

NTSA's Training Industry *news*

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Current *news*

Industry Faces Competition for Cyber Talent

Reprinted from *Aerospace Daily & Defense Report*

Already struggling with an inadequate supply of talent, the aerospace and defense industry finds itself competing with commercial information technology providers, and even its own customers, for graduates to fill job openings in the growing cybersecurity field.

There's a great need for young talent, but availability does not match demand," says Charlie Croom, Lockheed Martin vice president for cybersecurity solutions. "That's why we are investing in training, in university scholarships and in creating our own university to train and certify people."

Universities are responding to the demand by creating courses tailored to careers in cybersecurity. "It's an important area of future growth. The education opportunities are staggering, and that's highly motivational for universities," says John Osterholz, BAE Systems' vice president for cyberwarfare and cybersecurity.

USAF Leaders Preview Sixth-Gen Aircraft

Reprinted from *Aerospace Daily & Defense Report*

Improved fifth- and sixth-generation manned and unmanned aircraft are being designed with wide-area optical and electronic surveillance, explosive and nonexplosive weapons and an intricate view of the surrounding networks that might affect them. Also part of the advanced fight formula will be communications, including command and control, that can function even when under network attack.

"We've stood up a Sixth Gen Fighter office here, and we're starting to figure out what those attributes should be, says Maj. Gen. Tom Andersen, Air Combat Command's director of requirements. "Survivability will be huge, so how do you do that—with speed, stealth or some combination? Affordability is critical because \$500 million per air vehicle doesn't do much good [in a tough budget environment].

"If we start right now, 2030 is about the time you get a sixth gen fighter on the line," Andersen says. "That's about the time all the F-15s, F-15Es,

F-16s and A-10s are programmed to be out of the inventory. At that point, all you have is the F-35. I think [Sixth Gen] will have to be capable of being operationally manned. The cost margin between manned and unmanned is now only about a three to five percent delta. We have to be prepared to go either way."

The new designs will undoubtedly be stealthy for penetrating enemy air defenses. As long as they are close key targets, "you would hate not to have an ISR [intelligence, surveillance and reconnaissance] capability," Andersen says.

Moreover, these aircraft need to be linked so they always know where they are in reference to each other and to any enemy threat all the time. The advanced architecture for connectivity is called the joint aerial layer network. It creates a mosaic of the battlefield with space, airborne and surface layers. And within those layers, the denied and anti-access areas are detailed along with where everybody else can operate.

Surprises Emerge for Navy Jammer Competition

Reprinted from *Aerospace Daily & Defense Report*

The growing overlap of electronic warfare, information operations and cyber-invasion is creating an aura of mystery and some excitement around the U.S. Navy's competition for the next-generation jammer and the U.S. Air Force's re-entry into the world of airborne electronic attack.

ITT and Boeing are teamed for the next generation jammer contest. Other competitors include Raytheon, Northrop Grumman and BAE Systems. A downselect to two or three teams is expected before the prototype demonstrator phase starts in January 2011.

Clues about the various approaches are emerging—the technology being eyed includes broadband, electronically scanned arrays, advanced radars, digitized excitors and technique generators to produce exotic waveforms and algorithms for electronic warfare. Perhaps most importantly, the concepts and technology maturity being built are stepping

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

President's *notes*

Rear Adm. Fred Lewis, USN (Ret.)

For NTSA Members:

While the overall health of the modeling and simulation industry has never been better and the future looks more promising than ever, we have recently run into an unwelcome roadblock on the way toward recognition of our industry for what it is—a separate and distinct entity, deserving of official classification as such.

Specifically, the Economic Classification Policy Committee (ECPC) of the Office of Management and Budget has rejected, for the third time in eight years, our proposals for granting unique codes for M&S. As we have stated in our requests, granting such stature would not only bestow deserved formal status and recognition on our industry, but would also greatly facilitate tracking of economic data pertaining to modeling and simulation—at present an elusive goal.

The ECPC defended its latest decision by stating that to create new codes for modeling and simulation would “violate ECPC principles to separate out activity relating to modeling and simulation”. Further, the ECPC maintained that manufacturing of simulators belonged under one code category, whereas the software utilized by the simulators belonged in another. Finally, the ECPC concluded that simulation is not an industry, but a “regimen” that is consumed in provision of other services, e.g., “training, testing, entertainment, etc.”

This logic, we believe, is entirely and transparently specious. Following its reasoning, why not, for example, separate out robotics from computer programming and programmers, and upholstery manufacturers and suppliers, paint suppliers, and dozens of other functional operations and label the U.S. automobile industry a series of discrete components, rather than a single manufacturing entity? The fact that the end product may be a Ford, while that of our industry is trained human beings and other elements of preparedness, only reinforces our argument: the modeling and simulation industry, like the automobile industry or any other, is an assemblage of a wide variety of disparate assets, organized in such a manner as to produce tangible, identifiable, products.

The I/ITSEC conference provides explicit, physical evidence that M&S is an industry. At its essence, I/ITSEC is a grouping of experts and their tools, all pertaining to a specific, identifiable, industrial activity. If M&S were not a separate and distinct industrial category, I/ITSEC would not exist.

Curiously, when OMB charged the ECPC to update its classification system in 1992 by providing for new approaches to classification, one of its directives stated: “The system will give special attention to developing production-oriented classifications for a) new and emerging industries, b) service industries in general, and c) industries engaged in the production of advanced

technologies.” We would argue that articles a and c of this directive apply directly to the modeling and simulation industry, while b might qualify as a broad description of our industrial category. We therefore maintain that not only is modeling and simulation an industry under ECPC definitions, but that it fits neatly into ECPC’s own classification categories.

OMB will accept public comments on the proposed recommendations, which are contained in the Federal Register of May 12 of this year, until July 12. We intend to move swiftly to refute the logic the ECPC applied to this latest decision. Firstly, we will convey to them our own conviction that even their 1992 “production based principles” are no longer adequate for handling classification of emerging, hi-tech industries such as M&S. Secondly, we will initiate a campaign to mobilize our members and other organizations and individuals dedicated to the health and growth of the modeling and simulation industry to protest the ECPC’s recommendation and to underscore widespread industry support for unique codes for modeling and simulation. Thirdly, we hope to enlist the valuable support of the Congressional Modeling and Simulation Caucus, which has taken a strong, creative lead many times in seeking proper national recognition of our industry and its enormous potential.

On a more positive note, this year’s ITEC event featured one of the most intellectually rigorous and substantive discussions I have heard on the subject of fielding proper equipment and developing relevant training in time-sensitive situations where lives are on the line. Moderated by Frank DiGiovanni, Deputy Director for Readiness and Training, OSD, and featuring Scott Schless, Principal Director, U.S. Defense Security Cooperation Agency (DSCA), and Dr. Dai Morris, Head of Capability, Joint Training, Evaluation and Simulation, UK Ministry of Defense, the session also included lively and informative input from the large audience. In specific, it was emphasized that mission debriefs need to be done in a timely and detailed manner to quickly identify relevant training points, equipment needs and other requirements so they can be acted upon. The DSCA is the lead DOD agency for management and oversight of foreign military sales and other international security cooperation programs, such as International Military Education and Training. Training for partner country personnel is a key component of these programs, and US personnel training has been identified as one of DOD’s top ten priorities. I would encourage discussions along these subject lines to occur more frequently. Judging from the level of interest and audience participation, there exists a definite need for ongoing examination of these critical issues as we continue to prosecute coalition warfare.



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The Global marketplace

French Contractors See Sharp Boost in Investment as Recovery Looms

Reprinted from *Aerospace Daily & Defense Report*

French aerospace and defense companies expect to sharply boost investment outlays this year as they prepare for an expected rebound from the crisis that has affected the industry. France's aerospace industries association, Gifas, forecasts that spending for research and development and other investments by French companies will climb 11.4 percent in 2010, compared to a modest 2.8 percent increase last year. Gifas President Jean-Paul Herteman says the spending rise reflects confidence that the industry will begin growing again next year.

New orders fell to 37.3 billion euros (\$50 billion) in 2009, after declining 17 percent, to 48.6 billion euros, the year before. Revenue declined two percent, to 35.8 billion euros, after posting a 4.7 percent rise in 2008. The vulnerable equipment and aerostructures segment showed a 4.4 percent drop in sales as prime contractors reduced their stocks. Orders decreased nearly six percent, but that was less than the decline in 2008. Moreover, weak performance in some sectors, notably business aviation and helicopters, was largely compensated for by strong demand in others, particularly space.

Indian Defense Industry Decries Foreign Investment Rules

Reprinted from *Aerospace Daily & Defense Report*

Indian defense companies favor raising the maximum stake that foreign companies can hold in defense joint ventures in India, according to a recent survey. International investors continue to shy away from India's defense manufacturing sector owing to the Indian government's limitations on foreign direct investment, which caps the stake international companies can hold at 26 percent. These companies have called for raising the cap to 49 percent.

A survey by the Confederation of Indian Industry argues that the current foreign direct investment limit should be increased. The case for a higher foreign direct investment cap is a major issue, as international investors complain

they have no say in the management decisions.

"Foreign direct investment in the defense industry is essential because most defense products involve a relatively high level of technology, and this technology gets transferred only if the foreign partner has a long-term stake in the company," the report says.

Aerospace and Defense Employment, Sales, Holding Steady, Study Finds

Reprinted from *Aerospace Daily & Defense Report*

The aerospace and defense industry saw profits and backlog decline in 2009, but weathered the brutal economic downturn better than many other industries, a new study finds. Deloitte LLP's May 11 analysis of 91 aerospace and defense companies and units worldwide found that the industry's operating earnings decreased by 15 percent last year, to \$47.9 billion. But the decline was mainly driven by large program write-offs at Boeing, EADS and BAE Systems.

Industry revenues rose slightly to \$635 billion, thanks to robust commercial aircraft backlogs and long-term military contracts. While there were thousands of layoffs at Cessna, Hawker Beechcraft, Lockheed Martin and Boeing, total industry employment remained steady at just more than two million. By comparison, employment among companies in the S&P 500 index shrank by nearly three percent during the year. Performance varied by company and region. While U.S. contractors in the study saw their revenues rise by an average of three percent, sales at their European counterparts declined by an average of two percent.

On the profit front, the operating margins of U.S. aerospace and defense companies in the study averaged 9.3 percent in 2009, double the 4.6 percent margins posted by their European counterparts. The largest total profits were generated by Lockheed Martin, GE Aviation, General Dynamics and Raytheon, which each recorded more than \$3 billion in operating earnings. Those four companies accounted for nearly one-third of the industry's total profit in 2009. Boeing's operating earnings were down 47 per-

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stones to wider apertures, cooler amplifiers and faster processing, according to U.S. aerospace industry officials involved in the competition.

Military Tech, Organizations Will Merge, ISR Chief Says

Reprinted from Aerospace Daily & Defense Report

Next-generation aircraft and sensors are being planned that combine surveillance, intelligence gathering, tactical cyber and other electronic attack and directed energy. For example, a burst of high-power microwaves could leave a person unharmed but kill his mobile phone.

“There are three trends that are bringing about what I call the ‘information in war revolution,’” says Lt. Gen. David Deptula, the Air Force’s first deputy chief of staff for intelligence, surveillance and reconnaissance. “The first is the ability to rapidly compress and decompress data due to advancing computing speed; the second is the ability to transmit this data using very clever means, like transmitting only the parts of a video or radar picture that have changed; and then finally the ability we have now to bring all these technologies onto one platform, like we do with our remotely piloted aircraft and will do on our future manned aircraft.”

Those advances in technology are increasing the speed of information and changing the way the Pentagon designs aircraft, its organizations, and even the military’s long-developed cultural habits of collecting data, analyzing it, and then distributing the information to those who need it.

Spooky Spending

Reprinted from Aviation Week & Space Technology

National Reconnaissance Office Director Bruce Carlson says he plans to submit a comprehensive science and technology investment strategy with his Fiscal 2012 budget request. Carlson says 50-60 percent of the technology now on satellites that are soon to launch came from those research offers. But science and technology funding has “slackened,” jeopardizing the ability of the National Reconnaissance Office to deliver innovative satellites and sensors. Carlson says there are “several” launches of “very large, very critical” satellites in the next 18 months. He says the National Reconnaissance Office is embarking on its “most aggressive” launch schedule in 25 years.

Cerberus Buying DynCorp

Reprinted from Aviation Week & Space Technology

Cerberus Capital Management, the private-equity firm best known for buying ailing U.S. automaker Chrysler in 2007, is acquiring defense contractor DynCorp International, in a \$1.5 billion deal that includes assumption of DynCorp’s debt. Cerberus will pay DynCorp shareholders \$17.55 per share, a 50 percent premium from the stock’s April 12 closing price of \$11.75. Although the deal is subject to shareholder review, affiliates of Veritas Capital,

which in aggregate own 34.9 percent of DynCorp’s stock, have agreed to the acquisition.

U.S. Military Expands Green Energy Campaign

Reprinted from Defense News

From spray-on insulation for tents in Afghanistan to solar-powered water purification systems and biofuel for jets, the U.S. military is working on a variety of fronts to reduce its use of fossil fuels. The Air Force hopes by 2016 to use biofuel blends for half of the aviation fuel it burns. The Army plans to get rid of 4,000 gasoline-powered vehicles and replace them with electric vehicles by 2013. The Navy is preparing to launch the “Great Green Fleet” in 2016—an aircraft carrier strike force fueled by nuclear power and alternative fuels.

The world’s mightiest military hasn’t suddenly become a troop of tree huggers. The main reason to reduce reliance on fossil fuels “is to make us better war fighters,” Navy Secretary Ray Mabus said.

The Pew Research Center said April 20 that “the military is, in many respects, leading the way and helping to re-energize America’s future.” For the services, alternative energy and conservation is more a matter of saving money and lives.

To get a gallon of gasoline to a Marine unit in Afghanistan, Mabus said, the gas is shipped across the Pacific Ocean, then trucked across Pakistan and into Afghanistan. “It’s very expensive to do that, and very dangerous,” he said. “Convoy duty is some of the most dangerous duty that marines and sailors perform today.”

NASA Human-like Robot to Join Space Station Crew

Reprinted from Space News

NASA intends to launch a human-like robot to the international space station later this year to take up permanent residency aboard the orbiting lab, the U.S. space agency announced April 14.

Called Robonaut 2, or R2 for short, the 135-kilogram robot was jointly developed by NASA and General Motors and consists of a head and torso with two arms. NASA plans to launch R2 to the space station aboard Space Shuttle Discovery as part of the STS-133 mission planned for September. Once the robot is on board the station, engineers will monitor how it operates in weightlessness.

Although R2 will be confined to operations inside the station’s Destiny laboratory module, NASA said in a press release the robot eventually could be enhanced to allow it to move more freely around the station’s interior and possibly one day be modified to operate outside the station.

“The use of R2 on the space station is just the beginning of a quickening pace between human and robotic exploration of space,” John Olson, director of NASA’s Exploration Systems Integration Office, said in the press release. “The partnership of humans and robots will be critical to opening up the solar system

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Training & Simulation *report*

Fleet Synthetic Training Advances

Reprinted from U.S. Fleet Forces Press Release

Commander, U.S. Second Fleet, conducted a Fleet Synthetic Training (FST) event May 17-20 providing valuable training to a range of ships and commands at various stages in their pre-deployment training cycle. Operation Brewing Storm was a group commander-level event which encompassed critical mission areas including air and amphibious operations, integrated fires, battle watch training, crisis planning and maritime intercept and security, among others. Participants included commander, Amphibious Squadron Four, 26 Marine Expeditionary Unit, Tactical Air Control Squadron 21 and the ships *USS Kearsarge* (LHD 3), *USS Ponce* (LPD 15), *USS Carter Hall* (LSD 50) and *USS Mahan* (DDG 72). Coalition partners Germany and Canada took part in Operation Brewing Storm as well.

“The opportunity to develop and hone planning skills, execute battle rhythm and work command, control, communications, computers, intelligence systems pier-side is great preparation for upcoming at-sea periods,” said Chuck Kennard, director of Wargaming at Tactical Training Group, Atlantic in Virginia Beach, Virginia. “By grooming systems and refining command relationships in port, the Kearsarge ARG will be able to conduct complex at-sea operations with minimal spin up time.”

For the first time during an FST event, the exercise made use of the battlefield communications system simulator, which provides realistic shipboard communications intelligence training.

2010 National Small Business Person of the Year Selected

Reprinted from ECS Press Release

Engineering & Computer Simulations (ECS) announced that Waymon Armstrong, president and chief executive officer, has been selected by the U.S. Small Business Administration as the “2010 National Small Business Person of the Year”. Armstrong was honored at a luncheon in Washington, D.C. during National Small Business Week where the Small Business Administration salutes small businesses that drive America’s economy. In March, he was named Florida’s 2010 Small Business Person of the Year, and was honored at an awards ceremony in Orlando.

“It is such a great honor to be selected by the Small Business Administration for this award,” said Armstrong. “The pursuit of a dream, and the support of many dedicated employees, family members and friends, brought us to where we are today. Through the efforts of many, I have been honored, but I truly know that this award would not have been possible without the great ECS team, our customers, and my family — and I am grateful to each of them!”

Each year since 1963, the President has issued a proclamation calling for the celebration of Small Business Week. National

Small Business Week pauses to recognize outstanding small business owners for their personal successes and contributions to our nation. More than half of Americans who work either own or work for small businesses.

“Waymon’s commitment to his employees and to his business, Engineering & Computer Simulations, Inc., demonstrates the qualities that make small businesses such a powerful force for job creation in the American economy and in their local communities,” said Karen Mills, administrator of the U.S. Small Business Administration. “It’s the same qualities that will lead us to economic recovery. We are especially proud that his company benefited from two grants under the Small Business Administration’s Small Business Innovation and Research Program. I applaud Waymon, and all of the state small business persons of the year who are here today. We are all grateful for their contributions to our economy.”

CEO Named 2010 Colorado Small Business Person of the Year

Reprinted from Combat Training Solutions, Inc. Press Release

Combat Training Solutions, Inc. is proud to announce that Antonio Colón, chief executive officer of Combat Training Solutions, has been named the 2010 Colorado Small Business Person of the Year by the U.S. Small Business Administration. This annual award recognizes small business owners in each state who demonstrate entrepreneurial spirit and honor their commitment to the community.

The nominees are judged by an independent panel of small business leaders on a variety of criteria, including staying power, growth in number of employees, increase in sales, current and past financial reports, innovativeness of product or service, response to adversity, evidence of contributions to community-oriented projects, and small business advocacy. Antonio Colón represented Colorado at the 2010 National Small Business Week convention in Washington, D.C., May 23-25.

Upcoming events

Registration is open for these upcoming NTSA events.

AUGUST 10-12, 2010 • ADL CO-LAB

IMPLEMENTATION FEST 2010

ROSEN CENTRE HOTEL • ORLANDO, FL (#01D0)

NOVEMBER 29-DECEMBER 2, 2010 • I/ITSEC 2010

ORANGE COUNTY CONVENTION CENTER •
ORLANDO, FL

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and will allow us to go farther and achieve more than we can probably even imagine today.”

NATO Urges More Cooperation to Curb Cyber Attacks

Reprinted from *Jane's Defence Weekly*

The risk of a shift in cyber-attacks on military and government networks from criminal to warfare-type intent is growing and demands greater transatlantic coordination, say NATO and EU officials. “NATO suffers 100 [malevolent] cyber incidents a day and about 120 countries are now developing cyber-offensive strategies. This is a big challenge to our capabilities and awareness,” said Jamie Shea, director for policy and planning at the private office of NATO’s secretary general.

“Experts now talk about the ‘fifth domain’ in military terms—after air, land and other traditional military capabilities. This suggests that cyber-warfare could play the same role in the 21st century of softening up the enemy prior to wider attacks in the same way that air warfare techniques did in the 20th century.”

Shea and other officials were speaking during a 22 March policy debate for NATO and EU government and industry officials in Brussels, entitled “Cyber Security: A Transatlantic Perspective.” The NATO official questioned whether modern weapon systems should be “so totally dependent” on computer technology. “More and more sophisticated software is available, but the more we multiply the digital options in our systems, the more we create portals for attacks against them,” he said.

“We’ve learned that cyberattacks are very effective for about 36 hours before the [defensive software] patches and redundant back-up comes fully into play. But do we have the immediate back-up [for NATO’s military weapons and systems] that would work outside the cyber-environment?” he continued. “We have to ask ourselves: if deprived temporarily of our computers, what degree of redundancy [outside the cyber-network] should we have to still allow us to function militarily?”

Sci-Tech So-So

Reprinted from *Aviation Week & Space Technology*

House legislation to buttress nascent science, technology, engineering and math (STEM) educational efforts has cleared an authorizing committee with strong backing and could be approved by the full House before June, leaders say. The America Competes reauthorization bill would also continue widely bipartisan efforts started under the George W. Bush administration to stimulate federal grant-making for technology modernization.

Near-term programs like Innovative Technology Federal Loan Guarantees would help small- and medium-sized companies to update manufacturing techniques to become more efficient and competitive. Regional innovation clusters would try to boost local economies and their niche fields by promoting communication and collaboration between businesses and government.

Nevertheless, the version that passed the House Science and Technology Committee entails spending levels that are at least 10 percent more than before.

“This funding trajectory is not as steep as the bill enacted in 2007 and it is not as shallow as the president’s budget request,” says Committee Chairman Bart Gordon (D-TN). “These levels are lower than I would like them, but I believe they are practical, considering our current budget deficits.”

Australia Boosts Spending on Ops, Force Protection

Reprinted from *Defense News*

Australia has managed to escape the worst effects of last year’s global financial crisis, and the government of Prime Minister Kevin Rudd has honored a promise by increasing defense spending in the 2010-11 budget. Unveiled May 11, the new budget increases defense expenditure to 25.7 billion Australian dollars (\$23 billion), up five percent from 24.4 billion last year.

Most of the extra money goes to pay for operations in Afghanistan and elsewhere. Some funds will be shifted to buy armor to protect troops and the Army’s Bushmaster protected mobility vehicles, better night-fighting equipment, and better intelligence, surveillance and reconnaissance gear to fight terrorists and their weapon of choice, the improvised explosive device.

Gaps in Cyber-Policy and Defense Confound Congress

Reprinted from *Aerospace Daily & Defense Report*

The ability to operate in cyberspace, in particular to attack networks, has “outpaced the development of policy, law and precedent to guide and control those operations,” says Sen. Carl Levin (D-MI), chairman of the Senate Armed Services Committee. “The policy gap is especially concerning because cyber-weapons and attacks [could] be devastating, approaching weapons of mass destruction in their effects.”

Levin chaired a confirmation hearing to make Lt. Gen. Keith Alexander, director of National Security Agency since 2005, a four-star general and the first commander of U.S. Cyber Command. Minority leader Sen. John McCain, (R-AZ) added to the list of cyber-governance shortfalls by urging Alexander (in creating Cyber Command and its connections to other agencies like the National Security Agency) to ensure that the “rules of engagement are thought out and understood.”

Alexander agreed and suggested that the National Security Agency’s organization and mission will not change except for becoming a schoolhouse for military cyber-specialists who need to learn offensive skills. He contends that the greatest bureaucratic hurdle will be working out a relationship with U.S. industries that own and control the networks and companies that build attack and anti-virus software.

Contracts

Intelsat Nabs Big U.S. Navy SATCOM Contract

Reprinted from *Space News*

Global satellite operator Intelsat teamed with 17 companies around the world, including archrival SES of Luxembourg, to win a contract potentially worth \$542.7 million over five years to provide end-to-end satellite communications services for the U.S. Navy. Intelsat General Corporation, a subsidiary of Washington- and Bermuda-based Intelsat, will provide C-, Ku- and X-band satellite capacity, ground terminals and terrestrial backhaul and network management services as the prime contractor for the Navy's commercial broadband satellite program, according to a January U.S. Defense Department press release. The program will replace the Navy's current L-band mobile satellite services provided by Inmarsat of London.

Work on Site

Reprinted from *Aerospace Daily & Defense Report*

BAE Systems, General Dynamics, Lockheed Martin, Northrop Grumman and SAIC are among 11 companies receiving indefinite-delivery/indefinite-quantity contracts supporting information technology for the defense intelligence and greater intelligence communities under the Solutions for the Information Technology Enterprise (SITE) program. SITE will have a ceiling of \$6.6 billion over five years. Competition among the firms for task orders under the SITE program will begin in the summer.

U.S. Navy Cleared to Buy Super Hornets, Growlers

Reprinted from *Jane's Defence Weekly*

The U.S. Navy has been cleared to sign a multi-year contract with Boeing to procure a mix of 124 F/A-18 E/F Super Hornet tactical fighters and EA-18G Growler electronic attack aircraft, defense officials announced on 14 May. Ashton Carter, the military's top acquisition official, notified the U.S. Congress that the Pentagon had approved a four-year contract worth up to \$5.4 billion that will run through 2013. Signing a four-year contract is expected to save about 10 percent of the cost, according to Boeing.

The procurement will enable the Navy to acquire the remaining program of record for the 515 F/A-18E/F Super Hornets and 114 EA-18G Growlers. Boeing is already delivering 210 F-18 aircraft under a five-year contract awarded in January 2004 for \$8.5 billion.

The F/A-18 production line has become an increasingly critical asset to the Navy, as the Lockheed Martin F-35 Lightning II Joint Strike Fighter has been hit by production delays. The Navy anticipates a need for new fighters as its aging FA-18A-D legacy

Hornets begin to retire.

U.K. to Field Loitering Munition in Afghanistan

Reprinted from *Defense News*

A new British Army munition will be able to fly around for up to 10 hours while operators wait for a target, thanks to a development and manufacturing contract awarded March 29 to MBDA. The first propeller-driven Fire Shadow could go to Afghanistan in 2012.

The 330-million-pound (\$500 million) deal package between the Ministry of Defense and Europe's premier missile maker also included an updated version of the Brimstone air-to-ground missile for the Royal Air Force and more assessment-phase work on other weapons.

The Fire Shadow will allow the Army to attack mobile, fleeting and other targets up to 100 kilometers away in complex urban environments that demand accuracy and low collateral damage. A human operator will be able to view targets through a sensor on the munition, and choose time, angle and aspect of attack.

CSC to Build NOAA Supercomputer

Reprinted from *Space News*

Computer Sciences Corporation of Falls Church, Virginia, was selected by the U.S. National Oceanic and Atmospheric Administration to develop a computing system to support environmental modeling under a four-year contract worth as much as \$317 million, CSC announced May 14. Under the terms of the high performance computing system contract, CSC will provide the hardware needed to improve the accuracy of regional and global climate and weather forecasting models, a press release said. The indefinite-delivery, indefinite-quantity contract includes a four-year option and an additional one-year transition option. The first year of the program is funded at \$49.3 million using money NOAA received under the American Recovery and Reinvestment Act of 2009, CSC said.

AEgis Technologies Awarded AFMSTT Contract

Reprinted from *AEgis Press Release*

The AEgis Technologies Group Inc. was awarded a three-year contract for the Air Force modeling and simulation training toolkit (AFMSTT) estimated by the Air Force to be worth \$74 million. AFMSTT is a non-commercial, government-owned simulation system used to train the Joint Force Command, Joint Force Air Component Commander, and their battle staff in multiple federation environments.

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cent due to a \$2.7 billion write-off on its 787 program, while EADS' \$3.4 billion impairment charge on the A400M military transport development program led to an operating loss of \$530 million.

Among other trends highlighted in the 18-page report:

- Boeing is regaining its position as the world's largest aerospace and defense company after losing it to EADS in 2008 due to the labor strike.
- FLIR Systems had the highest profit per employee, at \$241,700, followed by TransDigm Group at \$167,700.
- Sixty-one percent of the industry's sales were generated by companies headquartered in the United States. European contractors accounted for 33 percent, with the remaining six percent coming from aerospace and defense companies in Japan, Singapore, Israel Canada, Brazil and India.

"Despite the relatively better performance of the aerospace and defense industry compared to others in 2009, we believe the industry continues to be challenged by moderating defense budgets, poor program performance, exchange rate volatility and credit availability," Deloitte says.

Armed Black Hawk Means Flexible Fleet

Reprinted from Aerospace Daily & Defense Report

After nearly a year of testing an armed Black Hawk configuration with the Israeli Air Force, manufacturer Sikorsky says it is ready to begin marketing the product internationally. The company announced the so-called Battlehawk at the Farnborough Air Show in 2006. Between January and August 2009, Sikorsky and the Israeli Air Force flew a modified Israeli Black Hawk to prove the Battlehawk concept. "The aircraft handled weapons very well," according to Ray Burke, Sikorsky's Battlehawk program manager. The type and quantity of weapons available to be mounted on the aircraft will vary depending on the customer, he adds.

"We're not looking to replace the helicopter's [utility] mission," says Mike Ambrose, vice president of international military programs. "We're looking to add more flexibility to the Black Hawk platform." For countries with smaller fleets of Black Hawks, the modular approach may prove ideal.

The Battlehawk configuration comprises three levels of armament kits. Level 1 could be used to provide close air support using fixed or cabin guns and pylon-mounted conventional rockets. A Level 2 kit would add a weapons management system, forward-looking infrared and laser rockets. Level 3 would require more intensive airframe modifications to add a turret gun.

India Significantly Boosts Defense Spending

Reprinted from Aerospace Daily & Defense Report

India's defense budget for 2010-11 is expected to rise 20 percent from the previous fiscal year, driven by factors including the

Mumbai terrorist attacks, tension with Pakistan, security for India's 7,600 kilometers (4,722 miles) of coastline and the need to protect ocean shipping. "There is no limit to security expenditure," a defense ministry official said. "Whatever is asked for is given."

The memory of the Mumbai attack in November 2008 has put the government under pressure to procure more and better equipment. Prime Minister Manmohan Singh has said that security modernization is crucial to economic development. With this in mind, it is not surprising that in 2009, Israel—a country with long experience in security—surpassed Russia as India's leading arms supplier. India purchased air and naval surveillance systems from Israel after the Mumbai attacks, along with Aerostat radar valued at \$600 million for its border with Pakistan, where the Mumbai terrorists originated. Since 2007, India has signed \$1 billion in defense contracts with Israel.

AWACS Deal Nearly Doubles U.S. Government Sales to France

Reprinted from Defense News

A \$440 million contract to modernize the French Air Force's fleet of Boeing airborne warning and control system spy planes to the latest standard almost doubles the value of government to government sales between Washington and Paris, an official of the U.S. Office of Defense Cooperation said. Boeing announced February 3 it had won a \$324 million Foreign Military Sales contract to upgrade France's four E-3F airborne warning and control system aircraft and the fleet's ground system to the U.S. airborne warning and control system Block 40/45 standard.

"This will double the Foreign Military Sales case book," said Air Force Lt. Col. Rodney Hamel. "Dollarwise, this is a very big project for us."

Before the airborne warning and control system upgrade, the U.S. Air Force had 40 open Foreign Military Sales cases with France totaling \$579 million, official figures showed; with the aircraft upgrade, that increases to 41 cases worth \$1.02 billion. The total value of the French aircraft modernization is \$440 million, Hamel said. The price difference is understood to be due to technical and training support provided by the U.S. government under the Foreign Military Sales terms.

Rheinmetall-MAN Teaming Boosts German Restructuring

Reprinted from Defense News

The teaming of Rheinmetall with truck manufacturer MAN to offer a range of armored and unarmored military vehicles is another step toward the restructuring of Germany's vehicle industry, an expert said. The new company, known as Rheinmetall MAN Military Vehicles, aims to ally the companies' core competencies and exploit respective brand strength, "with the goal of improving [their] position in the world market," said Georg Pachta-Reyhofen, chief executive of MAN Nutzfahrzeuge. Rheinmetall will take 51 percent stake in the venture and MAN 49 percent.

Major Program *report*

USAF Hones Long-Term Plans for Joint Cargo Aircraft

Reprinted from *Defense News*

The U.S. Air Force is still determining its long-term plan for the C-27J joint cargo aircraft, including where to station the planes and how many it will eventually buy, according to an Air Force report submitted in March to the congressional defense committees. The Pentagon's 2010 budget gave the joint cargo aircraft and the mission it supports solely to the Air Force to manage. The budget also included \$318 million for the Air Force to purchase eight C-27Js. For 2011, the Air Force has requested \$350 million for another eight planes.

A congressionally requested Air Force report indicates that the service's C-27J plans are still evolving. "For now, the plan is to primarily use the aircraft for the combat direct support role," largely for U.S. Army soldiers, the report says. The Air Force report says the service plans to buy 38 C27Js in the next five years, following guidance from Defense Secretary Robert Gates. The original plan would purchase 54 planes for the Army and 24 for the air service. But defense officials have called the figure of 38 a floor, not a ceiling.

On Track

Reprinted from *Aerospace Daily & Defense Report*

U.S. Army leaders have been dropping hints over the past several months that they might be leaning toward a tracked design for the ground combat vehicle, as opposed to the wheeled family of mine resistant ambush protected or Stryker combat vehicles the service has been buying over the last decade.

Lt. Gen. Robert Lennox from the Army's G-8 department said the Army indeed seems to be leaning toward tracks. "As you start asking what you want the vehicle to do in terms of survivability, weight is a factor," Lennox says. When it comes to "the number of people that it carries, weight is a factor. Do you want a turret on top? Weight is a factor. And those kinds of attributes drive you to, I think, a tracked vehicle."

U.S. Army Autonomous Navigation Passes Critical Review

Reprinted from *Aerospace Daily & Defense Report*

The U.S. Army is one step closer to deploying a system that will allow soldiers to drive manned vehicles remotely, or even make it possible for the vehicle to drive itself. The service's autonomous navigation systems recently completed its critical design review and is moving toward prototype fabrication, Army officials said May 12. The system was designed to help drive and navigate with certain manned vehicles as well as other parts of the former Future Combat Systems unmanned ground vehicle family.

Fusing data from a collection of sensors, including a millimeter

radar, GPS and inertial navigation system, the autonomous navigation system enables a vehicle to follow a set route using waypoints, detect and avoid obstacles, and follow dismounted soldiers or other vehicles, such as in a convoy.

While the autonomous navigation system is currently being designed for planned light assault armed robotic vehicles, Army officials say it can be configured and adapted to work on other vehicles as well. The Army has already tested the autonomous navigation system on manned vehicles. "It can be integrated on other platforms," says Lt. Col. Jay Ferreira, product manager for unmanned ground vehicles. "We have demonstrated already."

U.S. Army Urged to Accelerate GCV Development

Reprinted from *Jane's Defense Weekly*

Industry proposals were delivered by 21 May for the U.S. Army's new ground combat vehicle, as the project's development schedule is being scrutinized from several angles. The ground combat vehicle program is scheduled to begin fielding mobile and survivable infantry fighting vehicles within seven years of its inception, which means the first production systems would be ready in 2017.

However, Secretary of Defense Robert Gates said on 7 May that he is "not satisfied" with this development schedule and believes it could be accelerated. "It seems to me that we ought to be able to carve some time off of that seven years," he said, noting that the mine-resistant ambush-protected armored vehicle program went from a concept to full production in under a year. Gates added that he remains committed to the ground combat vehicle program, but repeated his previous direction that its design must reflect "the lessons we've learned in the last few years about war in the 21st century."

The Army is currently adhering to the ground combat vehicle's seven-year development schedule but is awaiting results from a "red team" study that could alter the program's acquisition strategy, according to Paul Mehney, a service spokesman with the Program Executive Office for Integration.

Boeing Unveils Concepts for Sixth-Generation Fighter

Reprinted from *Jane's Defence Weekly*

Boeing has unveiled its design concepts for a new strike fighter to replace the U.S. Navy's F/A-18E/F Super Hornets after 2025 and to succeed the U.S. Air Forces F-22 Raptor two or three years after. The sixth generation twin-engine fighter concepts are stealthy, tailless, supercruise-capable and would include optionally manned cockpits, according to Dixie Mays, Boeing's next-generation air dominance program manager.

Mays said the company began preparing its sixth-generation

Major Programs cont. on page 11

Who's where

■ **William F. Kiczuk** has been named vice president and chief technology officer of the Raytheon Company, Waltham, Massachusetts. He is a Raytheon senior principal engineering fellow and was technical director and director of the strategic architectures unit of Raytheon Integrated Defense Systems.

■ **Larry Dibbs** has been appointed director of business development for space products for San Diego-based L-3 Communications, Telemetry-West. He was director of business development for space electronics at L-3 Communications, Cincinnati electronics. Dibbs succeeds **Paul Brammer**, who is now director of proposals.

■ **Rear Adm. Norman R. Hayes**, USN, has become director of intelligence for the U.S. European Command, Stuttgart-Vaihingen, Germany. He was director of the National Security Operations Center of the National Security Agency, Fort Meade, Maryland.

■ **Rear Adm. William E. Leigher**, USN, has been named deputy commander of the Fleet Cyber Command/deputy commander of the Tenth Fleet at Fort Meade. He was director of information operations/deputy director of naval intelligence for cryptology in the Office of the Chief of Naval Operations at the Pentagon.

■ **Maj. Gen. Sue Mashiko**, USAF, has been appointed deputy director of the National Reconnaissance Office (NRO), builder of the nation's classified spy satellites. Mashiko will become the highest-ranking officer at the NRO, serving under director Bruce Carlson.

■ **Richard R. Yuse** has been appointed president of Raytheon Space and Airborne Systems, El Segundo, California. He succeeds the late Jon C. Jones. Yuse was president of Raytheon Technical Services Company, Reston, Virginia.

■ **Maj. Gen. James O. Poss**, USAF, has been named director of strategy, integration and doctrine/deputy chief of staff for intelligence, surveillance and reconnaissance at USAF Headquarters at the Pentagon. He was director of intelligence, surveillance and reconnaissance capabilities and remains deputy chief of staff for intelligence, surveillance and reconnaissance at USAF Headquarters.

■ Northrop Grumman, Los Angeles, announced **Sir Nigel**

Essenhigh has been appointed chief executive officer of its Information Systems Europe business. The former British Royal Navy first sea lord will focus on the strategic direction of Northrop's activities in defense and civil information technology, CAISTAR and counter-IED markets in Europe and its export markets. He will continue in his role as nonexecutive chairman for Northrop Grumman in Britain.

■ The board of directors of General Dynamics, Falls Church, Virginia, has elected **Jay Johnson**, president and chief executive officer of General Dynamics since July, as its chairman, the company said. He succeeds retired chief executive officer **Nicholas Chabreja**, who has served since 1997.

■ **Michael Chertoff**, former U.S. secretary of homeland security, has joined the board of directors of BAE Systems Inc., the U.S. arm of Britain's BAE Systems.

■ **Mark Elliott** has formally been appointed nonexecutive chairman of QinetiQ Group, London. Elliott, who joined the board in May 2009 as an independent nonexecutive director, replaces **Sir John Chisholm**.

■ Lockheed Martin, Bethesda, Maryland, named **Christopher Gregoire** vice president and controller. Gregoire succeeds acting controller **Mark Bostic**, who will continue as vice president of accounting after serving more than seven months in the capacity of acting controller. In his new role, Gregoire will lead the corporation's accounting, financial planning and analysis, government finance and tax functions.

■ **George Whitesides**, who stepped down May 7 as chief of staff to NASA Administrator **Charles Bolden**, will take the helm at commercial space venture Virgin Galactic as the New Mexico-based company's first chief executive. Whitesides, who previously served on President Barack Obama's NASA transition team and who was one of the president's first political appointments to the space agency, is tasked with transitioning Virgin Galactic from a development project to a fully operational commercial firm.

■ **Ricardo Sanchez** has joined Asynchrony Solutions' board of directors, the St. Louis-based information technology firm said. The retired U.S. Army lieutenant general was the commander of coalition and U.S. forces in Iraq.

■ L-3 Communications, New York, appointed **Steve Kantor** president of its services group. Kantor, who also is a corporate senior vice president, succeeds **Carl E. Vuono**, who will retire and remain with L-3 in a consultancy role.

Contracts from page 7

AFMSTT supports military organizations by providing the air war simulation for senior commanders and battle staffs for training in the execution of joint and combined operations. AFMSTT consists of a group of software applications designed to provide a range of operational environments for mission training. The toolkit is built around the Air Force's air warfare simulation model.

AEgis Technologies will serve as the prime contractor and Accenture will serve as the primary subcontractor. Accenture is a global management consulting, technology services, and outsourcing company with offices worldwide. Accenture has served as the prime contractor for AFMSTT for nearly four years.

Super Hornets Trainer

Reprinted from *Defense News*

CAE, Montreal, won a 90 million Canadian dollar (\$87.2 million) contract from Lockheed Martin to develop a training system for technicians who will maintain Canada's new fleet of 17 CC-130J transport planes. Lockheed is the prime contractor for the airlifter (CC-130J is Canada's designation for the four-engine C-130J Super Hercules).

Over the next three years, CAE will design and manufacture a maintenance training suite that includes two CC-130J fuselage systems and training devices, one cockpit systems training device, and Simfinity laptop and desktop-based virtual trainers. After delivery of the training suite in 2013, CAE will support the CC-130J maintenance training program at Canadian Forces Base Trenton, Ontario, until mid-2016.

BAE Resets and Upgrades Bradleys

Reprinted from *Aerospace Daily & Defense Report*

BAE Systems is ordering long-lead items for the \$145.1 million contract it recently received to reset 551 Bradley fighting vehicles—work that also should improve combat capability and incorporate later-block improvements in the vehicle, according to Roy Perkins, company director of U.S. Combat Systems Business Development for the heavy brigade combat team.

Basic work for the contract includes a low-rate reset for about

300 of the Bradleys, Perkins said, with a major overhaul for the remaining vehicles, basically stripping them down “and rebuilding from the frame up.” During the reset, BAE and the Army also will be installing improved tracks that should double or even triple the system's lifespan, Perkins said.

BAE also has been looking to make the Bradleys more survivable. It is testing a new fuel tank that resists rupturing when being hit and the company has a new ramp-release system that will allow crews inside the Bradley to lower the ramp in case the driver, who now controls the ramp that allows soldiers to exit the vehicle, is incapacitated, Perkins said.

BAE also has developed and deployed a safer way to secure ammunition inside the vehicle, he said. The reset work for this contract is to be completed by the end of 2011.

Full Team ADMS Training System

Reprinted from Environmental Tectonics Press Release

Environmental Tectonics Corporation's Simulation Division today announced the signing of a contract with Butler County Community College in Butler, Pennsylvania, to deliver a full team ADMS training system. Butler County Community College (“BC3”) serves 27 counties in Western Pennsylvania and plans to use ADMS to augment their already robust public safety program known as Emergency Crisis Management. BC3's program trains local emergency responders from all disciplines, including police, fire, EMS, municipal and industrial workers. BC3 is located between major metropolitan cities such as Pittsburgh, Erie, and Cleveland, Ohio, as well as near major highways which interconnect these cities. If a major incident were to occur, a multi-agency response may be required. Bill Rooker, Project Manager at BC3, explained the importance of training for this type of response. He stated, “ADMS Command provides the tools to local municipalities to ensure their response organizations are prepared for major emergencies. By training together and building on individual strengths, a cohesive response can be tailored to any size emergency. It's not often that agencies get the opportunity to train together. ADMS Command provides this unique training opportunity.”

Major Programs from page 9

fighter designs in response to a June 2008 Navy request for information for an F/A-XX fighter, including both manned and unmanned options. Since then, the Navy has renamed its requirement next generation air dominance, indicating an emphasis on the type of air-to-air combat that the U.S. Navy's F-14 Tomcat air superiority fighter was designed to achieve.

The U.S. Air Force has also started researching sixth-generation fighter requirements, opening a Sixth Generation TACAIR

Requirements Office at Air Combat Command in Virginia. The opportunity to build a sixth-generation fighter, even it is still several years away, is important for Boeing, which lost the Joint Strike Fighter competition to Lockheed Martin. Mays said it is his understanding that the U.S. Air Force and the U.S. Navy are working together to coordinate their sixth-generation fighter requirements as they both prepare to conduct an analysis of alternatives of fighter concepts.

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

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For membership information, see page 4 of this newsletter, visit <http://www.trainingsystems.org>, or call (703) 247-9471.
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