

NTSA's Training Industry *news*

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President's *notes*

Rear Adm. Fred Lewis, USN (Ret.)

Address to Attendees of the Second Annual Modeling & Simulation Leadership Summit, 26 February 2007, Chesapeake, VA, by RADM Fred Lewis, USN (Ret), President, National Training and Simulation Association (NTSA).

The National Training and Simulation Association is working to develop something which I believe will benefit us all. "SimTV" will be the world's first television web site dedicated to the modeling and simulation industry and its technology. When complete later this year, "SimTV" will be a television site for member corporations to showcase their technologies and applications. It will also serve as a clearing house for information about the industry and an interactive, 24/7 means to discuss developments, ideas and business in real time. (In addition, the site may also feature a "Jobs Channel.") "SimTV" will therefore be the television network of our industry, and I can't imagine a more fitting platform to project this exciting technology to the world while at the same time helping to grow it from within. In addition, if "SimTV" develops as I am confident it will, it can serve to a large extent to backstop the coordinating and informational function we have identified for a national enterprise organization. You have received a brief information flyer on "SimTV" this morning, and I'd be more than pleased to discuss this exciting

breakthrough in more detail during the rest of the afternoon.

It's only natural for many of us to become immersed in the challenges and opportunities we face every day, and in the process we sometimes lose sight of the broader impact and significance of what we do. The perfect antidote to this, in my view, is to hear the experiences of those who depend upon and have benefited from our technology. Instances where use of simulation has enabled our warfighters to react to grave danger and complete the mission are the stuff of the "Warfighters' Corner" at I/ITSEC. For example, the Warfighter's Corner is where our men and women who have faced combat tell of their personal experiences and how their training paid off. Hearing these accounts, we realize anew that what we are doing saves lives every day. We have a right to be proud of the community we represent and even prouder of those who benefit directly from it.

While I will not pretend that my remarks will be so grandiose as to be a "State of the Industry" speech, I would like to touch on a few developments, trends and issues that I think we should keep in mind and think about as we watch our industry develop. I do believe we are in an open-ended development phase, with no foreseeable end point.

Just in the last several years, we have seen mod-

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DoD Revisits Approach to Modeling and Simulation Organization

The re-designation of the Defense Modeling and Simulation Office (DMSO) as the Modeling and Simulation Coordination Office (M&S CO) on Oct. 27 of last year became the latest and most visible sea change in the Department's on-going revision of the way DoD manages M&S.

In recent years, it became evident to DoD senior leaders that the original approach for managing M&S at the Department level via the Defense Modeling and Simulation Office (DMSO) and the Executive

Council on M&S (EXCIMS) fell short in implementing the original Departmental M&S vision, policies, and plans established in the early 1990's. They asked where would we be today if the Department had fully implemented the original 1994 policy for managing M&S (DoD Directive 5000.59) and 1995 M&S Master Plan (DoD 5000.59-P). The senior leaders thought that given 13 years, the better part of a billion dollars counting just the DMSO budget from

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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.

Current *news*

U.S. Acquisition Czar Wants FYDP Overhaul

Reprinted from *Defense News*

U.S. acquisition czar Kenneth Krieg wants to overhaul the jumbled system the Pentagon uses to project and track long-term program costs, which too often leaves military officials struggling to estimate how much money will be needed.

Among other changes, Krieg wants his budgeters to be able to track all dollars used to bring about a specific battlefield effect, such as global strike or forcible entry. He also wants to improve the usefulness of the Future Years Defense Plan, a five- to six-year spending forecast that is updated annually.

“We’ve spent a lot of time and energy trying to figure out how to ... make the Future Years Defense Plan more of an analytic database instead of just a literal explanation of the budget program over five years,” Krieg said.

Critics agree the Future Years Defense Plan construction process needs to be revamped. But they say Krieg’s changes won’t fix what they call a Bush Administration hallmark—a lack of budgetary discipline.

U.S. to Push Commonality, Reduce Ship Types

Reprinted from *Defense News*

The fleet that U.S. Navy planners want to see in the 2020s and beyond will be larger than today’s fleet except for one key difference—the ships all will start to look the same. “What if we had fewer numbers of ship types?” asked Christopher Deegan, director of Naval Sea System Command’s cost estimating group. “What if we reduce that so we can simply extend production lines, get those production efficiencies working ... and then see if we can drop in modules for the capability?”

That’s the heart of a new plan developed under the direction of Naval Sea Systems Command’s commander, Vice Adm. Paul Sullivan, Deegan explained. Command officials are taking ideas from the naval aviation community, European shipbuilders and corporations to devise a new approach they hope will make the Navy’s shipbuilding cost goals reachable.

“We have to change our behavior,” said Howard Fireman, director of Naval Sea Systems Command Future Concepts and Surface Ship Design Group. “We have to fundamentally change the way we design ships.”

The new shipbuilding strategy is aimed at the key issue in fulfilling the service’s dream of building a 313-ship fleet—affordability. The Navy forecasts an average annual shipbuilding budget of \$14.4 billion to pay for the fleet, but nearly every analyst outside the Navy sees that figure as falling far short. Eric Labs of the Congressional Budget Office, one of the most credible outside cost analysts, sees the true cost at more than \$20 billion.

“Both numbers are right, Deegan said. “The question is not

who is right or wrong, the question is how will the Navy and industry change historical cost behavior” to hit the Navy’s budget target.

USAF Cyberspace Command Aims for May

Reprinted from *Jane’s Defense Weekly*

U.S. Air Force Cyberspace Command is racing to meet a May 1 deadline to stand up its full warfighting capability in preparation for its elevation to the status of a “major command.” Head of Cyberspace Command, Lt. Gen. Robert Elder, told *Jane’s*, “In terms of the warfighting command stand-up, I was shooting for June, but they told me that was too slow, so I’m shooting for 1 May now.”

The main warfighting responsibilities of the new command fall into three categories, Gen. Elder said. The first is maintaining and protecting the Air Force’s cyber infrastructure, a mission that involves, among other things, adjusting firewalls to protect data and making sure airmen anywhere in the world have access to a secure Air Force internet link.

A second major warfighting responsibility is defense of the Air Force’s cyber infrastructure, to include the development of jam-resistant communications. The third responsibility is offensive and includes jamming transmitters using the radio frequency spectrum.

“This particular domain is contested—in some cases by criminals and in some cases by nation states—and without the freedom of cyberspace, we can’t do any other action,” Gen. Elder said. “This is a warfighting domain.”

USAF to Limit Cut in Flight Training Hours

Reprinted from *Defense News*

The U.S. Air Force is stepping back from a cost-cutting plan to reduce flight training hours by 10 percent. Under pressure from lawmakers who control the service’s budget, Gen. Michael Moseley, chief of staff, said he would try to limit the cut to 7.5 percent. “At a 7.5 percent reduction of flying hours, we’re still at low risk,” Moseley told senators during a March 21 hearing of the Senate Appropriations defense subcommittee.

The session was one of several appearances Moseley and Air Force Secretary Michael Wynne made on Capitol Hill as they campaigned for the service’s \$137 billion budget for 2008. The flight-hour issue drew the attention of Sen. Daniel Inouye, D-Hawaii, chairman of the subcommittee. “What risks are you taking by reducing the time?” asked Inouye. The danger, Moseley said, was expecting simulators to offer aircrews the same experience as flying. “There are only so many things you can do in a simulator, before you have to fly,” Moseley said.

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The Global marketplace

RSC Energia Has Record \$16.4M Net Profit

Reprinted from *Aerospace Daily and Defense Report*

Russia's RSC Energia reported a record \$16.4 million net profit in 2006, with a 37 percent increase in revenues, and expects to maintain strong sales and earnings through the end of the decade, according to chief executive Nikolay Sevastiyonov.

In 2007, Energia will deliver nine Block DM upper stages, used on the Sea Launch Zenit booster, along with two Yamal-300 telecommunications satellites, intended for Gazcom, a satcom operating affiliate of giant gas utility Gazprom. Over the next three years, the corporation also plans to manufacture four Soyuz manned space vehicles and up to seven Progress cargo vehicles, Sevastiyonov says.

At the end of last year, NASA contracted with Roscosmos for two Progress vehicles, to be built in 2007-2008, and opened discussions for six Soyuz and five additional Progress vehicles, for delivery in 2009-2011.

Australia Looks Beyond Destroyer

Reprinted from *Defense News*

The Royal Australian Navy in July will select new air warfare destroyers, worth some six billion Australian dollars (\$4.9 billion), and amphibious landing ships worth two billion Australian dollars. The three destroyers are scheduled to enter service from 2013, while the first of two amphibious landing ships should enter service by about 2012. While Canberra's recent focus has been on these major new maritime capabilities, Navy planners already have begun considering the surface combatants, submarines and supply ships that will replace the service's existing fleet.

The Navy is grappling with two major challenges—money and manpower, said retired Commodore Jack McCaffrie, an analyst at the Australian National Centre for Ocean Resources and Security at Wollongong University. While planners in the 1990s aspired to a surface fleet of up to 14 warships, the December 2000 Defense White Paper, whose strategic guidance remains in force, calls for a fleet of about 12 surface combatants. Traditionally, Australia has rarely

been able to afford more than this number, McCaffrie said.

The government will choose in July between two competing air warfare destroyer designs: the Navantia F100 destroyer, which is already in Spanish naval service, and an evolved version of the U.S. Navy's DDG-51 destroyer, designed by Gibbs & Cox Australia, Adelaide.

Local Yards Can't Keep Up With India's Plan

Reprinted from *Defense News*

The Indian government has approved a \$30 billion shipbuilding plan to enlarge the fleet from 140 warships to 185 by 2017. The move supports the service's newly revised, more aggressive doctrine that shifts focus from coastal protection to a more strategic one including littoral warfare, dominance in the Indian Ocean region and development of a credible minimum nuclear deterrence, a defense ministry official said.

The Navy will have to buy foreign ships—despite the government's desire to rely on the domestic defense industry—if it is not to shrink for the next five to seven years. About five ships will be retired each year, and India's three naval shipyards can build a total of only three ships a year, said Navy spokesman Capt. Vinay Garg.

Bids are to be solicited this year for up to seven stealthy frigates from European or Russian shipyards, the ministry official said. By 2017, the Navy expects to have purchased from overseas vendors three aircraft carriers, five nuclear submarines, additional conventional submarines, deep submerged rescue vessels and air cushion vehicles, the official said.

Canada Sets Stage to Replace Frigates

Reprinted from *Defense News*

The Canadian Navy expects to begin laying the groundwork this summer to acquire a new class of vessels to replace its frigates and destroyers. The Navy leadership has accepted the concept that a single, common hull can be employed to replace the *Halifax*-class frigates and the *Iroquois*-class destroyers starting around 2020.

It is expected that Vice Adm. Drew Robertson, the head of the service, will soon sign off on an

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While simulators have become an accepted part of training for aircrews on large planes such as the C-17 Globemaster III, there are still questions about how much fighter training can be done in simulators since machines don't reproduce the physical stress of high-G maneuvers. Moseley, a career fighter pilot, explained he would be comfortable with a 7.5 percent reduction because it would not move too much training out of cockpits.

"I think we're at about the right balance on that, and I'm not willing to go much further," the general said.

Ten Percent of Simulated Missiles Hit Japan

Reprinted from Aerospace Daily & Defense Report

About 10 percent of simulated North Korean missiles hit Japan in an exercise held this year, a Japanese newspaper has reported. The Japanese-U.S. Keen Edge command exercise in late January and early February simulated the launch of about 150 enemy missiles over several days, the Yimouri Shimbun newspaper said. The paper didn't say what defensive weapons were used in the simulation.

Japan is buying U.S. SM-3 and PAC-3 anti-missile systems. The Lockheed Martin PAC-3 system was deployed in Japan for the first time March 29 at an air base in Saitama, a prefecture north of Tokyo. Ahead of the deployment, the government issued a regulation under which the defense minister can order interception of missiles heading toward Japan. Without that regulation, it would have been illegal to fire.

DNDO Looking to Develop Mobile Variants

Reprinted from Defense Daily

With final testing of next-generation radiation portal monitors underway to inform a decision in June whether to proceed to full-rate production, the Domestic Nuclear Detection Office is in the process of developing mobile variants of the advanced spectroscopic portals to screen cargo for radiological threats in certain areas of ports where screening doesn't currently take place and at smaller ports of entry and non-ports of entry, the head of the Domestic Nuclear Detection Office said.

These advanced spectroscopic portal variants will be truck mounted for relocatable checkpoint applications, including state and local use, and low volume ports of entry, Vayl Oxford, director of the Domestic Nuclear Detection Office, told the House Appropriations Homeland Security subcommittee. The variants would also be shuttle-carrier mounted for use in seaports where cargo is directly loaded from ships to rail cars, which usually aren't screened at an exit gate, he said.

"By focusing on developing additional passive detection design variants that meet unique port requirements, the Domestic Nuclear Detection Office is well on its way to providing technical solutions that enable us to scan 100 percent of cargo containers entering the United States," Oxford said. "To support all of our passive systems, we will also be upgrading the standard advanced

spectroscopic portal cargo portals with software improvements and better controls and displays based on feedback that we receive from operational deployments."

Currently 91 percent of containerized cargo entering the U.S. by land and sea passes through radiation portal monitors. The department of Homeland Security plans to have 98 percent of incoming sea containers screened by the end of this year.

Marines Working to Keep Harrier Numbers Up

Reprinted from Defense Daily

The Marine Corps is doing what it can to keep its fleet of aging AV-8 Harriers flying until the service takes delivery of the short takeoff and vertical landing variant of the F-35 Joint Strike Fighter. In the Navy's FY08 budget, the service cut Joint Strike Fighter procurement by almost 50 percent between FY08 and FY11. However, it should be noted that the program of record for both the Marine Corps and the Navy has not changed: 420 for the Marine Corps and 680 total for the Department of the Navy, said Brig. Gen. Robert Walsh, assistant deputy commandant for aviation.

Walsh noted that while Joint Strike Fighter numbers were trimmed, other aviation programs also received their share of reductions. "What it comes down to, as these programs have grown and costs go up, everything gets pushed to the right. Typically, that is the way we operate whether you like it or not," he said. "It is hard to afford everything we want to get, so a lot of these programs have been slashed. In some cases, we have had some increases."

Another factor is that the cost of new programs such as Joint Strike Fighter make them lucrative targets for cuts, Walsh added. While the aircraft cut in the FY08 budget are not operational aircraft, the cuts stills have an impact, he said.

Not getting the short takeoff and vertical landing variant of Lockheed Martin's Joint Strike Fighter sooner means the Marine Corps has to do what it can to keep its fleet of legacy aircraft flying. For example, the Marine Corps is about at the minimum number of Boeing AV-8 Harriers that it can get by with, Walsh said. The original primary mission assign aircraft was for 20 Harriers per squadron, Currently, it is down to 14. "What we did do is we remanned the majority of our Harriers ... remanned them about 80 percent new," Walsh said.

Boeing no longer makes the Harrier and with a Marine attrition model of about two to three per year, it is only a matter of time before the number per squadron falls to 12, Walsh said. "We are at that limit with the Harriers. We can't afford to go any lower."

The decrease in Harrier numbers has led the Marine Corps to pull aircraft from other squadrons to meet the needs in Iraq. Currently, Harrier squadrons sent to Iraq are sent with eight aircraft. Walsh said eight is not enough and that the Marine Corps needs to send 10 minimum. But to get to 10 aircraft, the service has to pull two from another squadron, he added.

Major Program *report*

Surface Warfare Enterprise Tackling LCS Manning

Reprinted from *Defense Daily*

The Navy's drive toward a surface warfare enterprise to transform the way the service mans, equips and trains sailors for the surface fleet is enabling the service to meet the challenges of the littoral combat ship, according to a top Navy official.

The Navy has to transform because it has to keep maintaining, manning and training the legacy ships it has today the same way, while the service takes on newer ships like littoral combat ships, DDG-1000 and even LPD-17, said Vice Adm. Terrance Etnyre, commander, Naval Surface Forces, commander, Naval Surface Force, U.S. Pacific Fleet. "How are you going to begin operating those ships? How are you going to maintain them because the same processes won't work," he said.

For example, usually the Navy has 10 to 15 years to prepare for a ship on the waterfront, he said, "With littoral combat ships, we didn't have that. People didn't know enough about the ship because of the way we asked to have it built, which was the right way, but with that came this other issue that we didn't get a lot of visibility into a lot of the systems that were going to be on this ship," Etnyre said. "You couldn't exactly plan for what training the people needed to have until you knew what the systems were."

Because a littoral combat ship would have a core crew of 40, the Navy had to develop new manning concepts, new training efforts, he said. "Without doing it in an enterprise fashion, we could not have kept up with the pace of delivery of the ship."

A Lockheed Martin-led team is building the first and third ships of the littoral combat ship class, which includes the *USS Freedom* (LCS-1). A General Dynamics-led team is building the second and fourth ships, which includes the *USS Independence* (LCS-2). All of the crews for the *Freedom* and *Independence* have been identified and their training tracks are in the works, Etnyre said. "Some of the crews are halfway through, some are completed. All will be done in time to go onto *Freedom* and *Independence*."

Army Drops Armed Robotic Vehicle from FCS

Reprinted from *Aerospace Daily & Defense Report*

The U.S. Army has decided to drop the armed robotic vehicle from the Future Combat System program, bringing the total number of systems in the mammoth modernization effort down to 14. Brig. Gen. Thomas Cole, deputy program manager for Future Combat System program integration, said the armed robotic vehicle is being cut from production and put back into the science and technology base.

Another possible casualty is one of the unattended munitions being developed for Future Combat System. The largest unmanned ground vehicle planned for the Future Combat System, the armed robotic vehicle, was being developed in an

assault variant and a reconnaissance, surveillance and target acquisition variant by BAE Systems. A company spokesman said BAE has received no official confirmation of the cut from the Army. Future Combat System lead systems integrators Boeing/SAIC would not comment specifically, other than to say they will "work with the Army on any possible adjustments to the program."

The Future Combat System is developing a networked suite of manned and unmanned vehicles, aircraft, sensors and munitions. The program had been stable at 18 systems until the Army decided to cut two of the planned four classes of unmanned aerial vehicle from Future Combat System.

Collaboration Aiding Anti-Terrorism R&D Efforts

Reprinted from *Defense Daily*

Limited resources are leading the services to actively collaborate on anti-terrorism science and technology efforts under the guise of the Pentagon's physical security equipment advisory group (PSEAG), according to a Navy official. PSEAG is one of several areas the Navy is actively involved in to develop anti-terrorism/force protection systems to protect sailors, ships and installations.

It is working to identify common anti-terrorism research and development efforts among the services to avoid having each branch go off on its own, Capt. Paul Cruz, program manager, anti-terrorism afloat, said. "Each service is assigned key working groups to lead and they take input from other services and work the efforts to meet [their] requirements as well as the requirements of the other services," Cruz said.

The Navy is the lead on three working groups: the shipboard and waterfront security working group; the Defense Department locks and magazines working group, and the explosive detection equipment working group. The Army and Air Force each have their own working groups, everything from interior-exterior robotics, access control, and surveillance systems.

"It's just a wide span. All those pieces are divvied up across the services. The Navy has facilitated the working relationships with the Department of Homeland Security science and technology branches because we have the same requirements in some cases, especially in the waterfront area," Cruz said. "They have the same capability requirements and work very closely with the United States Coast Guard, identifying what we need in terms of science and technology and making sure we are working together, if possible." The Coast Guard is very interested in what the Navy is doing. They Navy has had discussions with Coast Guard officials working the Deepwater program, Cruz said.

F-35 Program Cost Seen Increasing

Reprinted from *Aerospace Daily & Defense Report*

When the Pentagon next updates the cost information on its major

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initial statement of requirements for the new vessels and, from there, the multiyear process of gaining approval from Canadian Forces leaders and the government will start.

Navy officials stress that the lengthy process is just beginning. "We're starting to move the concept forward now," said Capt. Ron Lloyd, director-general of maritime force development. "Between now and the summer, we'll have an opportunity to brief the Canadian Forces in terms of putting on the table what we envisage are the milestones."

The new class of ship, expected to be about 5,500 tons, has been referred to in the past in Canadian defense circles as the single class surface combatant, but Lloyd said a new name will be sought, preferably using the term frigate in the title.

Lloyd said the first capabilities to be outfitted on the new class of ship would likely deal with command and control and area air defense. That is because by 2015 the *Iroquois*-class destroyers, which now provide those capabilities, will be more than 40 years old and too difficult to support and maintain.

Boeing Completes Delivery of Egyptian Air Force Apaches

Reprinted from *Defense Daily*

Boeing announced delivery is complete for all 35 remanufactured AH-64D Apache helicopters produced for the Egyptian Air Force. The final six AH-64Ds arrived in Egypt late last year after their conversion from AH-64A Apaches at Boeing's Mesa, Arizona, rotorcraft center. The aircraft were upgraded to the modernized Apache configuration through the foreign military sales process. A final arrival ceremony was held in Cairo, Egypt, to commemorate the event before 150 members of the Egyptian Air Force, the U.S. Army and Boeing.

Al Winn, Boeing vice president of Apache programs, said, "Boeing and the Apache team have enjoyed an outstanding relationship with the Egyptian Air Force for more than 20 years. We're proud to know that this relationship will have the opportunity to grow and prosper for many years to come."

At the ceremony, Winn promised continued Boeing support for the Apache and presented Apache models to key Egyptian Air Force officers. Maj. Gen. Sayed Loka, representing the Egyptian Air Force air commander, expressed the Air Force's appreciation for the timely completion of the remanufacturing program.

Will Maintenance Work Come to Canada?

Reprinted from *Defense News*

The Canadian government will award to a joint British-Canadian consortium a maintenance contract worth more than \$1 billion for its *Victoria*-class submarines, heralding what industry officials say is a sign of a robust future market for the long-term support of military equipment.

Contracts totaling more than seven billion Canadian dollars (\$5.8 billion) are expected to be awarded over the next year or so

Who's where

■ **Roger Smith**, former deputy assistant secretary of the Navy for littoral mine warfare, will now focus on expeditionary warfare. With his new title as deputy assistant secretary of the Navy for expeditionary warfare, he will focus on the Marine Corps, the new riverine program, and all the things that fall under expeditionary warfare.

■ **Rear Adm. William E. Landay** succeeded **Rear Adm. Jay M. Cohen** as Chief of Naval Research. Landay was the program executive officer for littoral and mine warfare at Naval Sea Systems Command before moving to the Office of Naval Research.

■ **Maj. Gen. William Holland**, USAF, has been tapped to be the deputy commander of U.S. Central Command Air Forces and the vice commander of Ninth Air Force at Shaw AFB, South Carolina. He is currently the deputy combined forces air component commander for Central Command at Al Udeid Air Base, Qatar, and the deputy commander of Air Force Forces in that region.

Calendar of Upcoming events

Mark your calendars for these upcoming events focused on training and modeling & simulation:

MAY 7-11, 2007 • DMSC (Defense M&S Conference) • Hampton Roads Convention Center • Hampton, VA

MAY 15, 2007 • USAF APBI • Dayton, OH

JUNE 4-7, 2007 • SimTecT 2007 • Brisbane Convention Centre • Brisbane, Australia

JUNE 12-14, 2007 • Training & Simulation Industry Symposium • Orlando, FL

AUGUST 28-30 • Joint ADL Co-Lab Implementation Fest • Orlando, FL

OCTOBER 9-10, 2007 • International Disaster and Emergency Resilience Conference and Exhibition • Winchester House • London, UK

Please visit www.trainingsystems.org/events for complete details or contact Patrick Rowe at (703) 247-9471 or prowe@ndia.org for more information.

for the long-term maintenance and support of Canadian military equipment, including the submarines, C-17 and C-130J transport planes, and Chinook helicopters. Additional long-term maintenance contracts are also expected when the Canadian Forces purchase new trucks from the Army and fixed-wing search-and-rescue aircraft.

Training & Simulation *report*

CAE, Possibly L-3 to Bid for Canadian Training Deal

Reprinted from *Defense News*

Canada's military will seek one industry contractor to be the main training provider for its new Chinook helicopter and C-130J aircraft fleets. CAE, Montreal, will bid on the upcoming contract, valued at around 150 million Canadian dollars (\$127 million). L-3 Communications Military Aircraft Services Canada, Mirabel, Quebec, also is considering a bid.

The government is still negotiating the purchase of 16 Chinook helicopters and 17 C-130J transport aircraft. In parallel with those negotiations, the Defense Department has given notice to industry that it is seeking what it is calling an operation training systems provider.

"Given we are acquiring the Chinook and C-130J Hercules fleets around the the same time, the opportunity exists to combine the aircrew training requirements," said Krista Hannivan, a spokesperson for the assistant deputy minister for materiel. "Training in this combined fashion would mean a more cost-effective and efficient means of delivering this required training to Canadian Forces aircrews and maintainers."

This could trim project and management costs and reduce the duplication of efforts, she said. A draft request for proposals for operation training systems provider could come as early as May. A contract would be awarded sometime in the summer of 2008. The selected firm would provide an aircrew training program and include training devices such as a full-flight simulator, part-task trainers and distributed mission rehearsal trainers. The program might include the construction of new training facilities.

Simulating Ship Supply

Reprinted from *Defense News*

Canadian defense scientists will use simulation to try to improve how naval ships can be resupplied at sea. The Atlantic laboratories of Defense Research and Development Canada, the military's science organization, has started an 18-month project to determine whether it is not only possible to increase the weight of supplies transferred between ships but also to accomplish that type of operation with fewer personnel.

Kevin McTaggart, the Defense Research and Development Canada scientist overseeing the project, said researchers also hope that simulation will be able to determine how to improve the resupply of ships during rough seas. Typically, replenishment between Canadian Navy ships is done using a cable stretched between the two vessels while they are underway. Supplies are then sent across that cable.

During the simulation of that procedure, researchers will input variables such as sea conditions, the motion of the ships and the behavior of the replenishment systems, including the amount the cable stretches during the transfer.

"One of our main concerns in this simulation is how the motions of the ships will influence things," said McTaggart, the group leader for ship structures and life-cycle management at the company. "We want to determine if adverse events might occur, such as breakage of the replenishment gear."

Simulation will also be used to come up with ways to prevent the likelihood of supplies being immersed in water.

Quantum3D Releases IData 3.0

Reprinted from Quantum3D Press Release of April 2, 2007

Quantum3D, Inc., a provider of commercial off-the-shelf open-architecture, real-time visual computing solutions for the visual and sensor simulation and training and embedded visual computing markets, announced the release of IData 3.0, the latest version of Quantum3D's innovative human-machine interface development toolset and visual computing framework. IData is a suite of powerful, cost-effective, PC-based human-matching interface tools that enable developers to rapidly prototype, develop and deploy dynamic and interactive cross-platform 2D and 3D human-machine interfaces for high-performance graphics and video-intensive applications such as avionics, vehicle electronics, unmanned vehicle control, C4ISR systems, industrial automation, medical systems and embedded training.

Mobile City Opens

Reprinted from *Defense Daily*

The Marine Corps' first mobile military operations in urban terrain facility on the East Coast opened April 3 at Camp Lejeune, North Carolina. The training facility, named Nir min Al-Bahar or "Eagles from the Sea" in English, is modeled after real towns in Iraq and Afghanistan, says the Marine Corps. The newly-completed training facility covers 29 acres and costs more than \$15 million to construct. It consists of 71 buildings, five of which contain 360-degree shoot houses to support live-fire training. The buildings within the complex are one to three stories tall and include indoor/outdoor stairwells and ladderwells, the service adds.

The complex features more than 100 automated targets including eight moving armor targets, five moving infantry targets, two tunnel complexes and battlefield effects simulators. To enhance the realistic training, speakers are in place to sound the call to prayer and provide city sounds. Iraqi role players will be contracted to run the streets as locals, Iraqi Army soldiers or insurgents.

Simulated Helicopters, Real Competition

Reprinted from *Defense Helicopters*

Until recently, military helicopter synthetic training was considered as something of a "strange animal" in Russia, as there were no adequate simulation technologies there, and almost all pilot train-

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Contracts

First Big Test for FCS

Reprinted from *Defense News*

The U.S. Army has begun to outfit about 100 Bradley fighting vehicles, Humvee utility vehicles and M1 Abrams tanks with radios and wireless networking gear in preparation for the first live, large-scale test of the Future Combat System program. In the limited user test, to be held in July 2008 at Fort Bliss, Texas, some 900 soldiers will use several dozen of the newly-networked vehicles in mock combat. Fighting a combination of simulated threats and live players armed with gun-simulating lasers, they will put the Future Combat System networking gear to use in roadside attacks, battle with insurgents hiding in caves and buildings, and other scenarios

“The tests will represent how the units would have to react in a tactical situation that is representative of today’s operational situation,” said Allan Resnick, who directs requirements integration at the Capabilities Integration Center of the Army’s Training and Doctrine command. This summer and fall, the Fort Bliss troops will practice with their updated vehicles while Army officials do technical testing and formal force development test and evaluation.

The 2008 test will steer the development of the world’s largest land-warfare program, a two-decade effort slated to cost some \$113 billion. Specifically, it is intended to help Future Combat System officials decide which technologies will be ready for service in the next five years.

Boeing, Lockheed Martin Gain GPS III Contracts

Reprinted from *Defense Daily*

Boeing late last year completed an Air Force review of the global positioning system Space Segment III, and the company separately gained a roughly \$50 million contract for further design work, Boeing said this week. Rival Lockheed Martin also late last year completed the review, and received a similar contract of almost \$50 million, the company announced.

That’s one more step for the competing firms, the two largest defense contractors on the planet, with each of them vying for a multi-billion dollar prize, a GPS III contract the Air Force will award later this year. The GPS Wing, Space and Missile Systems Center at Los Angeles AFB, California, will award the major contract.

That recent Delta Systems Requirements Review included an incremental-capability insertion approach designed to ensure low development and delivery risks. The review, which Boeing said it completed in November, is part of a \$10 million follow-on order to the Phase A concept development contract awarded to Boeing in 2004. A similar award was made to Lockheed Martin.

The subsequent \$50 million cost-plus-fixed fee contract supports system design reviews in March and key program decision points in June. That modification adds detailed system engineering and design, and continues risk reduction efforts as the Air Force moves toward initial launch in 2013, or earlier.

Training & Simulation from page 7

ing activity was carried out using expensive and increasingly scarce real flight time. This caused a number of flight safety issues and also hindered marketing efforts in some potentially lucrative but demanding export markets. There were no engineering simulators to speed the development of new helicopter types, either.

This grim situation began to alter in the early 2000s, thanks to the emergence of two specialized high-tech simulator manufacturers in Russia, CSTS Dinamika and RET Kronshtadt, which rapidly found domestic and export customers in this underdeveloped market niche, and now both are reporting that future sales prospects look bright.

In 2006, as ARMS-TASS news agency reported, the two Russian companies achieved sales exceeding \$150 million. This was accomplished through the adoption of a new marketing approach that

includes a simulator and computer-based training in every helicopter export offer. The view is that one simulator is a must for any export proposal covering between 10 and 30 helicopters.

The Real Deal

Reprinted from *Defense Daily*

Naval Sea Systems Command signed a cooperative agreement with the Simulation Interoperability Standards Organization and Defense Modeling and Simulation Office/Modeling and Simulation at Naval Surface Warfare Center Carderock Division, March 14, the Navy says. The three-way agreement established a consensus-based set of internationally recognized standards for modeling and simulation to promote interoperability between various simulation and modeling systems and to encourage software reuse, adds the Navy.

President's Notes from page 1

eling and simulation applications migrate from what had been somewhat limited, traditional uses--flight training and training on a few other platforms with a variety of environments. Now we are approaching a point where simulation training applications are becoming ubiquitous. The ability to infuse itself into increasingly diverse areas of human learning is the principal and most exciting characteristic of modeling and simulation today. Thanks to the ever-expanding pace of the technology, potentially all areas involving complex or potentially dangerous learning environments can benefit from some aspect of the use of simulation for training. In the near future, given the pace and inevitability of this migration, I think modeling and simulation will become pervasive throughout learning--and perhaps into areas we cannot yet fully anticipate.

No arena illustrates this ever-widening influence better than national defense applications. While modeling and simulation owes its origins largely to military training, it has recently spread from comparatively restricted applications--cockpit training comes to mind--and into much broader--and some would argue--more vital areas such as small unit operations, IED identification and avoidance, and battlefield casualty management. Now we are seeing the introduction of simulation technology into strictly human-to-human interactions--by far the most complex training environment. This is a natural progression, in my view. First, we had a strictly human-to-machine interface, which involved learning to manipulate a specific platform. Over the last decade, we have seen the expanded use of linked simulation training, where platform operators train in joint environments and humans react to each other as platform operators. Now we are witnessing the use of simulation in direct human-to human interaction, where we train to manage human relationships through virtual beings. While now limited to certain applications--security screening, for example--this aspect of modeling and simulation can be expected to expand and diversify as rapidly as did previous applications, opening an exciting and important new field, particularly as we continue to face terrorist threats which typically emanate from the actions of individuals or groups of individuals, rather than from traditional platforms.

Technology development of traditional training is largely static; that of modeling and simulation is nothing if not dynamic. It's therefore inevitable, in my view, that modeling and simulation will continue to occupy terrain now held by traditional training methodologies. As this process continues, however, we should be careful not to succumb to the temptation to push M&S too far too fast. It's tempting to do this, particularly where budgets are constrained and time is a critical factor. But--just because traditional training is typically more expensive and time-consuming doesn't mean that it can be dispensed with entirely. The Israelis learned this recently in tough combat with Hezbollah, where over-reliance on high-end applications, including virtual training, led to disappointment on the ground. For the time being at least, the challenge will be in

identifying what type of training, or training mix, is most appropriate for a given scenario. In the case of urban, small unit combat like the kind faced by the IDF and by the Coalition and Iraqi forces, there will remain a need for hands-on, live training into the foreseeable future. But even in this most demanding environment, we can see that simulation training is being utilized, and appropriately so, if kept in perspective.

In another area, those of us involved most closely with M & S uses for military training have long been interested in exploiting game technology for our purposes. To do this, however, has required a cultural shift in that many in defense have never taken electronic games seriously. Now, however, advances in the state of the art have caused us to closely examine not just the games themselves but the technology behind the game. It is my belief that we are on the threshold of a breakthrough that has the potential to have a major impact on how we train.

And we at NTSA and I/ITSEC are now providing game developers an opportunity to showcase their technology.

So--prospects for our technology are about as bright as for any cutting edge field, and the dynamism we see in its evolution is proof of this. Accompanying the technology is the emergence of "centers of excellence" around the U.S. These locations leverage industry, academia, federal, state and local agencies and other research facilities to nurture and develop the industry.

We are all aware of the growing importance of the Norfolk/Suffolk region, where we find ourselves. Other centers include Huntsville, New England, San Diego, Texas, and of course Orlando, where NTSA hosts the annual I/ITSEC conference and exhibition. A growing number of universities, community colleges and other academic and research organizations are developing and incorporating modeling and simulation courses into their curricula. Recently, the dramatic emergence of our technology into the forefront of 21st Century technology was acknowledged by the formation of the Congressional Modeling and Simulation Caucus. Under the dynamic and enthusiastic leadership of Congressman Forbes, the Caucus is raising awareness of the critical national need for sustaining this technology.

For all these reasons, we now need to recognize modeling and simulation for what it has become: a critical national technology and a fully National enterprise. We all need to urge our Nation's most senior leadership to accept this reality. America is only as strong as its technology base, and we all know the level and sophistication of the international challenges we face in this field, as well as those who pose a grave threat to our freedom and way of life.

It should not be a secret to anyone here that the level of interest in what we in the U.S. are doing in the field of M & S has captured the attention of friend and foe and economic competitors. Testament to that fact is the diversity of the international delegates at I/ITSEC where 2,000 foreign nationals gather from 40+ nations such as the UK, Canada, Australia but also from China, Russia, and India.

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I also believe that our industry has grown and matured more quickly than its organizational structure has developed. Many can attest that M & S technology has become increasingly pervasive in our society. If we look at the national management of our industry, we see a diverse collection of regional, state and functional organizations, devoid of any established means of collaboration or even of coordinated communication. Further, regional economic pressures and the strong desire by communities to promote technological development within their constituencies have, in my view, hindered collective development. After all, the M & S community of practice brings with it high paying jobs, a skilled and educated workforce, a non-polluting environment, and its practitioners demand that local educational systems keep pace with the requirements of the new M & S population. It is not surprising, given the rapid, dynamic growth of our community, that regional and functional pressures have developed and have clearly outstripped our attempts to all pull on the same oar. Given the role our community now plays as a profession, as an industry and as a national security asset, the time is now ripe to remedy this situation for the

benefit of the community of practice as a whole. I therefore urge that we give careful and serious consideration to the formation of an over-arching body whose purpose is not to constrain or dictate, but to facilitate, to coordinate, to deconflict, and to enhance collaboration throughout the industry. Such an organization could also serve as the representative of the industry as a whole before government and on the international scene. As we move to the discussion phase of this meeting, and indeed after we have adjourned, I strongly suggest that we share our views and insights on this subject, which I believe is now one of the most important issues before us. For if we are to advance as a community of practice, we must act as a collective and push forward together. It is clear that we have become a National Enterprise, and National leadership is now required.

Ladies and Gentlemen, the challenges we face and the choices we need to make are those that grow from success. The industry we represent is strong and exciting, and more and more critical to maintenance of our nation and its way of life. It's hard for me to imagine a more satisfying, fulfilling enterprise.

DMSO from page 1

1994 to 2007, and many more billions of dollars throughout the Department, we should be much further along on that vision than we are. So, starting in 2004 internally to DMSO, and culminating in the fall of 2005 with an FY07 Program Review Issue Team and Program Decision Memorandum, the senior leadership directed a revision of the Department's approach to managing M&S.

Initiatives over the past 18 months include a new DoD Directive 5000.59, currently in formal coordination, replacing the three/four-star level EXCIMS with a one/two star level M&S Steering Committee (M&S SC) supported by an M&S Integrated Process Team (M&S IPT), and a repurposed DMSO simultaneously re-designated as the M&S Coordination Office (M&S CO). The M&S SC's goals are to enable improvements in the efficiencies, effectiveness, visibility, accessibility, commonality, reuse, and interoperability of M&S affecting the \$B spent annually by DoD on M&S. The premise of the M&S SC approach is that these goals are only achievable via collaboration among, and implementation by, the DoD Communities and Services. At this time, the M&S SC, M&S IPT, and M&S CO are just starting the FY08 business planning cycle.

In the next issue of this Newsletter, the M&S CO, in conjunction with USD(P&R), will provide a follow-up article to describe how training M&S is likely to be affected by this already and in the future.

The M&S SC is organized based on, and designed to support, major DoD Communities that are highly enabled by M&S. The M&S SC currently recognizes six such Communities: Acquisition, Analysis, Experimentation, Planning, Testing, and Training. The

Military Services are recognized as the "industrial base" for most DoD M&S and participate at two levels, as members on the M&S SC and as members of the above Communities. The M&S SC has charged these Communities with developing a business plan that describes what M&S capabilities they have, what capabilities they need, what they can make available to the other Communities, what they need from the other Communities, and what actions they plan to take to close their capability gaps. The M&S SC has tasked the M&S IPT and M&S CO to support the Communities in creating their business plans and to lead the creation of a Common & Cross-Cutting M&S Business Plan that uses the Community business plans both as foundations and input.

The M&S SC's goals are to enable improvements in the efficiencies, effectiveness, visibility, accessibility, commonality, reuse, and interoperability of M&S affecting the \$B spent annually by DoD on M&S. The premise of the M&S SC approach is that these goals are only possible via collaboration among, and implementation by, the Communities and Services.

At this time, the M&S SC, M&S IPT, and M&S CO are just starting the FY08 business planning cycle; this cycle will culminate in August, 2007, with the FY08 versions of the business plans, an FY08 plan for those challenges addressable using M&S CO funding, and the identification of set of challenges that cannot be addressed using M&S CO funding. These M&S SC will address these later challenges by either creating M&S SC collaborative efforts or queuing them up for DoD senior leader review.

Major Programs from page 5

weapon systems, the F-35 Joint Strike Fighter program will show a roughly four percent unit cost increase. The cost growth, detailed in April to Congress in the next filing of the Pentagon's selected acquisition reports, is largely the result of a cutback in near-term procurement funding for the Lockheed Martin-led project, according to program officials.

Although the four percent growth is modest by Pentagon standards, the scale of the 3,000 aircraft procurement program means it represents several billion more dollars. Moreover, the total price tag to field Joint Strike Fighters could increase further if Congress mandates the continuation of the General Electric/Rolls-Royce F136 alternative engine program. U.S. Marine Corps Brig. Gen. David R. Heinz, deputy Joint Strike Fighter program director, notes that if the F136 survives but no money is added to the F-35 budget, program officials may have to trim near-term procurement by 15-30 aircraft to cover the development costs. That would further drive up the program's price.

Program officials are quick to point out they are remaining neutral as the debate rages over whether to keep the F136 as a competitor to the Pratt & Whitney F135 engine, and have supported the various Pentagon, Government Accountability Office, and Institute for Defense Analysis cost and analysis efforts. Heinz says merely that continuing the F136 clearly comes with a price, but also with potential industrial and operational advantages by not having to rely on a sole-source supplier.

Setbacks Hit U.S. Boost-Phase Interceptor Plan

Reprinted from *Jane's Defense Weekly*

The boost-phase interceptor—a cornerstone of the Bush Administration's strategy to defend the continental U.S. from enemy ballistic missile attacks—seems to be falling by the wayside as critics question the feasibility of shooting down an enemy missile shortly after launch.

Two missile defense systems that are designed to shoot down enemy missiles in the boost phase, the airborne laser and the kinetic energy interceptor, took major hits after the Bush Administration instructed the Missile Defense Agency to cut \$500 million from its budget, reducing its FY08 request to \$8.9 billion.

Destroying a missile in its boost phase is a relatively attractive option because the burning booster makes a highly visible target. However, it is a technically difficult thing to do, as the Missile Defense Agency quickly discovered in the process of developing the kinetic energy interceptor and airborne laser. The technical hurdles have led to delays and budget restrictions.

Army Aims at News Technologies

Reprinted from *Defense Daily*

The Army is pushing forward on new generation technology in an era where the rapid pace of innovation is the norm, according to the service acquisition chief. The Future Combat System,

for example, is "well managed and keeping technology on track," Claude Bolton said at the Association of the United States Army symposium in Florida in March.

In fact, Bolton singled out and praised Maj. Gen. Charles Cartwright, program manager, Future Combat System brigade combat team, for a "magnificent job" on the program that has more than 630 contractors working with lead system integrators Boeing and SAIC on robotics, weapons, platforms and networks that will connect to each other and to soldiers.

"Washington doesn't know what to do with a successful program," Bolton said as he has before, in talking about the move from 18 programs to 14—cuts that were "driven strictly by budget constraints." Even with the cuts, the first Future Combat System technologies head to an evaluation task force later this year to be examined for current force use.

Coast Guard Expects Resolution on Cutter Design Issue

Reprinted from *Defense Daily*

A technical solution for addressing the fatigue life issues related to the design of hulls for the Coast Guard's national security cutters is being finalized between the service and the ship contractor and will be decided on soon, Coast Guard Commandant Adm. Thad Allen told a House panel in March. Allen said that two senior Deepwater program officials completed a two-day visit to Northrop Grumman's shipyard in Pascagoula, Mississippi, to bring "closure" to the fatigue life issues for the national security cutters. The negotiation was to settle how to move forward with strengthening the hulls on the first two vessels and how to redesign the hull for the third ship, which isn't under construction yet, Allen told the House transportation and infrastructure committee's Coast Guard panel.

Northrop Grumman is building the national security cutters as part as part of the Deepwater program, which consists of a family of different ships and aircraft tied together by common communications and data systems. The first cutter was recently launched and is expected to be delivered to the Coast Guard later this year and work on the second vessel is about 25 percent complete.

The technical solution must be agreed to before a task order can be awarded for construction of the third cutter, Allen said. The Coast Guard currently plans to acquire eight national security cutters. Any strengthening to the hulls of the first two vessels would likely be made within a year of their being delivered when additional work is done under warranty.

The fatigue life issue first arose in late January when the Department of Homeland Security's Inspector General issued a report on the national security cutter. The concern is that the hulls on the ships won't meet their life expectancy. Allen said the issue was akin to buying tires with an 80,000-mile guarantee and receiving tires made to last just 60,000 miles. He said that the Coast Guard and Northrop Grumman disagree on the issue.

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