

# SAS Special Show Coverage

# Day 3



# Defense Daily®

## Navy Looking At New Capabilities For Super Hornets, Growlers

By Mike McCarthy

*NATIONAL HARBOR, Md.* — The Navy is reviewing various options to improve the capabilities of its fleet of F/A-18 Super Hornets and EA-18G Growlers that include ways to add more fuel to expand range and more weapons, the program manager for the aircraft said Monday.

Naval Air Systems Command (NAVAIR) has been analyzing the possibility of adding conformal fuel tanks to the fuselage, as well as an external weapons pod and steps to reduce radar signature, Capt. Frank Morley said.

Morley said testing has shown the impact of the areas of drag and weight came in as expected and enabled the Navy to reduce possible risk associated with adding the capabilities.

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The EA-18G Growler is the United States' most advanced Airborne Electronic Attack platform that provides tactical jamming and electronic protection for all U.S. military forces and allies around the world. Photo: Boeing

## Day 3 • Wednesday April 9, 2014 Schedule Of Events

### 7:30 AM - 3:30 PM

Attendee Registration Open  
Exhibit Hall Lobby - Lower Level  
7:45 AM - 8:45 AM

Congressional Breakfast  
Potomac Ballroom CD

### 9:00 AM - 3:30 PM

Exposition Open  
Exhibit Hall

### 9:00 AM - 10:30 AM

Sea-Air-Space Panel: "Expeditionary  
Force-21"

Potomac Ballroom AB

### 9:30 AM - 10:30 AM

Floor Speaker Session: "AIM-9X Sidewinder  
Family of Missiles"  
NAVAIR, Booth #1423

### 10:00 AM - 11:15 AM

Floor Speaker Session: Maritime Industry  
Panel

Navy League Pavilion, Booth #1002

### 10:30 AM - 11:00 AM

Floor Speaker Session: "Digital Rocket  
Launcher Program Overview"  
NAVAIR, Booth #1423

### 10:30 AM - 11:00 AM

Floor Speaker Session: "Littoral Combat  
Ships Program Update"  
NAVSEA, Booth #2323

### 11:00 AM - 11:30 AM

Floor Speaker Session: "Naval Aviation  
Enterprise Update"  
NAVAIR, Booth #1423

### 11:00 AM - 11:30 AM

Floor Speaker Session: "Doing Business  
with the Coast Guard"  
USCG, Booth #1028

### 11:00 AM - 11:30 AM

Floor Speaker Session: "Littoral Combat  
Ships Mission Package Program Update"  
NAVSEA, Booth #2323

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**Visit us at the SAS Show • April 7-9 • Booth 1900**

# AMERICA'S NUCLEAR-POWERED AIRCRAFT CARRIERS



The aircraft carrier USS *Carl Vinson* (CVN 70) transits the Pacific Ocean.  
Photo by U.S. Navy

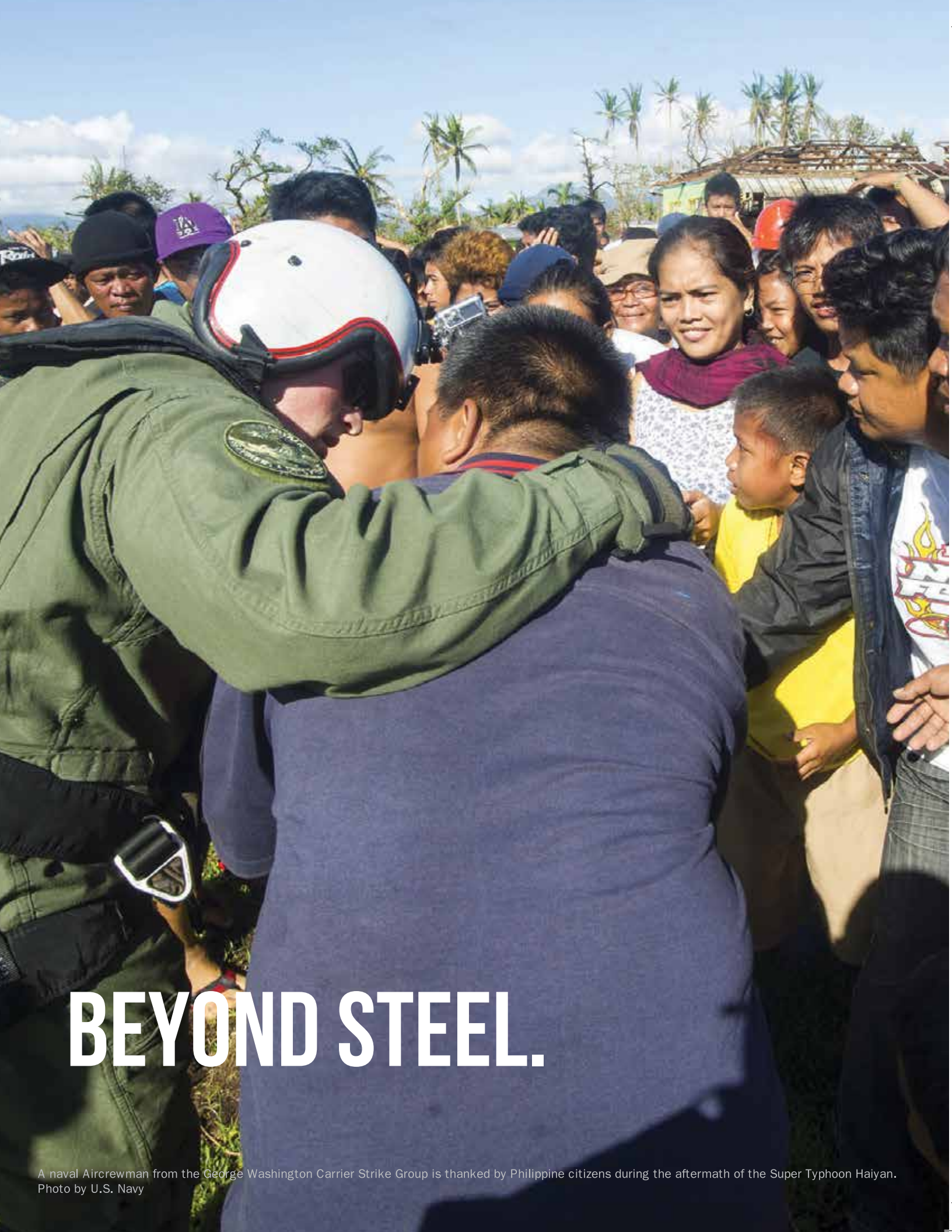




# STRENGTH FAR

Fighter Squadron (VFA)14 in an air power demonstration over the aircraft carrier USS *John C. Stennis* (CVN 74),  
Photo by U.S. Navy





# BEYOND STEEL.

A naval Aircrewman from the George Washington Carrier Strike Group is thanked by Philippine citizens during the aftermath of the Super Typhoon Haiyan.  
Photo by U.S. Navy



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**11:30 AM - 1:00 PM**

Secretary of the Navy Luncheon  
Potomac Ballroom AB

**1:30 PM - 2:00 PM**

Floor Speaker Session: "Unmanned Maritime Systems Programs"  
NAVSEA, Booth #2323

**1:45 PM - 3:00 PM**

Roundtable: "Ready to Fight and Win Today"  
Potomac Ballroom AB

**1:45 PM - 3:00 PM**

Roundtable: "Information Dominance, Security and the Sea Services"  
Potomac Ballroom C

**1:45 PM - 3:00 PM**

Roundtable: "Marines in Africa and the Middle East - Crisis and Opportunity"  
Potomac Ballroom D

**1:45 PM - 2:15 PM**

Floor Speaker Session: "Presidential Helicopter Replacement Program (VXX)"  
NAVAIR, Booth #1423

**1:45 PM - 2:15 PM**

Floor Speaker Session: "Coast Guard Aviation Logistical Management Process - Now and in the Future"  
USCG, Booth #1028

**1:45 PM - 2:30 PM**

Floor Speaker Session: "On The Cutting Edge"  
Navy League Pavilion, Booth #1002

**2:00 PM - 2:30 PM**

Floor Speaker Session: "Surface Maintenance Planning"  
NAVSEA, Booth #2323

**2:45 PM - 3:15 PM**

Floor Speaker Session: "Training to be the Best - Fairbanks Morse Commitment to Continuous Improvement"  
Navy League Pavilion, Booth #1002

"We really weren't surprised by much," Morley told reporters at the Navy League's annual Sea-Air-Space exposition just outside Washington.

The Navy could pursue a combination of the new, retrofittable capabilities or single options based on trade-offs for the Super Hornet fighters and Growler electronic attack aircraft, which share an airframe.

**Boeing** [BA], which manufactures the aircraft in St. Louis, presented the Navy with the options and publicly rolled out what it calls the Advanced Super Hornet in August to show off the new capabilities.

Morley said the Navy is weighing the capabilities and the cost associated with adding them to the aircraft.

Boeing initially came up with the upgrades under a plan to pursue sales in the international market but has now shifted the effort to its domestic customer.

Earlier this year, the Navy began testing a new infrared tracking system on the Super Hornets that is designed to be undetectable by enemy electronic attack and jamming capabilities in air-to-air combat scenarios.

The test flight with the **Lockheed Martin** [LMT]-developed Infrared Search and Track (IRST) took place in February.

Unlike radar, IRST is a passive long-range sensor that seeks out heat sources while not emitting radiation, making it harder to detect and enabling pilots to better spot and target enemy aircraft while in a high electronic attack environment.

Boeing is faced with the prospect of closing its F/A-18 and EA-18G production line in 2016 if it receives no new orders from the Navy or international customers. Boeing is focusing on persuading the Navy and Congress to buy more Growlers, citing a growing need for electronic attack capabilities in the future.

Top Navy officials have also said they need more of the aircraft to meet the electronic attack requirement for the service and joint operations, but have been hampered by tightening budgets. The Navy is submitting to Congress a document listing 22 more Growlers as an unfunded priority.

Current plans have the Navy deploying five Growlers per squadron, but Navy officials have said that number should be closer to seven. ■

## IOC Expected Next Month For Navy's Sonobuoy Submarine Sensing System

By Liz Gormisky



MAC will reach IOC with the P-3C Orion maritime patrol aircraft. Photo: Navy.

*NATIONAL HARBOR, Md.* — The Navy expects initial operating capability (IOC) for its sonobuoy submarine sensing system in May, an official said Monday.

Known as the Multi-Static Active Coherent (MAC), the system is comprised of sonobuoys dropped from aircraft to the ocean's surface. The buoys then "give reflections off of large targets, such as submarines, and then transmit it to the aircraft for processing and display to the tactical air crew," program executive officer Rear Adm. CJ Jaynes said here at the Navy League's Sea-Air-Space exposition.

"It really gives us an improved signal processing to the mission set that we're currently using," she said.



MAC's IOC will first be achieved with Lockheed Martin's [LMT] P-3C Orion maritime patrol aircraft. The system will be integrated onto Boeing's P-8 Poseidon aircraft with early operating capability expected at the end of fiscal year 2014. Full IOC will come with the P-8's Increment 2 in FY 2016, Jaynes said.

MAC is being completed in two phases. The first phase saw the system tested in harsh, shallow water. The next phase will explore the system's deep-water capability.

The Navy awarded Lockheed Martin \$59 million in 2009 to integrate MAC onto its P-3C. ■

## AV-8B, C-130T Will Be First To Meet Navy's FACE Avionics Software Standards

By Liz Gormisky

NATIONAL HARBOR, Md. — The AV-8B Harrier jet and the C-130T transport aircraft are the first systems being developed to meet the Navy's avionics software standards under the Future Airborne Capability Environment (FACE) initiative, officials said Monday.

Launched in 2010 out of the Naval Air Systems Command (NAVAIR), FACE seeks common technical standards for avionics software, which will make it reusable for multiple systems. The initiative moves naval aviation away from sole-source, proprietary software that can be expensive and reduce competition.

"We were spending the same kind of money over and over again on the same kind of thing--and we just couldn't afford to do that anymore," Capt. Tracy Barkhimer, air combat electronics program manager, said at the Navy League's Sea-Air-Space exposition.

The avionics suites on the AV-8B and the C-130T will go through a verification process to ensure they meet FACE standards. Eventually, systems will also go through a conformance process to be added to the FACE software library. NAVAIR has previously described the library as an "app store for military avionics." NAVAIR is working to determine the authority that will provide the conformance stamps to software that has been verified.

Barkhimer said no systems are under formal contract to conform to FACE, but she expects to see FACE transfer into the contracting process in the future.

While contractors make large profits off of proprietary software, FACE will give engineers the opportunity to build off of investments they've already made in development.

"They don't want to be paid to reinvent the wheel," Robert Matthews, avionics architecture integrated product team lead, said at the expo. ■



The avionics suite of the Navy's C-130T will meet FACE standards. Photo: Navy.

## General Dynamics Looking To Go Paperless On Ohio-Replacement

By Mike McCarthy

Credit card companies offer it and so do cell phone providers. Now, General Dynamics [GD] Electric Boat wants to do the same for the Navy: give it the option to go paperless.

Electric Boat is floating to the Navy the idea of eliminating paper drawings during the production of the Ohio-class replacement submarines known as the SSBN(X) program.

The first ship in the next class of ballistic missile subs is not scheduled to go into production until 2021, and Electric Boat is confident the technology will be ready to allow for all of the designs and specifications to be fed into the production process digitally and become known as "electronic disclosures," said



Will Lennon, the vice president of engineering and business programs at Electric Boat, located in Groton, Conn. “What we are trying to do is move away from (paper drawings) as a standard way of doing this,” Lennon said in an interview with *Defense Daily*.

Instead of having to sort through hundreds or in some cases thousands of paper drawings to see a design or design change, fabricators, mechanics, welders, pipe fitters and other workers would be able to flip through digital drawings on large screens in the production yard, Lennon said.

“They have vaults down there (in the yard) just filled with thousands of sheets of drawings,” Lennon said. “Today the vision is that that is all captured electronically and if you want to see something about a particular drawing you look it up online.”

Lennon said electronic deliverables have made their way into aerospace, but this would be the first time they are used for Navy shipbuilding, a significantly more complicated engineering and production process. Electric Boat also plans to employ mobile devices and tablets for builders to carry with them when they are working inside the submarines and or in confined areas where large screens are inaccessible.

While current tablet devices aren’t up to the task, Lennon is confident that with the rapid pace at which the technology is advancing, the capability will be there by the time Electric Boat starts cutting steel for the first SSBN(X).

“When you think back 10 years ago did you think you’d have a tablet?” Lennon said. “Now think ahead 10 years.”

Electric Boat is taking a flexible approach as it moves forward to adapt as the technology develops so “it can be friendly to a mechanic with some kind of mobile device of the day,” he said.

The Navy still must approve the approach, and Lennon said a decision could come in the next few months. He said making that kind of a change requires carefully ensuring it will work and there are no unforeseen problems.

“It’s change. You always want to be very careful when you introduce change that there are no unintended consequences,” he said. “Everyone wants to be thoughtful to make sure the path we are heading down will support all aspects of the submarine enterprise.”

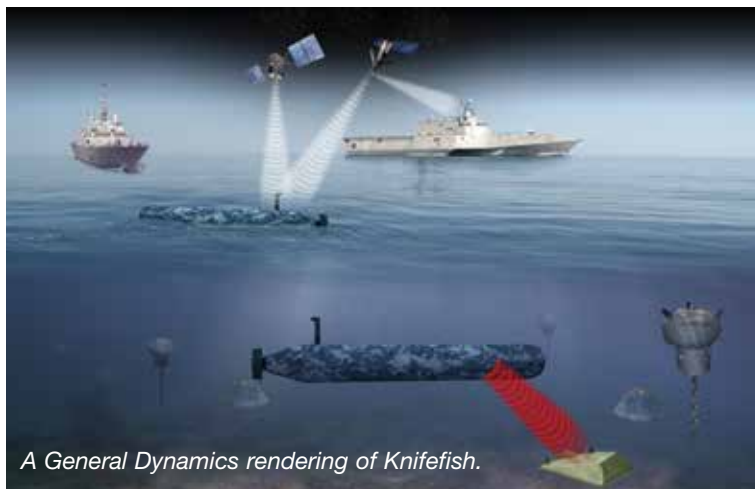
Moving away from paper will help streamline the process, make it faster and more efficient and save money, Lennon said. Electric Boat believes it can help even if the price of paper is tiny when considering the cost for each SSBN(X) will be billions of dollars.

“It’s all relative, you want to save any money you can,” Lennon said, noting the Ohio-class replacement is going to put a lot of pressure on the Navy’s overall shipbuilding budget in the 2020s.

The Navy plans to buy 12 SSBN(X)s to replace 14 Ohio-class boomers, with the first coming into service at the end of the next decade. The Navy and Electric Boat are still working through the design stage. Lennon said the Navy submitted its ship specifications on March 28. The specifications outline the high-level requirements that define ship and systems performance characteristics. ■

## Knifefish UUV Set For Water Testing This Summer

*By Mike McCarthy*



*A General Dynamics rendering of Knifefish.*

The Knifefish unmanned underwater vehicle designed for hunting mines as part of the mine countermeasures mission module for the Navy’s Littoral Combat Ships is scheduled for a first round of sea testing this summer.

**General Dynamics [GD]**, which is developing Knifefish for the Navy, has been building the first UUV and testing the sensors for detecting mines. It has been working through technical issues in moving from the prototyping phase to production, said Tom Mason, the senior program manager for Knifefish at the company’s Advanced Information Systems unit.

The Knifefish carries a transmit array to



communicate with the ship and sonar to look for mines while allowing sailors to avoid the risks associated with entering minefields. It will operate beside the Remote Minehunting System being developed by **Lockheed Martin** [LMT] that is also part of the mine countermeasures module.

The Knifefish can detect and classify mines below or at the water line, but is uniquely suited to go deep to find buried mines. It stores the data that is recovered once it returns to the ship.

Mason said the at-sea testing will take place in Boston and it will be launched from a small boat. The testing will examine its performance in the water and to ensure it navigates its planned route and depth and carries out simulated missions.

The UUV will be loaded with its payload for subsequent testing later this year, he said. The battery-powered Knifefish successfully completed critical design review in January 2013 and General Dynamics has continued to work through the system to reduce risk, Mason said.

The mine countermeasures package is one of three modules under development for the LCS. The other two are surface and anti-submarine warfare. ■

## Satisfied With Aircraft Supply, Coast Guard Focusing Spending On Ships

*By Pat Host*

The head of the Coast Guard said Tuesday he'll devote scarce acquisition dollars towards ships since the service is "good" on the aircraft side.

Coast Guard Commandant Adm. Robert Papp said he has no unfunded wishlist for aircraft though his fiscal year 2015 budget request focuses acquisition dollars on ships. Papp said the Coast Guard avoids having to buy medium range aircraft over the next few years with the addition of 14, or what he called "a half-billion dollars-worth," of C-27J cargo jets from the Air Force. Papp also said his fleet of helicopters is in good shape "for now" and the Coast Guard's C-130Js are being replaced by newer C-130J models, so he's good.

"Not great, I want to make that emphasis," Papp told reporters at a Defense Writers Group breakfast in downtown Washington. "But we're good."

Papp said he expects the C-27Js to be operational by FY '16, though he didn't know exactly when because the service doesn't have trained pilots at the moment. Papp said, yes, it's probably not that difficult to go from flying C-130s, which he said have similar engines and avionics, but there are peculiarities that pilots have to be trained in and proficient. Though there are degrees of mission-ization, Papp said the Coast Guard is capable of using the C-27Js right now.

Congress provided enough money in the FY '14 budget, Papp said, to allow the Coast Guard to stand up a C-27J project office and put a staff together. Papp said, initially, the Coast Guard won't have to do much more than paint them because the C-27J has a good surface search radar, but he said the service will, ultimately, want to put a sensor package in its new C-27Js, similar to what it has in its HC-144s and C-130s. Papp said that will be included in future budget requests.

"We can put that aircraft to work almost immediately after we get people trained up on it," Papp said.

Papp said the Air Force had 21 C-27Js it wanted to transfer out due to excess inventory. Facing a need for medium-range, fixed-wing aircraft, Papp said the Coast Guard originally awarded a contract to Airbus Group for HC-144s due to lower lifecycle costs than what the C-27Js provided. After starting the process of buying up to 36 HC-144s, the Air Force offered up its 21 C-27s, which Papp said the Coast Guard jumped upon. ■



*C-27J with Coast Guard colors. Photo: Alenia Aermacchi.*

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# Defense Daily's 2014 Open Architecture Summit

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Registration Bags		2	20%	✓	✓	✓	✓		1	1		\$8,000
Padfolios		2	20%	✓	✓	✓	✓		1	1		\$8,000
Chairsleeves		2	20%	✓	✓	✓	✓		1	1		\$8,000
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