, USN (Ret.), has been elected to the board of the Commercial Spaceflight Federation in Washington. As the first associate administrator for exploration systems at NASA, he initiated programs to foster commercial space transportation to the International Space Station.

■ **Maj. Gen. Bradley A. Heithold**, USAF, has been nominated for promotion to lieutenant general and assignment as vice commander of U.S. Special Operations Command at the Pentagon. He is commander of the Intelligence, Surveillance and Reconnaissance (ISR) Agency/deputy chief of staff for ISR at Lackland AFB, Texas.

■ The board of directors of Los Angeles-based Northrop Grumman Corporation elected **Mark A Caylor** corporate vice president and treasurer. He replaces **Mark Rabinowitz**, who was elected corporate vice president for finance.

■ **Marco Riccetti** was named technical director for MEADS International, Orlando, Munich and Rome, the prime contractor for the medium extended air defense system (MEADS). Riccetti joins the program management team in Orlando from MBDA Italia S.p.A.

■ Orbital Sciences Corporation, Dulles, Virginia, promoted **Greg E. Burgess** to senior vice president of its advanced programs group, national security systems division. Burgess previously served as the division's vice president.

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the political-economic circumstance, [and] it fits in the irregular warfare circumstance," Bill Boisture, chairman and chief executive officer of Hawker Beechcraft, said of the AT-6. "It probably also fits in what looks like to be a fairly austere budget in the defense business." In a combat environment with little surface-to-air missile threat, armed propeller-driven aircraft can perform missions traditionally performed by A-10 Warthogs and F-15E Strike Eagles at a significantly lower price tag.

Cyber Option

Reprinted from Aerospace Daily & Defense Report

The U.S. Defense Department says it is partnering with the defense industrial base, the public, and private organizations and corporations that support the Pentagon, to increase the protection of sensitive information. To address growing cyber-threats to the department and within industry, the department launched the Defense Industrial Base Cyber Security and Information Assurance Program in 2007. In July, defense officials announced that, building upon that program, they also are establishing a pilot public-private sector partnership that aims to demonstrate "the feasibility and benefits of voluntarily opting into increased sharing of information about malicious or unauthorized cyber-activity and protective cybersecurity

measures." Meanwhile, the Pentagon will try to grow a cyber talent base for defense and national security missions.

USAF Plots Future of Remotely Piloted Aircraft

Reprinted from Jane's Defence Weekly

The U.S. Air Force is developing a plan to bed down its remotely piloted aircraft across the combat commands as the wars in Afghanistan and Iraq begin to wind down, according to a senior Air Force official, "We are preparing and laying the inroads for future remotely piloted aircrafts," General Gary North, commander of U.S. Pacific Air Forces, told *Jane's*.

In particular, he said the U.S Air Force is focused on developing a basing and infrastructure plan to manage a remotely piloted aircraft force dominated by MQ-9 Reapers: the successors to the MQ-1 Predator. "We're building a plan for all Reapers for the Air Force for the future," he said. Implementing the plan will take some time, Gen. North said, since unmanned aircraft are still widely deployed in combat. The U.S. Air Force is also in the process of ordering additional MQ-9 Reapers to gradually replace their older, slower and smaller cousins, MQ-1 Predators. "That will take some years because of the capacity and requirements," he said.

The Pentagon's recently released 30-year aircraft procurement

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Major Program *report*

Missile Demonstrator Credible Path to High-Speed Vehicles

Reprinted from *Aviation Week & Space Technology*

Contracts to study a prototype long-range strike weapon that could be flight tested in 2016 are imminent. This work could lead to development of scramjet-powered hypersonic cruise missiles able to engage time-critical, high-value and highly defended targets. The U.S. Air Force Research Laboratory has laid out a road map that calls for flight test of the long-range strike weapon against a fixed target in fiscal 2016 and a mobile target in fiscal 2019. Boeing and Lockheed Martin have responded to a broad agency announcement released by the Air Force Research Laboratory in March. Boeing is basing its proposal on the X-51A Waverider scramjet engine demonstrator, while Lockheed is offering technology from the canceled Blackswift hypersonic vehicle program. The Air Force Research Laboratory envisions the missile program as a stepping-stone toward the demonstration by 2030 of a Blackswift-like unmanned, reusable hypersonic surveillance/strike vehicle able to take off and land on a runway.

U.S. May Delay Next Carrier

Reprinted from *Defense News*

U.S. Navy officials, now deliberating budget proposals for 2013, are seriously considering a delay of two years before buying the most expensive ship the service needs to order, the aircraft carrier John F. Kennedy (CVN 79). Officials won't comment on budget deliberations, but the move appears to be an effort to lessen the burden on the annual shipbuilding budget. It is not clear, however, what other effects the delay might have. The budget discussions are extremely closely held. Briefs showing the 2015 carrier are marked "secret," according to one industrial source. "It's exceptionally unsettled. It's not a done deal, but it's definitely in the consideration process." The most efficient pace at which to build new aircraft carriers, industry and Pentagon officials agree, is one ship every four years. It's a rate the shipyard and its industrial base can handle, in capacity and price, and it's a reasonable time to spread out payments for the ship, which can come to \$10 billion to \$12 billion per ship.

U.S. Starts Long Road to Replace F/A-18

Reprinted from *Defense News*

The U.S. Navy's technical bureaucracy is getting a preflight inspection, preparing for a nearly quarter-century journey that eventually will lead to a replacement for the mainstay of today's strike fighter force, the F/A-18E/F Super Hornet. Work is underway to create an initial capabilities document that will define the next generation air dominance aircraft (NGAD), often referred to as using "sixth-generation" aviation technology.

No deadline has been set to complete the initial capabilities document, Navy officials said. Once it is approved, the next step will be to conduct an analysis of alternatives for what kind of aircraft will fit the bill. The analysis, which could take up to three years, will look at a mix of "potential unmanned, manned or optionally manned platforms," Rear Adm. Mike Manazir, head of naval aviation programs, said June 1. There is no definition of what the carrier-based NGAD aircraft will be. According to the Pentagon's 30-year aviation plan recently sent to Congress, options for replacing the Super Hornet include "F-35 aircraft or developing a new manned or unmanned platform or a combination of both."

F-35 Flight Trials Back on Track, Officials Say

Reprinted from *Jane's Defence Weekly*

Senior program officials announced on 21 June that Lockheed Martin and the U.S. Defense Department have "turned the corner" with the flight trial campaign of the F-35 Lightning II Joint Strike Fighter after a year in which aspects of the program had "flatlined." Speaking at the Paris Air Show at Le Bourget, Major General C.D. Moore, deputy F-35 program executive officer, said that the flight trials campaign across all three Joint Strike Fighter variants "made a lot of progress" in 2011 and that the program "is just now hitting the pace for the flight trials campaign."

To date, all but one of the flight-test aircraft are undergoing trials at either NAS Patuxent River (for the short take-off vertical landing [STOVL] F-35B and the carrier variant F-35C) or Edwards Air Force Base (for the conventional landing F-35A). The 12th and final platform set is to be delivered to the program later this month. With 1,000 F-35 flights now accomplished, the most pronounced improvement has been with the test campaign of the STOVL F-35B, according to General Moore. While just 10 STOVL flights had been flown by the end of 2010, the program has now amassed 110 such flights and is 50 percent ahead of schedule. "STOVL testing is progressing much faster than we were expecting," he said.

Thumbs Up for GCV

Reprinted from *Defense News*

Pentagon officials approved the U.S. Army's plan to field a \$1.35 billion fleet of armored vehicles called the ground combat vehicle following a July 21 Defense Acquisition Board review. Army officials will proceed with the program's technology development phase of the vehicle designed to replace the Bradley infantry fighting vehicle. The Army plans to field more than 1,800 ground combat vehicles which some analysts say could cost as much as \$10.5 million per vehicle.

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plan calls for its unmanned aerial vehicle fleet to nearly double during the next nine years, with the bulk of that increase projected on the MQ-9 Reaper.

Advanced U.S. Anti-Ship Missiles on Track for Flight Tests

Reprinted from Aerospace Daily & Defense Report

Parallel development of two prototype long-range, highly survivable, anti-ship missiles is on track for test flights beginning in late 2012, says Lockheed Martin, following completion of a major program review. Under a joint effort by the U.S. Defense Advanced Research Projects Agency (DARPA) and the Office of Naval Research, Lockheed Martin Missiles & Fire Control is developing two variants of long-range anti-ship missile. Current U.S. missiles lack the latest ship defenses, and the program's objective is to demonstrate weapons that could be transitioned rapidly to the U.S. Navy after the completion of flight tests in 2013. To speed development, both designs use available airframe and propulsion technology coupled with advanced sensors and countermeasures. "This is 'DARPA-fast,'" not 'DARPA-hard,'" says Glenn Kuller, Lockheed's long-range anti-ship missile program manager. Both long-range anti-ship missile program variants are among candidate weapons being evaluated by the Navy within the offensive anti-surface weapon analysis of alternatives now under way.

Navy Tests New Carrier UAV Landing System

Reprinted from Jane's Defence Weekly

The U.S. Navy has completed a first successful landing on an under-way aircraft carrier using technology intended to facilitate the operation of fixed-wing unmanned aerial vehicles from moving decks. An F/A 18D Hornet fighter equipped with Navy-developed precision global positioning system hardware and software was arrested on board the Nimitz-class carrier *USS Dwight D. Eisenhower* (CVN 69) on 2 July. The Hornet served as a surrogate for Northrop Grumman's X-47B unmanned aerial vehicle aircraft: the testbed platform for the Navy's unmanned combat air system demonstration program. The technology demonstration program aims to prove that a tailless fixed-wing unmanned aerial vehicle can be launched from, and recover to, a carrier and refuel in mid-air via an interface in which commands are given via a mouse click instead of the traditional unmanned aerial vehicle guidance, which resembles cockpit flight controls.

NATO Urged to Set Up Remotely Piloted Aircraft Center

Reprinted from Aerospace Daily & Defense Report

NATO should consider establishing a center of excellence for remotely piloted aircraft, argues Gen. Mark Welsh, commander of U.S. Air Forces in Europe. The facility would help bring systems owned by member states together to work on interoperability issues. Such a move also could fix shortfalls in intelligence, surveillance and reconnaissance (ISR), Welsh says, adding that "I can't stress the need for ISR enough."

Welsh notes that the alliance also needs to improve its dynamic targeting capabilities, command and control, and secure communication capacities. With budgets among many member states under pressure, Welsh tells the Royal United Services Institute's Air Power Conference 2011 that some of the countries should consider spending money on "affordable ISR" rather than taking on expensive fighter modernization programs they cannot currently afford. Those fighter purchases could come later when the fiscal environment improves, he says. Another area where Welsh believes more "burden sharing" is important is in missile defense. That does not mean countries buying expensive elements, but helping support other elements such as consequence management or command and control. "We can't afford to get this wrong," he notes.

Nuclear Disaster Spurs Interest In Unmanned Systems

Reprinted from Aerospace Daily & Defense Report

Japan appears set to increase its investment in unmanned systems, in response to lessons learned from the Fukushima nuclear disaster that followed the March 11 earthquake/tsunami. The nuclear disaster highlighted how useful robots are in dealing with such situations, says Japan's defense minister, Toshimi Kitazawa, who addressed delegates at the Shangri-La Dialogue in Singapore June 4.

He says even though Japan is renowned for robotics, it still lacked unmanned systems that could operate in radioactive environments. "The ministry of defense should think of the usefulness of unmanned craft and robots" for international relief efforts as well, Kitazawa says. It is now clear how useful unmanned systems and robots can be in disaster relief, he adds.

His remarks augur well for companies such as Northrop Grumman and Fuji Heavy Industries (FHI). Japan is Northrop Grumman's number one sales prospect in Asia for its Global Hawk unmanned aerial vehicle. The U.S. firm has highlighted how the U.S. Air Force's Global Hawks in Guam were used to provide Japan with valuable surveillance images of the damaged Fukushima nuclear plant. FHI, meanwhile, is the Japanese defense contractor that has taken a lead role in Japan's efforts to develop unmanned aerial vehicles.

United Launch Alliance, NASA to Study Atlas 5 as Launcher

Reprinted from Space News

United Launch Alliance will support NASA efforts to assess the company's Atlas 5 rocket as a launcher for commercially-built astronaut transportation systems under a partnership agreement announced July 18. Under the agreement, ULA, a Boeing-Lockheed Martin joint venture, and NASA "can work together to figure out if and exactly how we're going to use an Atlas 5 to fly crew to" low Earth orbit, Ed Mango, NASA's Commercial Crew program manager, said. In a best-case scenario, the Atlas 5 could be launching crews in "three to four years," George Sowers, ULA's vice president of business development, said. He said his timetable

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by the USML. The Obama Administration has selected category VII—tanks and military vehicles—as a sort of test case to demonstrate how such a transfer could take place.

Germany Clears Potential Saudi Leopard Sale

Reprinted from Janes' Defence Weekly

The German Security Cabinet has given the green light to the sale of 270 new Leopard 2A7+ main battle tanks to Saudi Arabia. The Cabinet, which is responsible for sanctioning German defense exports, made the decision on 27 June, along with agreeing to a EUR10 billion (\$14 billion) defense cooperation program with Algeria that includes providing two MEKO-class frigates. It is understood that the signing of a contract for the Leopard 2A7+ is dependent on Riyadh accepting a 60:40 workshare package in favor of the German consortium that makes the vehicle, comprising Krauss-Maffei Wegmann and Rheinmetall. Neither of these companies had confirmed such an accord had been signed at the time of going to press. However, if a deal is agreed it will mark a major change in export policy for Germany in relation to the Middle East and implies the silent consent of both Israel and the U.S., since it is unlikely that Germany would have cleared such a deal without consulting these two countries.

Indian C-17 Deal Extends Production

Reprinted from Aerospace Daily & Defense Report

The Indian cabinet's decision to proceed with a U.S. foreign military sale purchase of 10 C-17s should stretch the California-based Boeing production line until 2014. The exact timeline will be

dictated by the delivery schedule included in the yet-to-be-signed letter of agreement between the Indian government and the U.S. The 10 aircraft are expected to be delivered in two batches—five aircraft one year and five more the next.

Jean Chamberlin, vice president of mobility systems for Boeing, says the deal will likely keep the line open until 2014, although the company is looking for additional international orders to stretch production. Boeing is in the process of reducing output to 10 aircraft a month from a rate of 13 while keeping the airlifter's price constant. The move is aimed at stretching out the production line to buy time to capture additional orders. The rate reduction should be achieved in the third quarter.

LM Offers F-35 Line to Japan as F-X Sweetener

Reprinted from Jane's Defence Weekly

Lockheed Martin plans to establish a manufacturing and assembly plant in Japan should Tokyo select the F-35 Lightning II Joint Strike Fighter to meet its F-X multirole fighter competition. The spokesman added that Lockheed Martin remains confident it can fulfill the Japan Air Self-Defense Force's delivery requirements, despite what will likely be challenging development and testing phases for the F-35 program in the next few years.

Japan's Ministry of Defense issued a request for proposals for its F-X fighter requirements in April. The document was sent to Boeing, which is offering its F/A-18E/F Super Hornet; and Eurofighter, which is offering its Typhoon. The three companies are expected to submit their respective F-X bids to the Ministry of Defense by September, with the purchase contract to be awarded by the end of 2011 or early 2012.

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assumes that NASA's Commercial Crew program receives adequate funding, and that the spacecraft now in development as part of that effort are completed in time.

Cyber-Ops Become Critical ISR Tool

Reprinted from Aerospace Daily & Defense Report

Cyber-operations are quickly becoming a formidable element in intelligence, surveillance and reconnaissance (ISR), and may soon be the dominant tool for maintaining international situational awareness of adversaries and potential foes. Already, cyber-intrusions are conducted against the U.S. with such persistence that they have a name—advanced persistent threat (APT).

"Though we usually cannot definitively identify the originator ... pretty much everyone understands APT comes from the Peoples' Republic of China," says Christopher Ford, director of the Hudson Institute's Center for Technology and Global Security. More importantly, "APT has been devoted to spying" and could be laying the groundwork for an escalation from cyber-spying to cyberwarfare.

Intelligence officials agree. During confirmation hearings, the next Defense Secretary and former CIA chief, Leon Panetta, told Congress that there is a "strong likelihood that the next Pearl Harbor [could be] a cyberattack that cripples" U.S. electrical power grids and pipelines as well as security, financial and government systems.

The U.S. Department of Justice has handed down indictments in two cases of prosecutions of distributors of counterfeit integrated circuits sold to the U.S. Military and within other industry sectors. The first case is that of *U.S. v. Mustafa Abdul Aljaff, et al.* (MVP Micro, Long Beach CA). The second is *U.S. v. Shannon L. Wren, et al.* (Vision Tech Components, Clearwater, FL). DOJ sources report that Wren died of a drug overdose while pending trial. The first sentencing to take place under the indictments will be that of Stephanie McCloskey, former Administrative Manager for VisionTech, and is slated for 10 September in U.S. District Court, DC District.

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

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