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JSF program still dealing with IPP failure impact

DOD Official Pledges New IOC For F-35B, But Remains Vague On Date

The Marines will set a new target date for initial operational capability for the F-35B, the Marine Corps' short-takeoff, vertical-landing variant of the Joint Strike Fighter, once the restructuring of the program is complete and the flight plan is clearer -- unless officials decide not to, according to a new report submitted to Congress Oct. 28.

Acting Defense Department acquisition chief Frank Kendall penned the report, a copy of which was submitted to the Senate Armed Services Committee and reviewed by *Inside the Navy*. The report details the JSF system management plan and the capabilities of the F-35B once it reaches IOC. The report "provides a table of top-level metrics that are reviewed monthly by the JSF program executive officer to gauge program progress and identify areas that need leader-

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Open architecture key in reducing costs

Next Surface Combatant Likely To Follow LCS's Modular Construction

The Navy may increasingly rely on modularity and open architecture to deal with both reduced shipbuilding budgets and ever-changing threats across the globe by incorporating concepts pioneered by the Littoral Combat Ship onto future ships, Vice Adm. Kevin McCoy, commander of Naval Sea Systems Command, said Nov. 9 at *Defense Daily*'s Open Architecture Summit.

McCoy said the Navy had learned a lot from open architecture, particularly in its submarine programs and the LCS, and that he and others hoped to incorporate that concept into future platforms, particularly the next surface combatant.

Half of shipbuilding costs consist of contractor- and government-furnished equipment, much of which is combat-

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Knighthawks expanding carriers' tactical options

MH-60, Fire Scout Improving Connectivity To Expand Range Of Operation

LEXINGTON PARK, MD -- The Navy is testing the communications between manned and unmanned helicopters in the hopes that the two working in tandem could expand the Navy's reach.

Robert Kimble, the Navy's H-60 deputy program manager, told reporters here on Nov. 8 that the Littoral Combat Ship's surface warfare mission package, with both Lockheed Martin's MH-60R and Northrop Grumman's MQ-8B Fire Scout unmanned helo, highlights the possibilities that increased connectivity could bring.

In an October demonstration at Naval Air Station Patuxent River, MD, a ground station simulated a ship and the two aircraft took off on a reconnaissance mission. Kimble said the demonstration "allowed the Fire Scout to be out a

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Mission packages could expand beyond three

Officials: Navy, Marines See Host Of Applications For Littoral Combat Ship

PANAMA CITY, FL -- The Navy and Marine Corps see the Littoral Combat Ship as a versatile platform that could potentially host a range of mission packages that expand the ship's capabilities far beyond the three currently planned, although the ship has its limitations, service officials said here recently.

Only the mine countermeasures, anti-submarine warfare and surface warfare mission packages are currently a program of record for the LCS, and Maj. Gen. Timothy Hanifen told reporters at the Expeditionary Warfare Conference hosted by the National Defense Industrial Association Oct. 26 that the service is focused on just those three packages right now. However, multiple officials at the conference discussed the possibility of expanding on those packages.

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Mine Hunter Award

Naval Sea Systems Command awarded General Dynamics an $86.7 million contract to design and build the Surface Mine Countermeasure unmanned underwater vehicle (SMCM UUV), GD said in a Nov. 9 statement. The SMCM UUV is intended to play a significant role in the Littoral Combat Ship's mine warfare mission package, allowing commanders in the field to "reliably detect and identify mines in high-clutter underwater environments in a single pass, including mines that are suspended in the ocean, resting on the sea floor or buried," according to the statement.

Second ship's test this week

Biofuels Can't Match Diesel Performance At Max Speed; Lower Speeds OK

The Navy this week will test a biofuel blend on the decommissioned destroyer Paul Foster, dubbed the Self-Defense Test Ship, after tests with a Landing Craft Utility platform on Oct. 18 proved successful.

Unlike the Navy's aviation biofuel blend of half jet fuel and half camelina oil, surface ships will run on a half-and-half blend of F-76 diesel fuel and algal oil.

The LCU performed well with the biofuel, operating at full load and at a range of speeds. Testing included monitoring fuel consumption, exhaust temperatures and engine room temperatures, as well as measuring power performance.

The data showed that the output power of regular diesel fuel was matched by the biofuel at lower speeds, but not at maximum speed, Gregory Toms, Naval Sea Systems Command fuels and lubricants technical warrant holder, wrote in an email to *Inside the Navy* Nov. 8.

"At this maximum engine speed, the injectors are delivering the maximum volume of fuel to the engine," he said. "Since the alternative fuel has a lower heat of combustion compared to a typical petroleum F-76, for identical injection volumes the typical petroleum F-76 will deliver more energy.

"In the lower speed ranges of the engine, identical output power is possible because the injectors are capable to inject an increased volume of fuel to achieve the engine speed requested," he continued.

In aviation biofuels testing, the jet fuel/camelina oil blend has produced the same performance across all eight platforms tested, several Navy officials have said, touting that even the Blue Angels pilots didn't notice any performance differences. Though that oil proved successful, Toms said the Navy's goal was to evaluate multiple sources of hydro-processed oil derived from non-food sources. He said these two oils and several others all have similar properties and could be used in either aircraft or ships if the Navy ever decided to use just one.

The Self-Defense Test Ship testing will be followed by a Landing Craft, Air Cushion test at Naval Surface Warfare Center in Panama City, FL, in December, and the Navy has ongoing tests of the biofuel in yard patrol boats at the U.S. Naval Academy in Annapolis, MD.

Toms said the testing is on schedule and was always expected to take longer than the aviation testing. In addition to requiring significantly more fuel, the ships also need to test the fuel blend in the diesel engine, gas turbines and boilers. -- *Megan Eckstein*

‘There’s been thought’

Official: Navy, Marines Mull Combining Commands Into ‘Super SYSCOM’

PANAMA CITY, FL -- The Navy and Marine Corps have looked at the possibility of combining acquisition commands within the services in order to increase efficiency as the Pentagon enters an era of tighter budgets, Capt. Dietrich Kuhlmann, director of the operations division for the assistant secretary of the Navy for financial management and comptroller, said here recently.

“There’s been thought, and I would say as part of the efficiencies and the efforts that are going on, those things continue to be looked at,” Kuhlmann, who has been selected for his first star, said Oct. 25 at the Expeditionary Warfare Conference hosted by the National Defense Industrial Association. “There has been suggestions about combining various [systems commands]. I don’t think there has been one yet to combine them all into a single super SYSCOM, but there has been some look at are there any efficiencies if you do that.”

Kuhlmann said the Navy and Marine Corps will ultimately have to figure out how to do more with what they have to truly achieve better efficiency, and combining SYSCOMs could conceivably be part of that solution.

“I’m pretty convinced that you can make any organization work if you follow it through in execution,” he said. “That’s the hard part.” -- *Dan Taylor*

‘Too early to tell’ concept’s effect on programs

Official: AirSea Battle Could Allow Navy To Get More Air Force Assistance

The AirSea Battle concept could ultimately result in greater collaboration between the Navy and Air Force to the point that Air Force assets could be used to assist the Navy in maritime missions regularly, a Defense Department official told reporters Nov. 9 at a background briefing at the Pentagon on the formation of the AirSea Battle Office.

“Is it inconceivable that maybe the Air Force can help prosecute maritime objectives? How often do we do that right here?” according to one of three officials at the briefing, who spoke on condition of anonymity. “So I’ll leave the rest to your imagination, but there is a nearly limitless number of things we can look at to start integration.”

The officials said the AirSea Battle Office would have a small staff of between 12 and 15 people that would seek to better synchronize the services and leverage their common capabilities and operations.

“This is leveraging -- with a few guys -- our organizations as they currently exist to then look at what are these opportunities for integration,” the official said. “And from there -- and you probably don’t have to take many -- you are going to extract a plethora of things that you need to learn from them and the interdependency reporting between these.”

Asked whether the AirSea Battle concept might change the way requirements are written for future platforms and programs, the official said it was “too early to tell,” and that he didn’t want to “set expectations” for the office in areas that haven’t been defined.

“What we do think we can get to, and we’re working toward -- and this is part of the journey -- is as we take this out to our components and we look to integrate, there are things that we’re going to need to do to help integrate that force,” he said. “And that’s going to help identify interdependencies that we’re going to have to match up, whether they be programmatic or training or organizing. So those interdependencies are what we seek to coordinate here. But that goes across the board, not just programmatic.” -- *Dan Taylor*

In advance of planned 2012 fielding . . .

Navy, Marines Fire APKWS From UH-1Y Helicopter For First Time

The Navy and Marine Corps last week conducted the first successful live-fire shots of a precision weapon meant for use on UH-1Y and AH-1W light helicopters.

Manufacturer BAE Systems announced the successful first shots of the Advanced Precision Kill Weapon System (APKWS) from a UH-1Y utility helo on Nov. 9, although the tests took place in mid-September. The APKWS is a laser-guided 2.75-inch rocket meant to act as a “highly precise weapon that is effective against soft and lightly armored targets while minimizing collateral damage,” according to a BAE statement.

Marine pilots fired six shots from the helicopter against stationary targets at ranges of up to 5 kilometers during the tests. The Navy plans to field the weapon next year.

In July, the Navy announced on *Federal Business Opportunities* its intention to award a sole-source follow-on contract to BAE for full-rate production of APKWS for a base quantity of 1,656 missiles and four options of 1,000, 2,321, 1,541 and 2,062 missiles, for a total possible procurement of 8,580 weapons. -- *Dan Taylor*

Louisiana, Navy providing incentives

Huntington Ingalls Seeking Partners To Keep Avondale Shipyard Open

Huntington Ingalls Industries is pursuing all avenues to avoid closing its Avondale Shipyard and Louisiana lawmakers are offering incentives to keep it open, but the company will need more than that to keep the shipyard open, HII's president said Nov. 10 in a third quarter earnings phone conference.

In response to an investor's question about closing the Louisiana shipyard, President and Chief Executive Officer Mike Petters responded that there are a lot of good shipbuilders at Avondale and "we owe them -- its our responsibility to make sure we turn over every rock looking for possibilities here."

The plan of record is still to close the shipyard in May 2013, but the Louisiana government has been working to create incentives for Huntington Ingalls to keep the facility open and spare thousands of jobs, Petters said. A Louisiana state government press release says the incentives include workforce retraining and modernization of the facility, which is worth about $214 million over 10 years.

Petters said the company would also need some financial help from the Navy, a credible business partner and a sustainable market to make keeping Avondale open a viable option.

The Navy signed a memorandum of agreement with HII Oct. 12 clarifying that the Navy would help cover some of the restructuring costs associated with HII discontinuing its naval shipbuilding activities at Avondale regardless of whether HII shuttered Avondale or converted it to another type of manufacturing facility. Louisiana lawmakers had been concerned that the wording of the federal acquisition regulations would lead to Navy contributions only if the shipyard were shut down.

'The last thing we want to do is put a lock on that gate -- we're trying everything we can right now to ensure we have a viable alternative.'

-- staffer for Sen. Mary Landrieu

It is unclear how much money the Navy would spend on restructuring costs. Navy spokeswoman Capt. Cate Mueller said Northrop Grumman had submitted an initial restructuring plan before HII spun off into an independent company, but HII has not yet done so. The amount of funding the Navy could provide would depend on the specifics of the plan.

She added that the Navy was keeping an eye on the Avondale decision, but was not pushing for one outcome or another.

"We are supportive of efficiency and more affordable shipbuilding," she said in an email Nov. 10. "Closing a facility such as Avondale may involve restructuring costs, but we would look to overall savings in future shipbuilding costs."

Before the MOA was signed, Louisiana lawmakers accused the Navy of providing a financial incentive for HII to close the shipyard instead of finding a way to save it. Sen. Mary Landrieu and Rep. Cedric Richmond, both Democrats who represent the Avondale area, wrote to Navy Secretary Ray Mabus on Oct. 6 to ask that "any funding be used to convert the shipyard to take advantage of commercial opportunities."

"It is wrong to spend taxpayer dollars to incentivize closure and job loss," Richmond said last month.

But despite the MOA and the Louisiana incentive package, Petters seemed uncertain about the likelihood of finding a business partner in a new and sustainable segment of the market. He said Louisiana officials were helping HII look for possible companies to partner with, but "just because they are working with us doesn't mean we're going to get one."

He said layoffs and shop closures would continue as scheduled unless a business partner were found. He did not elaborate on what kind of company he was looking for, but did say that "this needs to be in a place that's not in the Navy work we're doing today -- that means its going to be in a line of work we're not doing"and therefore he would need to feel comfortable with that company's expertise in manufacturing whatever it specializes in.

A Landrieu staffer said the senator met with Petters earlier this month, and he told her that "the last thing we want to do is put a lock on that gate -- we're trying everything we can right now to ensure we have a viable alternative."

The staffer said Petters did not identify any specific companies yet.

"They would like it to be shipbuilding, but they're open to other opportunities as well," the staffer said. "As they've put it to the senator, commercial work is a broad spectrum of opportunity and they don't want to shut the door on any possibilities. Would they like it to be shipbuilding? Yes, that's what they have their base of knowledge in. But could it be a mixed bag? Absolutely."

Landrieu and Richmond are also working to identify legislation that could be changed to open the commercial shipbuilding market, making it more likely that HII would find a partner for commercial shipbuilding at Avondale,the staffer said. The number of commercial shipyards in the United States has steadily declined as work is contracted to foreign shipyards.

"I don't have many specifics on that yet, but they are working with the timeline that's been given to identify, with Huntington Ingalls' help, legislative avenues that would incentivize and hopefully spur the commercial shipbuilding sector in the United States again," the staffer said. -- *Megan Eckstein*

Oshkosh Is 'Comfortable' With Cost Targets For Joint Light Tactical Vehicle

Oshkosh Defense is "comfortable" with the price point the Marine Corps and Army have set for the Joint Light Tactical Vehicle, according to John Bryant, vice president and general manager of Marine Corps programs.

The price of the vehicle changed with the release of a draft request for proposals for the engineering and manufacturing development (EMD) phase in October from $350,000 per vehicle to a new cost ceiling that ranges from $230,000 to $270,000 per vehicle, plus an additional $65,000 for armor kits. The draft RFP included changes in the schedule for design development from 48 months to 32 months.

Oshkosh Defense announced in September the company already developed its Light Combat Tactical All-Terrain Vehicle, which it is offering for the JLTV competition. This vehicle has already undergone 20,000 miles of testing, Bryant told *Inside the Navy* in a Nov. 10 interview.

"It's a proven system, so a compressed EMD [phase] is something we have no problem with whatsoever, and the vehicle is designed to be not only high performance but also low-cost," he said.

One of the key features of the L-ATV is mobility. The vehicle includes the TAK-4i intelligent suspension system, which expands on the TAK-4 system that is currently fielded. The independent suspension offers 20 inches of independent wheel travel, which is about a 25 percent increase over other vehicles currently fielded, Bryant said.

Bryant told *ITN* the L-ATV system is designed to be modular and scalable so that it can accept multiple armor configurations to protect troops from explosive devices and battlefield threats.

Inside the Army reported on Nov. 7 that Marine Corps Assistant Commandant Gen. Joseph Dunford and Army Vice Chief of Staff Gen. Peter Chiarelli will host a series of one-on-one meetings on Nov. 18 with potential bidders for the JLTV. The services are asking for feedback from industry regarding cost for the EMD phase and production price goals.

"We will definitely be attending the meeting and offering our feedback as requested by the Army and the Marine Corps," Bryant said. "We're looking forward to the opportunity to have an honest and direct exchange with the key decision makers in the Army and the Marine Corps on this important program." -- *Lee Hudson*

Industry day held

Pentagon Looking To Industry To Expand Non-Lethal Capabilities

The Pentagon is looking to industry to develop directed-energy capabilities and a high-gain antenna system for small tactical vehicles to provide troops with a non-lethal weapon, according to a series of listings recently posted on *Federal Business Opportunities*.

The first request for information states the Defense Department's Joint Non-Lethal Weapons Directorate would like to develop a prime power system "that can achieve the required performance in a compact size" so that it can be integrated onto a small tactical vehicle.

The second RFI states the directorate would like industry to research "compact, lightweight, steerable and high-gain antenna systems" that could stand-alone or be integrated onto a small tactical vehicle.

The third RFI asks industry to develop a "compact, lightweight and efficient high-power microwave and radio frequency source technologies that will enable the development of directed energy non-lethal capabilities."

No specific vehicles have been targeted to incorporate these new technologies, Scott Griffiths, counter-materiel directed-energy officer of primary responsibility at the directorate, wrote in a Nov. 9 email.

There is no formal analysis of alternatives planned. An AOA usually takes about a year to complete.

"The JNLWD will review the responses to the RFI to determine if there are any sources that can provide technologies capable of achieving the desired performance," he wrote. "The JNLWD will assess options for developing technologies of interest, but no predetermined time line has been established."

In the mid-1990s, the non-lethal weapons arsenal contained law enforcement-related equipment and riot control agents. In recent years, weapons were developed for checkpoint operations, convoys, patrols and more, according to Kelley Hughes, a spokeswoman for JNLWD.

In April, *Inside the Navy* reported BAE Systems developed a tactical laser system for the Navy, which mounts to a Mk 38 machine gun on surface ships, to detect how many crew are on a nearby ship. The tactical laser system is an eye-safe laser that can be shined at personnel on board so that they cannot see.

ITN reported in January that the Office of Naval Research turned to industry to develop a directed-energy weapon that could be installed on a ship to disable small boats.

"Additionally, extensive research has been conducted on next-generation non-lethal directed-energy capabilities that show great promise in providing vehicle-stopping, vessel-stopping and area-denial applications as extended ranges," Hughes noted. -- *Lee Hudson*

'Not going to be in first initial buy'

Marine Corps Hesitant To Procure Mid-Tier Networking Vehicular Radio

The Marine Corps is "waiting on the sidelines" during the initial procurement of the Mid-Tier Networking Vehicular Radio, which will replace the Ground Mobile Radio program, Army Col. Gregory Fields, GMR program manager, told reporters last week in a teleconference.

The GMR program was canceled in October due to cost overruns that caused a breach of Nunn-McCurdy Act cost thresholds in June. The Army lowered the number of units it wanted to procure from 86,000 to 10,000 units. This caused the average unit price to be $186,000, sister publication *Inside the Army* reported on Oct. 24.

The GMR contract expires in March 2012 and "will be closed out in a manner that supports this new strategy," Joint Tactical Radio System program office spokesman Jeff Mercer told reporters Nov. 9.

The Marine Corps "said that they are still very interested in getting this [Mid-Tier] Networking Vehicular Radio moving forward," Fields stated, but the Corps hasn't made any commitment to the program.

Fields told reporters Nov. 9 the Army released a draft request for proposals on Nov. 4 for an order of anywhere between 664 and 10,000 MNVRs, or enough radios to supply eight to 10 brigade combat teams. It is a two-year production, single-award contract, and the Army expects to release a final RFP in February 2012. Fields declined to comment on cost for the MNVRs.

He expects the MNVRs to be in fielded during the first quarter of fiscal year 2014. The program office is looking for a "commercially available solution" to expedite the procurement process.

The draft RFP requires the MNVR to be compatible with both the wideband network waveform and the soldier network waveform.

One of the things the GMR program office is "struggling with [in] the current program of record is the size of the systems, as well as power draw," Fields noted. "[We're] making sure it doesn't impact the performance of electronics that's going to be on the platform." -- *Lee Hudson*

II MEF to be downgraded

Marine Corps Lays Out New Details Behind Force Structure Changes

The Marine Corps has finalized the results of its 2010 force-structure review, setting the baseline for deeper force-structure cuts as the Pentagon moves to slash security spending by hundreds of billions of dollars over the next decade.

Among the major changes in fiscal year 2012 is a plan to downgrade the II Marine Expeditionary Force headquarters from a three-star billet to a two-star job while shifting the three-star authority to the Marines' U.S. Central Command component (MARFORCENT), according to a paper prepared for Marine Corps Combat Development Command chief Lt. Gen. Richard Mills' signature. *Inside the Pentagon* reviewed an unsigned copy of the paper.

Mills' spokesman, Col. Sean Gibson, confirmed that the command formally issued the internal message the night of Nov. 8, giving commanders "the information they need for changes in the force as a result of the 2010 force structure review." The review, which called for cutting end strength from 202,000 to 186,800 following the completion of Marine Corps operations in Afghanistan, was summarized in a report released in March, but the new paper explains the changes in greater detail, including the impact on various commands and units.

The service also plans to activate MARFORCENT Forward, an embedded Marine expeditionary brigade (MEB) headquarters in Bahrain in FY-12; activate MARFORAFRICA, an embedded MEB command element under U.S. Africa Command, in FY-14 to FY-15; and transform ad-hoc MEBs around the globe into permanent command elements that can provide the nucleus for crisis-response efforts, including the 3rd MEB in FY-12 to FY-13 and the 1st and 2nd MEBs in FY-13 to FY-15.

In FY-15 and beyond, the plan calls for F-35 Joint Strike Fighter squadrons of two different sizes. The plan would transition the Marine Corps to 21 squadrons: 14 with 10 planes each and seven with 16 planes each. As officials have previously stressed, the plan would also bolster Marine Corps cyber and special operations forces in the coming years.

Although the message calls for a force of 186,800, the Marine Corps is expected to shrink further based on the Pentagon's ongoing strategy and budget review. The best the Marine Corps can hope for given the coming budget cuts would be 182,000, but a target in the neighborhood of 176,000 is more likely, a former Pentagon official recently told *ITP*.

Noting "further force-structure changes" are being considered by DOD, the paper states that the Marine Corps "will use the 2010 [force-structure review] as the basis for any further modifications."

"The resulting plan generates a 21st-century Marine Corps that builds on our historic role as the nation's crisis response force and provides 'best value' in terms of capability, cost, and readiness relative to the operational requirements of our Geographic Combatant Commanders," the paper states. "The Marine Corps' force structure must provide a strategically mobile, middleweight force optimized for rapid crisis response and forward-presence. As a middleweight force, we must be light enough to leverage the flexibility and capacity of amphibious shipping, yet heavy enough to accomplish the mission." -- *Christopher J. Castelli*

New DOD rules prompt penalty

Navy Withholds Funds From Shipbuilder Due To Management Problems

The Navy will penalize shipbuilder Huntington Ingalls Industries for management problems by withholding millions of dollars under new Pentagon rules that crack down on contractors' deficient business systems.

The decision to limit progress payments to the shipbuilder, which was not publicly announced, follows revelations earlier this year that Ingalls shipyard in Mississippi was breaking more than half of the Defense Department's rules for delivering weapons on time and on budget.

The Navy notified the shipbuilder in late October that it would withhold 5 percent of progress payments for the $698 million contract awarded in September for the construction of an Arleigh Burke-class destroyer (DDG-114) at Ingalls, Naval Sea Systems Command spokesman Chris Johnson told *Inside the Pentagon*. The money is being withheld in accordance with new DOD acquisition rules on contractor business systems.

Huntington Ingalls Industries President and Chief Executive Officer Mike Petters said the shipbuilder is disputing the Navy's decision.

"In all of our contracts, we usually end up with several kinds of disputes with our customer over various issues," Petters said during a Nov. 10 conference call on corporate earnings. "And this particular one, I think, has to do with earned value management systems." He said the company has "engaged with" the Navy on the subject and "will continue" to do so. Petters said he does not expect the Navy's decision to impact the outlook and cash flows for the business.

Defense Contract Management Agency spokeswoman Jackie Noble said the agency was not aware of any other instances in which defense programs were withholding payments under the new clause on contractor business systems that was recently added to defense contracts.

The DDG-114 award is the first contract awarded to Ingalls that includes the new clause, which does not necessarily require the government to withhold payments, even if the contractor has a history of management deficiencies. First, the contractor is "given due process," said Noble. Before withholding money, the department must initially determine there is a problem and give the contractor an opportunity to respond. After evaluating the response, a contracting officer makes a final decision about withholding payments.

"No withholding of payments occurs until a final determination is made that a significant deficiency exists," said Navy spokeswoman Pat Dolan.

Huntington Ingalls Industries went through that process, but did not pass muster.

In June, the administrative contracting office initially disapproved of Ingalls' earned value management system, Dolan said. At issue are 32 earned value management rules that Pentagon acquisition officials are increasingly using to flag problems, forecast cost and schedule performance, and get troubled procurement programs back on track. The Defense Contract Management Agency determined this summer that Ingalls was violating 19 of the 32 rules.

The agency also reaffirmed this summer that Huntington Ingalls Industries' shipyard in Newport News, VA, the sole builder of U.S. aircraft carriers, was breaking 16 rules. Shipyards owned by General Dynamics were also faulted for management problems. But Ingalls was found to be breaking more rules than any other producer of U.S. warships.

In September, when *ITP* first reported the new findings of widespread management deficiencies at shipyards, Huntington Ingalls Industries' spokeswoman expressed confidence the company would meet the Navy's expectations.

"At Ingalls, we are working with our customers to improve our [earned value management system] processes and believe that we will meet their expectations relative to cost and schedule management," Brenton said at the time.

"We have a formal corrective action plan that has been approved by the Navy and is in review by DCMA," Brenton said, referring to the Defense Contract Management Agency. "We are making progress on the corrective action plan and believe we will meet the expectations of our customers and the DCMA through this process."

In April, Petters questioned whether all 32 rules should apply to the company's shipbuilding contracts, prompting a Navy spokeswoman to state that the company had not made enough progress toward fixing its earned value management deficiencies. -- *Christopher J. Castelli*

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Capabilities document sought

Services Tell OSD Their Unmanned Drones' Airspace-Integration Needs

The military departments have completed their part of a Defense Department review to determine airspace-integration needs for unmanned drones by submitting flight-profile needs for all of their unmanned aircraft systems, according to a service official.

Steve Pennington, the Air Force director of bases, ranges and airspace, said the service has examined every unmanned aircraft system at every installation and major command, and passed that information to a UAS Task Force in the department's acquisition directorate. The other services have submitted similar information to the Office of the Secretary of Defense, which is in the process of "collating and tabulating" it, Pennington said in a Nov. 2 interview.

This information will enable the department to develop capability documents to help address capability gaps in its quest to enable routine access to the national airspace for operations and training, Pennington said.

"Once the task force has them all, they will do the standard collating, put them all together in one big document, and then we will do a [Joint Requirements Oversight Council review], where we look at those various requirements by type of system and by type of airspace access," Pennington said. "Where this is designed to lead us is to an understanding of what systems use what types of airspace, and then to what would be the capabilities that would better enable the use of that airspace."

"Sometime in the future, whether it's six months to a year, year and a half from now, an interim capabilities document for airspace integration will most likely begin to be developed," Pennington added.

Then-Deputy Defense Secretary Bill Lynn called for the review in an April 29 memo accompanying the release of DOD's UAS airspace integration plan. In the memo, Lynn directed the military departments, U.S. Southern Command and U.S. Northern Command to conduct a review of current and planned UAS programs "to ensure that national airspace access requirements to support domestic training operations are clearly documented and aligned" with the plan.

Lynn called for the study's results to be submitted to the Joint Requirements Oversight Council within 180 days of the memo's issuance. That deadline fell at the end of October.

The Joint Staff received input from the combatant commands and military departments on Oct. 15, according to a Pentagon spokeswoman. She noted that the Joint Staff is moving it forward to the JROC for review, but the date is to be determined. Pennington said he estimates the review will be scheduled between three and six months in the future. "But it's all dependent upon what else is bidding for JROC time," he noted.

To conduct the review, NORTHCOM worked closely with its force providers to identify the appropriate UAS requirements and capabilities needed to complete its mission and compared them with the airspace integration plan. "After conducting this review, NORTHCOM determined that it concurs with the existing plan as it stands," said NORTHCOM and NORAD spokesman James Graybeal in an email. NORTHCOM submitted its report to JROC on Oct. 14, he said.

The command is also working closely with the Army Test and Evaluation Center on a number of efforts to "confirm the integration of UAS into the national airspace system, standardize UAS procedures and engage the [Federal Aviation Administration] on future UAS airspace policies," Graybeal said.

SOUTHCOM reviewed its UAS airspace access requirements and "aligned them with requirements stated in the DOD UAS Airspace Integration Plan," said command spokesman Jose Ruiz.

"SOUTHCOM does not currently operate UAS in U.S. national airspace, and has no plans to do so," Ruiz said. "However, in the future, it may be possible that SOUTHCOM requirements may result in UAS assets being based in the U.S. or its territories."

The Marine Corps, the Navy and OSD did not respond to questions by press time (Nov. 11).

An Army spokesman declined to comment on the study, noting that it is "premature for the Army to comment on a DOD study before it receives implementation guidance from DOD."

OSD will submit to the JROC the airspace requirements for UAS access to the national airspace by type of aircraft. "This will very clearly state the absolute requirement for all UAS, requirements by each type of UAS and the requirements by each type of access," Pennington said in a followup email provided by a service spokesman.

Pennington said the Air Force started looking at airspace requirements more than a year ago. "We already had at least a beta version of this six months ago; [we] just had to make sure it was right," he said. These responses were gathered in August and September, and sent over last month to OSD, he added.

He said the point of the exercise is to determine the demand signal of each of the six airspace access profiles. These six different profiles incrementally provide more access to the national airspace. These flight profiles consist of line-of-sight operations, terminal area operations, lateral transit operations, vertical transit operations, operating areas and dynamic operations.

Pennington said that terminal airspace is the one used most often. In that flight profile, the UAS operates in a confined volume of space. Larger UAS with more complex missions will still start in the terminal area before heading out to a working area.

He said dynamic airspace is the one used the least. That's because that flight profile calls for access similar to a manned aircraft, in which the UAS ends at a separate airport. Most UAS come back to the same airport, Pennington said. "In some cases we transit them, but not very frequently," he said. -- *Jordana Mishory*

Pentagon Stands Up New AirSea Battle Office

The Defense Department formally announced on Nov. 9 the creation of an AirSea Battle Office to implement a newly developed concept of warfare in anti-access and area-denial (A2/AD) environments.

Defense officials described the AirSea Battle (ASB) concept, which has been approved for implementation by the Office of the Secretary of Defense, as designed to counter systems, technologies and capabilities and not potential enemies with A2/AD capabilities, notably China. The new office has a core staff of 12 to 15 individuals from across the military services; it will have access to officials from the combatant commands, individual services and the Joint Staff that deal with A2/AD challenges.

The office was stood up on Aug. 12, according to a DOD statement. *Inside the Pentagon* reported on Nov. 2 that the new office would be staffed by captains and colonels from the different services and overseen by more senior officials. Rear Adm. Sinclair Harris, head of the Navy's irregular warfare office, is expected to be one of those officers.

At a Pentagon briefing, defense officials -- who spoke on the condition of anonymity -- singled out the development and proliferation of new, longer-range munitions among potential adversaries as a prime reason for the office's creation as well as a renewed emphasis on the integration between DOD's air and sea components.

"We're not saying A2/AD is new -- it's been around in warfare for a long, long time," one of the officials said. "In this century, what does it mean when these new long-range . . . precision systems are employed? What are those consequences? The concept attempts to answer some of those questions and get after it."

The officials said the new office would contribute to the efforts of Gen. Martin Dempsey, the new chairman of the Joint Chiefs of Staff, to write a new strategic vision for DOD. *ITP* reported earlier this month that the Joint Staff was in the process of determining whether a new strategic document, called a Capstone Concept for Joint Operations, is needed.

According to the officials, the ASB office is envisioned as a long-term, "enduring relationship" between the services, like the AirLand Battle concept was years ago. "I don't want to make this sound like an AirLand Battle and give those expectations," a second official said. "However, the parallel here is that was a long-developing concept before it came to fruition. We believe we have the same kind of journey that we're beginning here."

The same official said the new office does not yet have a plan for acquisition efforts needed to further DOD's readiness for conflict in an A2/AD environment, and stressed that the individual services already consider those needs in their budgets. However, he added, "We do expect in the future to have interdependencies that are programmatic as well as operational."

The officials also said they expect to finalize a strategic document that will explain how the office plans to refine and operationalize Air-Sea Battle, but gave no time line for that report. -- *Gabe Starosta*

Inspections advocated

Levin Wants Industry To Cover Counterfeit Part Replacement Costs

In light of findings that China is flooding the worldwide market with counterfeit electronic parts, a key Senate defense panel wants the U.S. to scrutinize all Chinese electronic parts entering the country and to require contractors to foot the bill for replacing counterfeit parts in weapon systems.

During an all-day Nov. 8 hearing, Senate Armed Services Committee Chairman Sen. Carl Levin (D-MI) requested industry leaders and the director of the Missile Defense Agency to provide input on the best way to shape proposed legislation to deal with what he dubbed "a clear and present danger" to U.S. troops.

Levin also wants to develop a certification process for parts that don't come from the original manufacturer or authorized dealer. A committee investigation found that the majority of counterfeit parts originate in China. The committee also discovered contractors were failing to promptly notify the government or fellow companies of the problems.

Levin wants to ensure that companies inform the government of all counterfeit issues. During the hearing, he chided a Boeing representative for failing to report to the Navy a suspect part in the ice-detection module on the P-8A Poseidon for more than a year and a half. Contractors and distributors also should be better at filing reports with the Government Industry Data Exchange Program, a DOD-run system that's supposed to provide a forum to report suspected counterfeit parts and suppliers who sold them.

The goal is to amend language to the fiscal year 2012 defense authorization bill when it comes before the Senate, which is expected to occur in the near future. The chairman anticipates a number of his colleagues will cosponsor the bill.

"We're going to do everything we can to stymie and stop this at the source," Levin said.

Having contractors -- not the taxpayer -- cover counterfeit-related costs will force them to more diligently inspect their supply chains, Levin said. The senator also noted that the planned inspection on all electronic parts from China would be similar to how the U.S. screens potentially dangerous agricultural products. This cost would be borne by the shippers.

It is up to the United States government to take a stand, he said.

"We cannot rely on the Chinese to act," Levin said during the hearing. "I think that's been proven for a long period of

time. The Chinese say that they have an effort going on to act against counterfeits, and it's baloney."

Witnesses at the hearing said they were interested in providing input to the proposed legislation.

During a Nov. 7 press conference, Sen. John McCain (R-AZ), the committee's ranking member, noted that Congress can't change the problem in China, but can work to address it at home. He noted that counterfeit parts could have a detrimental effect on a weapon system's life-cycle cost, as well as a safety risk.

A committee investigation delving into more than 100 cases of suspected counterfeit electronic parts found that more than 70 percent of them came from China. The city of Shenzhen in Guangdong Province is "the primary source of counterfeit electronic parts," Levin said. In the other cases, parts were traced back to the United Kingdom and Canada, known resale points for counterfeit Chinese parts, according to the panel's findings.

As part of the study, committee staffers asked defense contractors to identify cases of suspected counterfeit parts over a two-year period, and got back nearly 1,800 cases covering nearly one million individual parts.

Many of these parts come from electronic waste, which is taken apart, washed in rivers and dried on city sidewalks. Counterfeiters sand down numbers and other markings, and recoat and reprint the parts with new fake markings. Thomas Sharpe, the vice president of SMT Corp., testified that when he was in China in 2008, he saw piles of electronic scraps everything, and witnessed parts washed in rivers and dried on river banks, and "nylon sacks with harvested components being dumped onto sidewalks, and sorted by women and children." SMT Corp. specializes in the sourcing, authentication testing and supplying of obsolete components to the defense and aerospace industry, according to Sharpe's prepared statement.

"Since the Chinese government is so well aware of what's going on as far as the counterfeiting in the country, it would seem to me that they could get a handle on this rather quickly, if they were to make that effort to do so," Sharpe said.

Committee staffers attempted to go to China, but were denied entry. Levin also noted the Chinese ambassador declined to send representation to the Nov. 8 hearing.

These counterfeit parts, which are both fake parts and older parts remade to look new, are entering the Defense Department's supply chain, posing a risk to national security and affecting defense system reliability. Suspect counterfeit parts have been found on mission computers for the Missile Defense Agency's Terminal High Altitude Area Defense missile, and military airplanes, including the C-17, C-130J, C-27J and P-8A, according to Levin's prepared statement. Two C-27Js with suspect counterfeit parts are in Afghanistan.

"Our fighter pilots rely on night vision systems enabled by transistors the size of paper clips to identify targets. Our troops depend on radios and GPS devices, and the micro-electronics that make them work, to stay in contact with their units and to get advance warning of threats that may be just around the next corner," Levin said. "The failure of a single electronic part can leave a soldier, sailor, airman or Marine vulnerable at the worst possible time. A flood of counterfeit electronic parts has made it a lot harder to have confidence that won't happen."

He noted that industry has been cooperative in the investigation.

In a fact sheet released Nov. 8, the Pentagon said there "has been no loss of life or catastrophic mission failure due to counterfeit parts." DOD is coordinating an anti-counterfeit policy that's expected to be released in March 2012.

MDA Director Lt. Gen. Patrick O'Reilly said if a counterfeit part causes an interceptor to malfunction, the cost could be human lives. The agency has no indication that there is a counterfeit part in any of its fielded Ballistic Missile Defense System hardware, O'Reilly testified. But these parts have cost the MDA nearly $4.5 million since 2006, and the agency is in the midst of determining how much of that price tag industry must pay.

Industry has already paid for nearly $1.35 million and MDA has covered $352,000 of those costs stemming from seven counterfeit incidents, O'Reilly said. One case resulted in the removal and replacement of nearly 800 parts.

Despite knowing that Chinese counterfeit electronic parts are flooding the market, the federal government is not avoiding the companies selling those parts, a Government Accountability Office official told senators. GAO Managing Director of Forensic Audits and Investigative Service Richard Hillman said inferior products continue to be available to suppliers looking for equipment.

Hillman's comments came in response to an inquiry from Sen. Joe Manchin (D-WV), who demanded to know whether the U.S. government and DOD are still doing business with these companies. Hillman said the Internet purchasing platforms provide contractors a place to acquire these parts.

But Manchin was not pleased with the response. "I just asked a very simple question," Manchin said. "Is the United States government still purchasing from these counterfeiters that are putting out inferior products?"

"The Internet trading platforms have 40 million to 60 million line items and parts that are purchased on a regular basis," Hillman said.

Preliminary results of a GAO investigation discovered firsthand the availability of counterfeit parts on Internet platforms. As part of the study, GAO created a fake company to get access to Internet platforms that sell military-grade electronic parts, and requested quotes from vendors on 13 parts. Some of these requests were for real obsolete and rare parts. GAO also sought parts with date codes after the last date they were manufactured, as well as parts with "bogus part numbers" according to Hillman.

None of the seven parts received and tested are authentic. GAO also received three parts in response to made-up

numbers.

"We will be referring the results of our investigation to the inspector generals at the Department of Defense for further review and potential action," Hillman said.

Sharpe said the U.S. government and industry could avoid China if desired. "The open market of China is definitely not a place to go," he said.

Levin noted that the committee might hold an additional hearing to determine what the Pentagon is doing to keep counterfeit parts out of its supply chain. -- *Jordana Mishory*

Company denied safety issue

Levin Slams Boeing For Failing To Report Counterfeit Part

The head of a key defense committee chewed out a Boeing representative last week, claiming the company should have immediately notified the Navy that a particular aircraft contained a suspect counterfeit part instead of unilaterally deciding to replace the parts through attrition.

Senate Armed Services Committee Chairman Sen. Carl Levin (D-MI) told Charles Dabundo, a Boeing vice president and the company's P-8A Poseidon program manager, that a counterfeit part could fail at any time, and that the finding should have been brought to the Pentagon's attention. Boeing didn't notify the Navy for more than a year and a half about the suspect counterfeit part in the ice-detection module on the P-8A.

"You're kind of shooting dice with the mission and the lives of our people here," Levin told Dabundo during a Nov. 8 hearing on counterfeit parts. The senator said he believes that current law requires companies to notify the government when a counterfeit part is found, noting that he intends to change the law "so that it's not going to be up to you as to whether or not something represents a safety concern or not. That's got to be up to the customer -- in this case, the Navy."

But Dabundo claimed that the counterfeit part did not create a safety issue.

Counterfeit parts, primarily from China, are entering the Defense Department's supply chain, posing a risk to national security and affecting defense system reliability, according to an investigation by the committee's staff. The committee is working to crack down on these parts, which have been found in a myriad of systems.

L-3 Communications and Raytheon representatives also testified Nov. 8 about counterfeit parts, which all originated in China, found in their systems.

The committee found that one Chinese company had supplied more than 28,000 electronic parts to divisions within L-3 Communications, and at least 14,000 of them had already been identified as suspect counterfeit. "Neither the committee nor L-3 Communications knows whether the remaining 14,000 parts are authentic, and the company has not yet identified what military systems they might be in," Levin said during the hearing.

In September, Raytheon informed the Navy that suspected counterfeit electronic parts had been installed on three electromagnetic interference filters installed on forward looking infrared radar units.

Levin said Boeing found out about the suspect counterfeit part in the ice-detection module on the P-8A in January 2010, but waited until August 2011 to notify the Navy. That notification called the issue critical, saying that "it is suspected that the module may be a reworked part that should not have been put on the airplane originally and should be replaced immediately."

"Did the government ever have the option of replacing the part?" Levin asked.

Dabundo said that it was viewed as a "long-term reliability concern," but was "not a safety issue." Boeing Commercial Airplanes' final suspect discrepancy report, done in coordination with BAE Systems and released in July 2010, said there was no action required "and that the part could be repaired on an attrition basis," Dabundo said.

"The rationale for that was that final disposition that came out of BCA engineering, who are the qualified folks to make the disposition on that type of nonconformance, was that there was no action required and the part could be repaired on an attrition basis," Dabundo said.

Dabundo later said that the company only has a contractual obligation to report counterfeits to the government immediately if there is a safety or a functional concern.

Levin questioned how that could be justified.

"You've got a critical part here, which by your own notice is critical, but [the Navy wasn't] notified for a year and a half after it was suspected to be a deficient, defective, and as it turns out a phony part," Levin said. "How do you justify the year and a half?

At a later point in the hearing, Levin pressed Dabundo on his claims that the counterfeit part did not create a safety issue, asking why the Navy puts these modules on the plane if not for safety. "Why are we paying money for an ice-detection module if it doesn't relate to the safety of the plane?"

Dabundo said it has a function -- just not one with a direct safety impact.

Levin responded: "What is it for? Just to help steer the plane? I mean, what's it for?"

"It gives the pilot an indication if there is ice buildup on the exterior of the airplane," Dabundo said in response,

reiterating that his company's engineers have said that the ice-detector nonconformance part did not create a safety issue.

In a statement provided Nov. 9 by spokesman William Holmes, Boeing said that its handling of counterfeit-part issues with the P-8A fully complies with "every applicable" Federal Aviation Administration, Defense Department and contractual requirement. Boeing noted it spent years improving its internal processes and policies to protect against counterfeit and nonconforming parts.

"In each of the three incidents involving P-8, Boeing technical experts evaluated the parts in question and made determinations about whether the parts would pose any safety risk if they remained on the aircraft," the statement says. "We are aware of no instances in which any question has been raised about the correctness of these technical determinations."

According to Dabundo's prepared statement, the second counterfeit part incident occurred in November 2010 when Honeywell told BCA of a "potentially unapproved component" in equipment measuring the distance between an aircraft and a ground station. The third incident was in July 2010 when Rockwell Collins told Boeing of a "potentially unapproved component contained in Rockwell Collins Receiver-Exciter and HF Power Amplifier."

Last month, the Navy sent Boeing a letter stating that "any counterfeit material present on any aircraft and/or aircraft system" should be immediately reported to the government. The letter was included in the committee's package of documents.

Levin said the Navy believes that it should know of any nonconforming material. "They don't say whether, in your judgment, it's a safety concern," Levin told Dabundo. "They say any counterfeit material received is nonconforming and shall be immediately reported to the government. You're saying, well, we're not going to follow that requirement if we, in your judgment, believe it's not an immediate safety concern. So that's my question."

Dabundo responded that "that statement does not flow from our contractional documentation."

Levin responded that the Navy contract even includes a requirement that states "used, reconditioned or remanufactured supplies may be used in contract performance if the contractor has proposed the use of such supplies and the contracting officer has authorized their use."

When asked if Boeing asked the contracting officer to authorize the used part, Dabundo said no, adding that it did not apply in this instance. -- *Jordana Mishory*

JSF STOVL IOC Date Still Uncertain . . . begins on page one

ship attention," it states.

Kendall noted in the report that the Marines are likely to declare IOC at an undetermined date in the future when flight test plans become more clear.

"The Marine Corps will provide an updated projected initial operational capability date once program restructuring efforts are complete and there is a clearer understanding on flight test plans, software development improvements and aircraft delivery schedules," he said.

"However," he continued later, "due to the complexities of the aircraft, the Marine Corps will use an iterative approach as the system matures and may adjust declaration of IOC at its discretion. This is dependent on the ability to train to advanced capabilities as they are cleared for operational use and achieve IOC when the contractor delivers the aircraft without limitations to the above stated requirements."

Those requirements listed earlier outline what it will take for the JSF program to achieve IOC on the F-35B: one squadron with 10 jets and spares; ground support equipment, tools, technical publications and a functional autonomic logic information system; a squadron manned with trained and certified personnel; aircraft in the Block IIB configuration; home bases capable of supporting the aircraft; aircraft that are qualified and certified for deploying aboard ships and at austere sites; an ability to execute a full range of tactical aircraft mission sets; and a joint program office and contractor that are able to sustain IOC squadron operations.

Ever since the Marine Corps and Navy abandoned their respective IOC goals of 2012 and 2016, the services have declined to give new IOC dates until the restructuring of the program is complete. However, Lt. Gen. Terry Robling, deputy commandant for aviation, said recently that the Marines are likely to achieve an IOC in the 2015 time frame.

Kendall also wrote in the report that DOD is continuing to reexamine the production rate of the aircraft on an annual basis to "ensure it is appropriately balancing concurrency risk and manufacturing process maturity with efficiency." However, because the F-35 was still going through restructuring, DOD is "currently unable to provide criteria and conditions for comparing expected levels of demonstrated system maturity with annual production requirements.

"After the restructure process is complete and the program has an updated acquisition program baseline, the information will be available," he added.

Kendall included charts with the report that depict the progress of various goals the program is trying to meet in manufacturing, engineering, performance and testing progress. The chart lists goals in three colors: green if it is 100 percent on track or ahead of schedule; yellow if it is less than 100 percent but greater than 90 percent on track; and red if

less than 90 percent.

Under manufacturing maturity, the charts list two goals as green, four as yellow and one as red. The red goal was non-conformance hours, which the report described as a "high-interest item in the program office [that] is being tracked closely." System design and development for all variants was listed as green, but the chart noted that the Aug. 3 failure of the Integrated Power Package on one of the test aircraft has impacted the schedule by about six weeks. Aircraft deliveries were listed under yellow, with 10 delivered so far out of a planned 12. The report noted that there was "some risk to deliveries this year."

In the area of engineering maturity, one goal was listed as green, four as yellow and one as red in the area of low-rate initial production Lot 3 final flight tests.

The category of performance and testing progress had four test points under revision, four that were green and three that were yellow. In explaining the test points under revision, the report noted that all three variants of the JSF have had test points added this year, necessitating a revision.

"Data represents only test point completion actual versus original plan," the report notes. "Test points have been added in 2011, commonly referred to as flight test requests (FTR), for discovery and maturity. FTR test points are above the original planned test points and are not accounted for in either planned or current status columns. As of Aug. 31, 686 FTR test points were flown. Impact is being assessed and the complete scope of added work is being reviewed by the JPO [joint program office]."

The two-week suspension in August has had "productivity impacts" to all variants, according to the report. Next to the row in the chart for the Air Force's conventional-takeoff-and-landing variant, it states: "Get well plan in work for 2011."

The report noted that it may take one or two months for the Navy's carrier variant to catch up in the test schedule due to the IPP failure. The short-takeoff, vertical-landing and CTOL variants remain ahead of schedule, however.

Under the system verification/key performance parameters category, the report lists 10 areas as green, three as yellow and three as red. Most of the red or yellow areas are the result of DOD awaiting further test data accumulation or awaiting a particular upgrade. -- *Dan Taylor*

Modular Designs May Improve Contracting . . . begins on page one

related, he said during his keynote lunch speech. In traditional shipbuilding, by the time the ship was finished and ready to be deployed, much of that equipment was already outdated, meaning the ship was less useful and a lot of money was wasted. With its submarine programs, though, the equipment was plugged in at the very end of construction and is being updated every four years, ensuring warfighters always have the tools they need.

McCoy used the USS Enterprise (CVN-65) as an example of modularity at its simplest. When the ship retires next year, it will be 51 years old and will still be as relevant as it was when it was built, he argued, due to the aircraft it hosts on its decks.

The LCS follows that same concept, and McCoy said he believed it would soon be applied to larger ships as well. The LCS is flexible enough that when it is unexpectedly deployed with a Coast Guard detachment, officials were able to throw together a "mission package" that included additional showers for the extra personnel aboard.

"One of the things that I think we really have to start to think about as we look at particularly diminished budgets in the future is, how many sea frames do we need, and how many mission modules do we need?" McCoy said. "So for example, do we need every sea frame with the big SPY radar, or can the big SPY radar come literally as a module?"

He said it didn't make sense for every ship to come equipped with expensive equipment that it would only use some of the time, nor did it make sense to have such specialized ships that they were only useful for one part of a mission and then needed to be swapped out a few days later for another specialized ship.

"I think as we look to even larger ships than the LCS, the next surface combatant, we have to really start to think about . . . how do we keep a Navy that's relevant and afford it? And I think modularity brings a lot to the table," he said.

He added that Chief of Naval Operations Adm. Jonathan Greenert had already pushed Navy officials to more seriously consider open architecture solutions, including the idea of constructing a stable hull and allowing all sensors, weapons and more to be procured separately and plugged in. Doing so, McCoy said, would open up the market to additional contractors who can provide a capability but are not able to integrate it directly into the ships.

The Navy hopes the segmented contracting tactic would also drive down costs. McCoy said these lessons were learned with the LCS.

Though it could be a hard sell to Congress -- the Navy would essentially be asking for ships with no real purpose identified yet -- McCoy said it was the service chiefs' job to "open up that aperture as wide as we can, and the independent cost folks will follow." -- *Megan Eckstein*

VP: Budget Shouldn't Hurt LCS . . . begins on page one

little further, looking at what's out in the suspect area."

The MH-60 scanned the area and identified a target, and instead of sending a manned aircraft to investigate, Fire Scout operators on the ship sent the unmanned helo instead. The Fire Scout collected images with its forward-looking infrared camera and sent them back to the ship, allowing the crew to decide on a next move.

"Right now, we're just looking to pass the information between the two platforms," Kimble said, but he added there was a lot of interest in further integrating the two and allowing the manned helo to directly control the unmanned vehicle. "That's like two levels beyond what we currently have the capability to do within the H-60.

"A lot of that has to do with space available," he continued. "To have that level of fidelity in the helicopter to control the Fire Scout and be assured that you're not going to have an incident requires a lot of space because of the technology."

The benefits to overcoming that tech hurdle would be significant. The Fire Scout is limited in its operations by its ability to communicate: its tactical common data link is only reliable if the vehicle is within about 200 kilometers from the receiver, according to a Northrop Grumman fact sheet. But the MH-60R is equipped with advanced communications systems, giving it both line-of-sight and over-the-horizon real-time communications abilities. So, as long as the Fire Scout was near enough to the manned helo to transmit data, the MH-60R could send the information to a ship or ground station regardless of the distance.

Kimble said the MH-60s were allowing the Navy to identify other tactical strategies the Navy could employ thanks to the flexibility the MH-60R/S helos bring. A single newer model of the MH-60 can do the same work that would have required both the MH-60B and MH-60F models in the past, while taking up half the space on a ship's deck. Kimble said commanding officers aboard carriers have started experimenting with different ways of using this new capability, and whereas a carrier may have only deployed with two MH-60B/Fs, it may now take as many as nine MH-60R/Ss.

The MH-60s are also being used to work through the mission module testing aboard the LCSs. Kimble said the mine countermeasures mission package testing is further along than the surface warfare mission package testing -- the former using the S model and the latter using the R model -- but he added that neither required any changes to the helicopters and that integration was therefore going smoothly.

During the same media availability, Joe North, Lockheed Martin vice president for littoral ship systems, said construction of the LCS ship frames was progressing nicely. The Fort Worth (LCS-3) finished its builders trials and was waiting for the Board of Inspection and Survey to come out after Thanksgiving. The Fort Worth will leave Marinette, WI, in late June with its crew, undergo fire testing in Norfolk and then be commissioned in Galveston, TX, on Sept. 22.

The Milwaukee (LCS-5) is about 5 percent complete, and the Detroit (LCS-7) already has plates being cut. North said Lockheed has gotten into a cycle of starting production every six months, which he believes is the most cost-effective way of building the LCS fleet.

Asked if he was concerned that budget cuts and the congressional supercommittee's upcoming actions would affect the LCS program or Lockheed's production cycle, he responded that "based on what we've been able to do with the second ship -- not only throw improvements on top of it but turn her around on cost and on budget -- with the performance we're getting on 1 and 3, I see no reason why they're not going to continue on.

"We're expecting the next two, and we're going to try to stay on that path because that's what's going to keep the program moving," he added. "I've got to keep the production line and the work force up and moving. I've got to keep all our vendors with hot production lines to support the whole class going forward. So that's where we are."

Little Rock (LCS-9) and the yet-to-be-named LCS-11 should be awarded by the first quarter of the next calendar year, North said. -- *Megan Eckstein*

LCS Mission Packages Could Expand . . . begins on page one

Vice Adm. Richard Hunt, commander of naval surface forces, said it is "time to think about where we're going" with LCS.

"I don't think we know what the complete variety of mission modules could eventually be," he told attendees. "We could get cyber mission modules, we could get [intelligence, surveillance and reconnaissance] mission modules, we could support [special operations forces], we could support Marines. We've got to start thinking about what are the possibilities."

He said the "sky is the limit" and that the Navy and industry need to "figure out what the options are for LCS."

Rear Adm. James Murdoch, program executive officer for the LCS program, and Randy Hill, an official in the Naval Marine and Anti-Submarine Warfare Command, discussed the possibility of using the LCS for offensive mining.

"Are we willing to put forces at risk? Are we willing to put mines on the LCS? Are we really going to put the LCS at risk with mines on it? I'm not saying yes, I'm not saying no," Hill said. "Those are the discussions occurring that are actually quite invigorating that we have not heard before."

Brig. Gen. Daniel O'Donohue, director of the Marine Corps capabilities development directorate, said in response to the question that the service is looking at the possibility of using the LCS for amphibious operations and to support special operations forces. However, he noted that LCS is limited in that it is focused on areas other than amphibious operations, such as mine countermeasures.

"There's an opportunity cost in using LCS in other ways," he said, noting that the ship was not designed for amphibious landings or raids.

"The ship has limitations, really, for a broad amphibious use," he said, but added that the Marines would carefully examine the capabilities offered by any ship, including the LCS. -- *Dan Taylor*

DSB Urges Action To Better Prepare For Climate Change-Induced Crises

The Pentagon must better prepare for conflict and humanitarian disasters triggered by climate change by adopting a raft of alterations to its organization, policy, force structure, facilities, training, security assistance and coordination with other agencies, according to a new report from the Defense Science Board.

The DSB's "Task Force on Trends and Implications of Climate Change for National and International Security" calls on the Pentagon to develop a "strong climate information system database" to predict where weather patterns are likely to cause instability, according to an October report, released last week. The report focuses on the potential for climate change-related crises to affect African nations.

"Climate change will only grow in concern for the United States and its security interests," Paul Kaminski, chairman of the Defense Science Board, writes in an Oct. 4 memo forwarding the task force's recommendations to the Pentagon's acquisition executive. "This report offers guidance to the Department of Defense on how to become a leader in mitigating and adapting to its growing effects."

The task force was directed last year by Ashton Carter, then the Pentagon's top acquisition official, to conduct a sweeping assessment of the trends and implications of climate change for national and international security. Carter has since been named deputy defense secretary.

The Defense Department, according to the task force, "can play an important role by providing climate change data and warning" as well as assisting foreign militaries in understanding how dramatic weather events could impact their force structure, facilities and overall security situation.

"Climate change is likely to have the greatest impact on security through its indirect effects on conflict and vulnerability," states the report. "Climate change is more likely to be an exacerbating factor for failure to meet basic human needs and for social conflict, rather than the root cause."

The panel, led by retired Air Force Gen. Larry Welch and William Howard, former senior vice president of Motorola and now an independent consultant, also argues that DOD can assist foreign nations on "how to build their capacity" to effectively manage population migrations with the potential to trigger armed conflict. In July 2010, Howard replaced John Deutch, the former director of central intelligence and deputy defense secretary, who was named originally to co-lead the task force in April 2010.

While calling on the Defense Department to take action in concert with other executive-branch agencies, the 151-page report notes that the United States "has neither the resources nor the influence for an open-ended commitment to addressing" global consequences of climate change.

Still, the task force argues, the United States will be particularly interested in preventing instability in nations that supply fuel and minerals that are of strategic importance to national security, as well as in areas that might become terrorist safe havens.

"A key to success will be extensive advanced planning and collaboration with others most influenced by the impacts," the report argues. "Near-term work to deal with the immediate basic needs of populations will demand a multi-

agency and multinational response" that addresses issues like effective water management, population migration, changes in agricultural practices and storms and flooding "resulting in from extreme changes in weather patterns," the report argues.

The task force, which recommends policy initiatives that span the diplomatic, intelligence and defense establishment, call for the Pentagon to take specific actions, including the formation of a "DOD-wide coordinating policy board for climate change impacts on national security" that would assess implications for force structure and deployment options. The new body would also develop a global and regional foreign military assistance program focused on climate change impacts, according to the report.

The task force also calls for expanding the charter of the Pentagon's operational energy plans and programs office "to include operational climate change" issues and establishing pilot projects with relevant executive-branch agencies to explore how specific regions and locals might adapt to climate change-induced events.

The Pentagon's policy shop and the Joint Staff "should direct development of a DOD strategic roadmap for climate change-related efforts" that does for the entire department what the Navy's Climate Change Roadmap did for the sea service, the task force argues.

The Joint Staff director, the study argues, should "require that climate change and disaster risk reduction be integrated into training exercises," and regional combatant commanders should account for "energy, security and climate change" in their respective theater campaign plans.

In 2008, the U.S. intelligence community prepared a classified finding on the national security implications of climate change that concluded a range of global crises over the next two decades could degrade U.S. military readiness by diverting key transportation assets and combat support forces (DefenseAlert, June 25, 2008).

In particular, that assessment -- distilled from a review conducted by all 16 U.S. intelligence agencies -- raised concerns about rising temperatures in Africa, an event that could have particular consequences for the Defense Department's military command with responsibility for overseeing American operations there.

"The United States' new military area of responsibility -- Africa Command -- is likely to face extensive and novel operational requirements," said a senior intelligence official in 2008. "Sub-Saharan African countries -- if they are hard-hit by climate impacts -- will be more susceptible to worsening disease exposure. Food insecurity, for reasons of both shortages and affordability, will be a growing concern in Africa as well as other parts of the world. Without food aid, the region will likely face higher levels of instability -- particularly violent ethnic clashes over land ownership." -- *Jason Sherman*