

Counterdrug, mapping operations

AFSOUTH CONDUCTING GLOBAL HAWK MISSIONS IN SOUTH, CENTRAL AMERICA

At the request of partner nations in the area, Air Forces Southern is using RQ-4 Global Hawks drones in South and Central America to provide imagery for counterdrug and other non-military-related operations, a senior service official tells *Inside the Air Force*.

The highly sought-after unmanned aerial systems -- which are regularly used to gather intelligence in Iraq and Afghanistan -- flew six missions over Central America in 2008 and are slated to fly 12 missions in Central and South America this year, according to AFSOUTH officials. This marks the first time U.S. officials have acknowledged Air Force drone operations over the continent.

continued on page 8

Through two-phase effort . . .

AIR FORCE DEVELOPING NEW CONVENTIONAL ICBM DELIVERY VEHICLE

The Air Force is quietly developing a new non-nuclear-warhead-tipped intercontinental ballistic missile that if developed would allow it to hold targets around the globe at risk without deploying strategic bombers.

To do this, the service has tasked Lockheed Martin with a \$9.7 million, two-phase effort to design a "Prompt Global Strike Payload Delivery Vehicle," according to Air Force Space Command officials. The program is derived from a U.S. Strategic Command initiative to build a continental United States-based conventional prompt global strike weapon, according to Lt. Col. Randall White, the effort's program manager.

The project is being run out of the Space and Missile Systems Center's Developmental Planning Directorate at

continued on page 10

Could evolve into international program

AIR FORCE FUNDS STUDY TO DETERMINE LIGHT-ATTACK PLANE REQUIREMENT

The Air Force has kicked off a study to determine whether it will buy a light-attack plane, according to service officials.

The capabilities-based assessment -- which is being conducted by the Air Combat Command strategic plans division with fiscal year 2009 funding -- will "help with the initial requirements definition for a potential OA-X" aircraft, according to a service official.

"The results of that effort will be used in formulating requirements documentation and acquisition strategies in accordance with the Joint Capabilities Integration Development System," the official said, noting the study is still in

continued on page 12

Without TSAT . . .

FOLLOW-ON PROTECTED COMM ASSETS MIGHT NEED PROGRAM RE-COMPETES

With the future of the Transformational Satellite Communications System in the balance, there is a chance that new buys of current protected communications payloads might face additional contract competition, according to the Air Force's space acquisition chief.

Gary Payton, the deputy under secretary of the Air Force for space programs, told reporters during an April 2 briefing at the National Space Symposium in Colorado Springs, CO, that he does not know if the final fiscal year 2010 defense budget will contain money for TSAT. Some early drafts of the Pentagon's spending outlook included the program, others did not, he said.

continued on page 17

Welcome Home

The Air Force intends to stand up its nuclear and global strike mission-oriented major command at Barksdale Air Force Base, LA, the service announced this week. Barksdale -- home to 8th Air Force and the 2nd Bomb Wing -- was chosen as Global Strike Command headquarters over five other Air Force bases. The selection was based on the "installation's ability to provide significant nuclear-mission synergy," according to a April 2 service statement. The final basing decision will not be made until an environmental impact study is completed.

New gun system may impact performance

GAO: CV-22 BUY COULD INTERFERE WITH MV-22 PURCHASES, MAINTENANCE

The proposed accelerated delivery schedule for Air Force CV-22 Ospreys, combined with unexpected maintenance issues found during the Marines Corps MV-22s' Iraq deployment, could have a negative impact on the purchase and maintenance of Marine variants of the tiltrotor, a new Government Accountability Office report claims.

"The demand for spare parts for deployed aircraft and the acceleration of CV-22 production could both pose challenges for ramping up V-22 production from 11 in 2005 to 36 in 2009," a copy of the report reads.

Adding to this, Marine Corps MV-22s in Iraq experienced significant reliability problems with the plane's engine service life being less than 400 flight hours in the deserts of Iraq, significantly lower than the "500 to 600 hours estimated by program management."

These maintenance issues, combined with long waits for new parts to be delivered, resulted in "high cannibalization rates" of Marine Ospreys in Iraq, the report states. Cannibalization refers to pulling flight-essential components off one or multiple aircraft just to get another flight worthy, in turn grounding aircraft that had their insides stripped.

The accelerated Air Force CV-22 buy now puts even more pressure on suppliers and maintainers at a time when aircraft continue to be delivered and accepted with "deviations and waivers relating to components such as brakes, landing gear, hydraulic hoses, de-icing systems, and radar altimeters," the report reads.

The report goes on to claim that the new belly-mounted minigun being developed by BAE Systems for the V-22 fleet may have an adverse effect on the tiltrotor's ability to carry troops and cargo as well as reach its top speeds and altitudes -- something that is critical for operations in the high elevations of Afghanistan.

"For missions requiring the new weapon, however, the interior space needed to integrate the system will reduce the V-22's troop carrying capability below its key performance parameter of 24 troops," the document reads. This, along with all-weather radar and de-icing upgrades needed for Afghan operations, will result in weight increases that "may affect the V-22s ability to maintain key performance parameters such as speed, range and troop carrying capacity," it adds.

The V-22 program office signed a \$10 billion multiyear contract for 167 aircraft between fiscal years 2009 and 2012 with Osprey maker Bell-Boeing.

The Air Force's special operations CV-22 fleet is expected to reach initial operating status sometime this year, and the command is hoping to have its entire complement of 50 CV-22s by 2015. AFSOC has requested additional money to accelerate its purchase of CV-22s to eight aircraft per year starting in FY-10. However, the service's request is under review by the President as the new administration conducts a thorough review of all programs in the FY-10 defense budget.

Officials from the V-22 program office were not available to comment on the report at press time (April 2).

-- John Reed

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Will stand up 24th Air Force this summer

LORD: AIR FORCE TO ANNOUNCE CYBER HEADQUARTERS IN COMING WEEKS

After several years of delays, the Air Force expects to select the permanent home of its cyber warfighting component in the coming weeks, a step that will finally allow the service to advance its electromagnetic spectrum combat shop.

“There’s been an analysis that has narrowed down from 57 to six locations and then those six locations were surveyed and now that analysis is complete,” said Maj. Gen. William Lord, commander of the Air Force’s provisional Cyber Command during a March 31 briefing with reporters during this year’s National Space Symposium in Colorado. “I think the secretary and chief will make a decision in probably the next several weeks.”

Once the preferred base is selected, Air Force officials will have to conduct an environmental review, a process likely to last until early summer, said Lord -- who is responsible for standing up the service’s cyber command that will be officially known as 24th Air Force.

“We think maybe Junish, end of June maybe July, the command will stand up at that location,” said Lord.

The two-star anticipates the environmental review will be fairly simple, given the fact that the network-focused command will not need much in terms of new brick and mortar facilities.

He then hinted that locations with excess facilities may hold an advantage in the basing competition.

“As a result of the Air Force getting smaller in the past couple of years, there are some places that have got buildings that are satisfactory” for cyber operations, said Lord.

The service took the amount of readily available permanent facilities at each of the six locations into account, added Lord.

The 24th Air Force will consist of a total of 5,500 airmen with 1,500 apiece going to three wings, 400 at the headquarters base and 500 to 550 who will transfer from the current Air Force Communications Agency to work cyber operations along with another new 100 cyber experts that Air Force Space Command will gain.

The Air Force originally planned to create a cyber major command; however, this was reduced to a numbered air force reporting to Air Force Space Command late last year under the service’s restructuring to accommodate the new Global Strike Command.

Once operational, 24th Air Force missions will include defending the service’s networks, exploiting and attacking enemy networks as well as establishing, operating and maintain a force that its equipped to fight in the cyber arena, said Lord. -- *John Reed*

Specialized operator career field instead

MIT PROFESSOR: NO NEED FOR TRADITIONAL PILOTS TO FLY USAF UAV FLEET

A leading researcher in the field of unmanned aerial systems control stations is calling for the pilot-centric Air Force to eliminate traditional, rated pilots from unmanned aerial systems and instead develop a specialized career field of UAS operators.

Advances in autopilot technology combined with the relatively simple flight tasks required of UAS leave little need for traditional pilots to operate the remote-controlled planes, argues MIT professor and former Navy fighter pilot Missy Cummings.

“You just don’t need [traditional] pilots anymore, that’s the bottom line,” said Cummings during a March 30 telephone interview. “You don’t need someone with stick and rudder skills; you need someone with point and click [analytical] skills.”

“If automation can get [a plane] from point A to point B on automated flight plans and control the plane without the pilot ever touching the stick, automation can do the basic flying for us -- it can do what I call the housekeeping tasks,” explained Cummings. “What we really need pilots/operators there for are the more complex mission tasks.”

This means that unmanned aerial vehicle operators should instead focus on cognitive analytic skills rather than stick and rudder skills, according to Cummings.

Being able to take in vast amounts of data and pass vital information to the correct analysts or customers is far more important than being able to hold a plane in a racetrack pattern, argues the professor, whose lab is working on numerous human to machine interfaces, some of which would allow one person to control multiple UAVs.

Since autopilot technology has existed for decades, the biggest challenge Cummings sees in realizing the true potential for UAS is overcoming the Air Force’s pilot-dominated culture. Right now, the service insists on having rated pilots -- many of whom are fresh from combat tours in fighter jets -- “fly” its UAS from ground stations that are often thousands of miles away from the fight. These pilots are accompanied by sensor operators who manage the actual collection and distribution of the ever-increasing reams of information picked up by the planes.

The Air Force has only just begun to try out a program that trains non-flight-rated officers to become UAV

operators, something Cummings endorses as “a great program and a step in the right direction.”

However, this effort, dubbed the UAS pilot “Beta Test,” is a limited program that will produce only 20 pilots over the next year. The Air Force still pulls the vast majority of its UAS operators from its body of manned aircraft pilots.

Earlier this month, Col. John Montgomery, vice commander of the 432nd Wing at Creech Air Force Base in Nevada, claimed that the biggest needs for UAV operators is a ground station that makes pilots and operators feel like they are flying a manned plane. The 432nd is the first all-UAS wing in the Air Force.

“Right now we have the pilot, honestly he’s projecting himself into the scene via a soda straw,” said Montgomery during a March 18 trip to the desert base. “It is amazing in an aircraft to [look outside a bubble canopy] and say, ‘Here’s the answer.’ In a soda straw, you’re still working for the answer, looking on a map -- synthesizing all of that to know that you’re there more.”

To solve this, Montgomery argued that control stations with a “dome-like” visual display surrounding the crew designed to replicate the feel of flying is a top need for his pilots.

Other pilots and operators echoed this sentiment recently saying that their biggest needs are increased data fusion and workstations that are designed to be easier to use, especially while operators are required to control various sensors while processing massive amounts of information (*Inside the Air Force*, March 20, p2).

Cummings takes particular issue with the argument that more lifelike control stations are the top technological needs for UAS crews.

“**The problem when you try to make a ground control station look like a cockpit is you can’t do it,**” said Cummings. “Even with wraparound screens, even with virtual display projections; it’s not what they’re seeing and, you have to ask yourself, ‘What do you need them to see anyway?’ Do you need them to always have the outside window attitude reference? No, they don’t need to know if their wings are level. The plane knows its wings are level, the plane can keep track of whether its wings are level way better than the human can.”

Instead, UAS need specialized operators who can discern the subtleties of the modern battlefield from afar. Operators who can find and fix the plane’s sensors on a terrorist’s vehicle in a busy urban street or discover an enemy hideout in the mountains, according to the professor.

“What the plane needs is the operator to look at the camera image and say, ‘Is this the right person you want me to drop a bomb on? Do you want me to follow this guy? Is this a good guy? Is this bad guy? What should I do about this; do I need to coordinate with someone else?’” said Cummings.

These operators should be trained from the outset to be UAS pilots, something that would boost morale and eliminate the need to pull pilots from flying high-performance jets and put them behind keyboards, according to Cummings.

While the technology to remove pilots from the UAV equation may exist, the regulatory environment to do so may not, according to Richard Aboulafia, senior analyst at the Teal Group, an aviation consulting firm.

“You’ve got two issues: One, what kind of onboard sensors do you have in terms of [traffic collision and avoidance software]; That’s a key variable here,” said Aboulafia during an April 2 telephone interview. But, “it’s one thing to form the operational plan and insert the appropriate technology and backup systems; it’s another thing to work with the regulatory authority in making sure this is OK and that’s been a serious stumbling block to UAV operations in the U.S. and I imagine anywhere else that has a government.”

The Defense Department has made “little progress” in working with the Federal Aviation Administration to resolve regulation issues surrounding the training and testing of its unmanned aircraft, according to Pentagon report on UAS operations that was sent to Congress last year. -- *John Reed*

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To respond to attacks coming at 'speed of light'

LORD: BETTER INTERNATIONAL RESPONSE GUIDELINES NEEDED FOR CYBER OPS

Due to the lightning-fast speed at which cyber threats move, international arrangements must be developed to effectively fight in the digital arena, a senior service official said this week.

The Air Force has been furiously working with the rest of the Defense Department and civilian government agencies to map out how it will respond to a variety of network security threats; however, the same must be done on an international scale, according to Maj. Gen. William Lord, commander of the Air Force's provisional Cyber Command.

"What I don't see is the processes that operate quickly enough to be able to get to enemies [outside of the United States] who are now conducting warfare at the speed of light," said Lord during a briefing with reporters at this year's National Space Symposium in Colorado. "So what happens when you track back an IP address to you name the country, how do you get law enforcement to go to that address -- that physical address -- and, using the laws of the country, say, 'Stop that stuff.' That process takes weeks today, and we've got to figure out how to make it occur more quickly."

Air Force officials have long worked with other government agencies to figure out how to respond to cyber attacks given the confusing nature of the electromagnetic spectrum arena. Simply determining who is behind an attack can be an incredibly difficult task for cyber operators.

"When you begin to tie the DOD, law enforcement, homeland security and foreign intelligence together, you begin to get a much better synergistic feel for what is it an enemy is doing," said Lord.

A cyber attack against a U.S. bank could simply be a rogue criminal trying to steal money or the beginning of an effort by a hostile nation or group to take down the United States' entire financial system, according to Lord.

Determining the type of attack -- and who is behind it -- is critical to being able to respond effectively, added the general.

This is because a single attack by a criminal against a bank falls under the jurisdiction of the law enforcement community, while a foreign entity probing the bank would warrant a response by the U.S. intelligence community. If the intrusion is the beginning of a large-scale attack by a foreign nation would require a military response.

"We see these seams that we have to operate between very quickly and still stay within U.S. law," said Lord. "So we have good relationships . . . and we exchange data much better than we ever did between [U.S.] government activities."

Lord and other cyber security officials have argued that the ability to rapidly figure out if a network is under attack, determine who is attacking it and how to respond are the "holy grail" of cyber operations.

Lord now has colonel-level liaisons with the Department of Homeland Security -- DHS is responsible for protecting United States infrastructure from cyber attack -- that help share data and coordinate rapid responses to stateside cyber incidents, according to the two-star.

"I have a colonel who works in their spaces, they give us feeds from Einstein [DHS' electronic intrusion alert system], we're going to share feeds when we get our capability stood up," said Lord. -- *John Reed*

'It is not time for high fives'

KEHLER: SPACE ACQUISITION PROGRAMS ARE TURNING SOME CORNERS

As space programs that began prior to Air Force Space Command's "block-build approach" started move through the system, AFSPACE's newer programs show promise that officials have "turned some acquisition corners" in posturing satellite constellations for success, the command's chief told reporters this week.

"I see the beginnings of a better day in acquisition, but it is not time for high fives," Gen. Robert Kehler said during a March 31 briefing at the National Space Symposium at Colorado Springs, CO. "We are still taking some troubled programs through the system, and, until we get some of those on orbit, I will tell you I am cautiously optimistic that we have turned some acquisition corners, but we are not there yet."

The four-star general added that he does not know what the fiscal year 2010 budget and beyond holds for space spending, but his "overall assessment" of his command's operations is that they are "very successful, though there are "aging issues" in the on-orbit constellations.

"Operationally, we find that the space-delivered effects . . . are improving our warfighting in every dimension," the general said. "The warfighters are very pleased with what we're doing with them."

Recently, military officials have begun an upturn in rhetoric regarding "75-percent solutions" for acquisition programs and "flexibility" in capability when looking to revamp how the United States goes about acquiring new systems. Kehler for some time has touted the block approach of new space systems, specifically the GPS III series of global positioning systems, while also stating that the future of military operations will incorporate a capability-

driven mindset rather than one that looks at what a specific payload can offer.

Kehler cannot “go back and fix the requirements” of programs that began in the 1990s, but GPS IIIA shows promising signs that AFSPACE’s block approach is working, the general said this week.

“It has been conceptualized and will be designed as a block-build approach, meaning that, if the 75-percent solution is what we can provide at the first block, that’s what we’ll do, and we’ll add the other 25 percent when we can,” he said. “I think that I’ve seen better requirements discipline. I can’t go back and fix the requirements that we’ve had on [the Space-Based Infrared System] and [the Advanced Extremely High Frequency satellite system] and some of those that are still working their way through the system, but we know what the problem was. On GPS III, I think we understand how to manage the requirements and how to have discipline in the requirements process. I’m seeing some advances here.”

In the future, Space Command needs to think about how extraterrestrial assets fit into “a broader architecture” because “sensors are sensors” and creating an architecture and ground systems that better facilitate the sharing of data is “critically important,” Kehler concluded. -- *Jason Simpson*

14th AF already has cyber-like ops

KEHLER: SPACE, CYBERSPACE OPERATIONS, TRAINING HAVE SYNERGIES

Air Force Space Command’s chief says he sees a number of synergies the military can leverage between space and cyberspace operations as the command works through the details of incorporating a numbered air force responsible for cyber war into its charge.

The Air Force decided to bring cyber operations into Space Command’s portfolio because there are a number of similarities between space operations and those devoted to defending U.S. computer networks, Gen. Robert Kehler said during a March 31 telephone briefing with reporters.

‘We’ve taken a page out of the Marine Corps’ view of the world, which is every Marine is a rifleman first; what we’ve said is everyone is a rifleman first in cyberspace.’
-- Gen. Robert Kehler

“We can go forward with much of what we have learned in the 27 years of existence of Air Force Space Command we can apply to cyberspace -- how we train, how we procure, recognizing there’s a piece of how we acquire space [assets] that’s in the lower end which is a little more agile than what we do with the larger platforms and programs,” the four-star general said. “I think there’s synergy, and we’re exploring where that synergy is and how we go forward with it.”

There will be “lots of room for discovery,” and there are still a number of questions regarding cyberspace for which no one yet has all the answers, the general added.

When intercontinental ballistic missile forces move from Space Command’s responsibilities, roughly 10,000 people will be transferred to Global Strike Command; 7,000 new personnel will move to AFSPACE’s 24th Air Force when the cyber fighting 24th Air Force is stood up, according to Kehler.

Cyber forces will have three major wings; however, when 24th Air Force is stood up, there will be a number of “pieces” that will continue to operate their cyber missions as they do currently where they are located now, he said. The Air Force expects a bed-down decision on the cyber numbered Air Force “within the next couple of weeks.”

“The new operational command for cyber will be spread out throughout a number of units that are around the United States -- they won’t all be in one place,” the general said. “There are other pieces in lots of places that we will police up and eventually we probably won’t move them all eventually, we will eventually do that. The wings and other locations themselves will stay in the locations they’re already in, and what we will do is then organize them under that numbered air force.”

Meanwhile, Space Command is “working our way through” how the command will look like with space and cyberspace responsibilities, he added.

“We certainly think that there are processes in terms of how we train people, how we have looked at the uniqueness of the space operations, and what that means to us,” the general said. “There are certainly operational synergies here. If you take the joint definitions of cyberspace and cyberspace operations, which we have done, much of what gets done in 14th Air Force [Air Forces Strategic], which is today’s space numbered Air Force could be considered cyberspace operation, and I think, when you look at it that way, it’s about moving and protecting ones and zeros.”

Kehler added that he knows “intuitively” that the integration of space and cyberspace will add exponentially to the effectiveness of the U.S. military, and said the next step is to integrate air operations into the synergies of the other two domains.

“What we’ve said is defending cyberspace, defending the networks, will be everyone’s responsibility within the Air Force,” he added. “We’ve taken a page out of the Marine Corps’ view of the world, which is every Marine is a rifleman first; what we’ve said is everyone is a rifleman first in cyberspace.” -- *Jason Simpson*



EXPANDING THE ENVELOPE

Editor's Note: Expanding the Envelope is a new section that explores a variety of Air Force-related news that has occurred over the last week.

Smack Down

This week, Senate Armed Services Committee Chairman Carl Levin (D-MI) fired at shot across the Capitol when he criticized senior House defense lawmakers for attempting to legislate a mixed buy of Air Force next-generation tankers.

Proclaiming his neutrality in the heated battle between Boeing and Northrop Grumman-EADS, Levin said: "I think the chances of getting something done are greater if there's a few people, particularly chairmen of a committee that's got some jurisdiction, who really are not tilted one way or another, not trying to shift the direction one way or another.

"I am honestly doing my very best to keep an open mind on this subject," Levin said at a March 31 breakfast meeting with reporters in Washington.

The senator's comments come after two prominent House lawmakers spent the last few weeks urging the Pentagon to buy both Boeing and Northrop tankers. House Appropriations defense subcommittee Chairman John Murtha (D-PA) has said he plans to introduce legislation mandating a mixed buy. House Armed Services air and land forces subcommittee Chairman Neil Abercrombie (D-HI) also said he favors a procurement split. Pentagon officials claim buying both aircraft would be a misuse of taxpayer money.

This week, Levin said he would not discuss his personal view of the split. The senator also noted has not spoken with either Murtha or Abercrombie.

"I don't want to prejudge it in any way," Levin said. "I don't want to say anything that gives any suggestion that I have prejudged, because I haven't."

"If you say anything that even suggests prejudgment, or a judgment on

this, it creates all kinds of mis-impressions and I just don't want to do it," he added.

When asked if he believes a Pentagon-run tanker acquisition program could withstand congressional interference or mandates, Levin simply responded: "Yeah."

Bombing Run

A group of six senators from South Dakota, Louisiana and Texas sent a letter to President Obama last week urging him not to cancel the Air Force's plans to field a new bomber aircraft by 2018.

"We believe termination of the Next-Generation Bomber would do tremendous damage to our nation's future ability to project power abroad, and runs counter to what senior defense officials in your administration have stated about the need for" the aircraft, the senators wrote on March 26 in response to a press report asserting the White House had suggested scrapping the program.

The senators -- including John Thune (R-SD), Tim Johnson (D-SD), David Vitter (R-LA), Mary Landrieu (D-LA), John Cornyn (R-TX) and Kay Bailey Hutchinson (R-TX) -- all have major Air Force bomber bases in their states that could eventually host the next-generation bomber.

Both South Dakota and Texas are home to B-1B squadrons at Ellsworth AFB and Dyess AFB, respectively, while Louisiana is home to B-52s at Barksdale AFB.

"The need for this new long range strike capability is urgent because, while our current wars are being fought in undefended airspace, the conflicts of the near-term future will likely feature heavily defended sophisticated and deadly air defense systems," the senators wrote.

The senators argue that a stealthy new bomber is needed because the Air Force only flies 20 radar-evading B-2 bombers, which are based in Missouri. Those aircraft are expected to remain op-

erational for several decades.

On another note, Democratic Sens. Kent Conrad and Byron Dorgan of North Dakota were not listed on the letter -- noteworthy given that their state is home to Minot Air Force Base, a major B-52 Stratofortress hub.

New Job

The Pentagon announced late last week that after four months on the job, Air Force Maj. Gen. James Hunt, the head of the service's Quadrennial Defense Review efforts in the office of the assistant vice chief of staff, is being reassigned to become the next deputy commanding general of Multi-National Corps-Iraq.

Hunt has been the Air Force's QDR director since November 2008, according to his official bio. In that role, he is "responsible for the development of Air Force policy, concepts, analysis and strategy for the next QDR. His organization continually re-orientes the department's capabilities and forces to be more agile in times of war, prepare for wider asymmetric challenges, and mitigate risk against uncertainty over the next 20 years."

In the same statement, the Pentagon also said Air Force Maj. Gen. Duane Jones, director of global combat support in the office of the deputy chief of staff for logistics, installations and mission support, would become the office's next director of resource integration.

According to his bio, Jones' current directorate "is responsible for integrating expeditionary combat support and is the focal point for all cross-functional ECS-related issues."

TSAT's Future?

Like a number of defense programs, the future of the Air Force's Transformational Satellite Communications System, known simply as "TSAT," could be decided by the fiscal year 2010 budget, with a number of analysts speculating that it has a target on its

head for cancellation.

The program was originally scheduled for contract award last spring, by the decision was delayed a number of times since then and ultimately was restructured as a less-complex system and a new request for proposals was released late last year.

Last week, *Inside the Air Force* reported that both contractors vying for the contract, Boeing and Lockheed Martin, said they had been asked by the air service to examine what alternatives to the multibillion-dollar project could be.

At a March 31 briefing at the Na-

tional Space Symposium in Colorado Springs, CO, Gen. Robert Kehler, chief of Air Force Space Command, confirmed that report.

“We have studied options, and there were a number of them on the table when we went through the last review last summer to include continuing with the existing programs of record, meaning WGS [Wideband Global Satellite Communications system, built by Boeing] and AEHF [Advanced Extremely High Frequency satellite system, built by Lockheed],” the four-star said.

Kehler said he did not know what the

budget holds for TSAT or, for that matter, the Air Force’s space portfolio as a whole.

“I do not know what the budget decisions will be and how they will impact all of the space programs, not just TSAT,” he said “I don’t know how they’re going to unfold across the board. We’ve been asked our views, we’ve voiced our views, and I am very comfortable that my voice has been heard and now we have to see how the ultimate balance that the Secretary of the Air Force [Michael Donley] and others . . . have to make, and I don’t know what they’re going to decide.”

GAO: AIR FORCE TO BEGIN GLOBAL HAWK MR-RTIP RADAR TESTING IN MAY

The Air Force is poised to begin testing its advanced Multi-Platform Radar Technology Insertion Program system on Global Hawk drones this spring, according to a Government Accountability Office report released this week.

The MP-RTIP program office is scheduled to deliver its first developmental radar unit to the Global Hawk program office in May to support testing, according to the March 30 report, a review of major Pentagon acquisition programs.

The Air Force plans to install the Northrop Grumman-built MP-RTIP system on 15 Block-40 Global Hawks.

The MP-RTIP next-generation wide-area surveillance system that uses Active Electronically Scanned Array radar to provide a near-real-time horizontally integrated view of the battlespace, according to service documents. The technology will allow the operators to track moving targets on the ground and in the air simultaneously.

In its report released this week, the MP-RTIP program office claims all eight of the system’s critical technologies for the Global Hawk program office “are fully mature,” according to the GAO report.

The Air Force originally wanted to put a large MP-RTIP sensor on the E-10 surveillance aircraft; however, the service killed that program in FY-08. In addition to the smaller Global Hawk MP-RTIP sensor, officials now intend to put a larger version of the radar on the E-8 Joint Targeting Surveillance and Attack Radar System.

“The Air Force is also considering whether additional platforms could utilize the radar,” the GAO report states. -- *Marcus Weisgerber*

12 SOUTH AMERICAN RQ-4 MISSIONS SET FOR 2009 . . . begins on page one

“The countries that we’ve been supporting have been very pleased with the products,” AFSOUTH Commander Lt. Gen. Norman Seip said in a March 30 telephone interview. In addition to AFSOUTH -- the air component of U.S. Southern Command -- Seip also commands 12th Air Force.

The Global Hawks are being used to provide infrared, electro-optical and synthetic-aperture radar imagery that can be helpful in humanitarian assistance, disaster response, deforestation monitoring and counterdrug operations. The missions -- which are similar to ones flown in the United States following hurricanes or during fast-spreading wildfires -- are all flown at the request of the host nations.

“It helps us establish baselines for future events,” Thomas Schnee, deputy chief of AFSOUTH’s Operational Planning Division, said of the imagery gathered by the unmanned aircraft.

“If we know what the country looks like right now, if for some reason a hurricane [or earthquake] comes through . . . we have a before and after image,” he said during a March 31 telephone interview. “We can see some of the areas that may or may not be accessible to help them out in the event that [the Defense Department] is asked to come in and provide assistance.”

The Global Hawk’s pictures provide “resources and products in the event that there is natural disaster or some type of humanitarian-relief-type of operation, to be able to do a before-after [comparison], or just be able to understand what’s going on around you,” Seip said.

The drones -- which are flown out of Beale Air Force Base, CA -- have been used for missions over Guatemala, Belize, Honduras, El Salvador and “other nations,” according to Schnee. The command is projecting upcoming

missions over Haiti, Jamaica and the Dominican Republic. Each nation requesting the imagery gets briefed before the missions are conducted.

“We’ve done a very good job from a strategic communications standpoint of not making the Global Hawk threatening to people,” Seip said of the RQ-4, which is essentially an unmanned version of the Cold War-famous U-2 spy plane.

Even though the drones can fly for more than 30 hours, flying them out of Beale poses some limitations because missions must originate and terminate out in Northern California.

“In some cases, it doesn’t give you a lot of time on-station, and, in some cases, you’d get no time on station” due to the distance the drone would have to travel to reach some parts of the South American theater, Seip said.

Still, officials are touting the Global Hawk missions as a “huge theater security cooperation success,” Schnee said.

In the future, gas-and-go airfields -- which could allow a Global Hawk to land, receive fuel and then take off and continue its mission -- could help extend Global Hawk operations to a vaster portion of South America.

“We’re going to have to think of down the road of being able to move those things forward,” the three-star said when asked about setting up RQ-4 gas station.

For the past few years, Pacific Air Forces has been working on establishing agreements with Asian nations for Global Hawk gas-and-go or “lily pad” bases. -- *Marcus Weisergerber*

Part of \$86 million reprogramming

DOD SHIFTS FUNDS INTO USAF, NAVY NUCLEAR FUZE DEVELOPMENT PROGRAM

The Pentagon has repositioned \$8.8 million into a joint Air Force and Navy effort to design a new nuclear warhead fuze, according to Defense Department documents. The transfer of funds is part of an \$86 million reprogramming action sent to Capitol Hill late last year.

All of the money shifted in the transfer will go toward nuclear-related research and development projects, according to the Dec. 5, 2008, document, which is signed by then-acting Pentagon Comptroller Douglas Brook. The nuclear-fuze development is listed as a “new start” for the Air Force.

The reprogramming was sent to the four congressional defense committees, which approved it recently.

The additional money is “required to support feasibility and initial design study for a joint Air Force-Navy program for a Joint warhead fuze,” the document states.

In addition to that initiative, the Pentagon received permission to realign \$39.8 million “to provide a ‘Fusion Center’ combining data from 13 legacy inventory systems to enable item in-transit tracking by serial number,” the document states. The new start “enhances [the] existing system with software integration patches and hardware components.”

Another \$35 million will go toward accelerating the Defense Threat Reduction Agency’s development of systems that can detect nuclear weapons and neutralize them.

Of the \$35 million, \$17 million will go toward “specific research elements [that] include investigating the use and generation of various beams, which are used to ‘light up’ nuclear materials so they may be detected easier with passive detectors,” the document states.

DTRA will also get another \$18 million to accelerate development of “advanced nuclear and radiological detection systems,” according to the reprogramming. The effort is divided in four sections, which include:

- The “development and demonstration of a long-range standoff detection system based on high energy x-rays”;
- The “development of a family of advanced passive sensors for locating and identifying fissile material and

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radiological hazards for interdiction and elimination operations”;

- “Laboratory and field studies of advanced materials and electronics for radiation sensing”; and
- The “development of a robust technical performance and operational test and evaluation infrastructure to support evaluation and field assessment of active and passive detection systems.”

The Pentagon originally requested \$55 million for the effort; however, lawmakers on Capitol Hill did not approve \$20 million. The money shifted into the nuclear programs came from the RDT&E coffers of several Air Force aircraft-related programs.

“Funds are available from these programs to support the higher priority need of nuclear surety due to underexecution,” the document states. -- *Marcus Weisgerber*

GAO: B-2 AEHF COMM UPGRADE COULD AFFECT LOW-OBSERVABILITY ASPECTS

An audit of an Air Force program to upgrade its stealthy nuclear-strike bombers’ communications capabilities found that the low-observable aspects of the aircraft could be jeopardized with the modifications required, according to a recently released Government Accountability report.

The B-2 Spirit Advanced Extremely High Frequency (AEHF) satellite communications capability upgrade program includes three increments. The first includes the installation of advanced flight management computer processors, which entered into system development in February 2007, according to the GAO report. The second increment adds new antennas and radomes to the stealth bomber, and the third allows connectivity to the Global Information Grid.

While Increment 1’s critical technologies are nearing maturity and “the design appears stable,” GAO is concerned with the plans for Increment 2 and the augmentation of the aircraft to add the new payloads.

“Increments 2 and 3 are not yet in development, but there are already areas of concern,” states the report, released late in March. “For instance, critical technologies for Increment 2 are very immature, will add significant weight, and may affect the aircraft’s low observable nature.”

Specifically, the two “most critical technologies” for the second phase of the program, the antenna and radomes, are “very immature,” according to the report. Further, beyond the added weight of the instruments in the design, their integration requires holes cut in the aircraft skin, leading to the possibility that “the low-observable properties of the aircraft could be affected.”

Increment 2 is scheduled to enter into development in February 2011, the report adds.

In November 2008, Maj. Paul Capes, bomber branch chief of the Air Force Global Power Directorate, told *Inside the Air Force* that the service planned to add AEHF connectivity to the B-2 and B-52 Stratofortress for nuclear command and control (*ITAF*, Nov. 21, 2008, p9). While low-observable capabilities are not a concern for the B-52, the plan to upgrade the Spirit’s capabilities included a specialized antenna as to not jeopardize the jet’s stealthy profile, Capes said.

In its report, GAO stated the program in March 2008 initiated a \$38.1 million advanced development effort for the antenna integration phase “to better define system requirements and address potential risks.”

“As part of that effort, the program conducted loads and analyses for the antenna hardware,” the report reads. “Based on the results, the program decided to make structural modifications to B-2 aircraft to ease installation by providing a uniform mounting system.”

In addition, the program plans to cut holes in a static test article later this year to identify potential radome installation issues before cutting into an actual Spirit, according to the report.

At press time (April 2), the Air Force did not respond to questions regarding the audit; in the report, GAO noted that the service concurred with the findings. -- *Jason Simpson*

CONVENTIONAL PGS WEAPON TEST SCHEDULED FOR 2012 . . . begins on page one

Los Angeles Air Force Base.

“The objective of the two phase contract with Lockheed Martin is to demonstrate the ability to destroy a target with a conventional strike weapon flown to the target on the . . . payload delivery vehicle,” an SMC spokeswoman said.

In the first phase, engineers will develop the requirements for the delivery vehicle, according to SMC officials. Phase II includes the actual design, construction and flight testing of the vehicle. The contract for the second phase has not been awarded, according to the spokeswoman.

SMC wants to conduct an “operationally relevant” launch of the test vehicle using a Minotaur-4 rocket by early 2012, White said during a March 31 telephone interview. The test flight -- which will originate at Vandenberg Air Force Base, CA -- will last 35 minutes, five of which will be powered.

The flight will make use of three of four possible stages on the Minotaur, White said. The first phase will boost

the payload high atmosphere where it will separate from the rocket and a hypersonic engine will take over. After this, the delivery vehicle will descend unpowered for 20 minutes in the atmosphere while making test maneuvers. Then, when the delivery vehicle is “several hundred feet above” its target, the payload’s munition, a “focused fragmentation weapon,” will be discharged and fall to Earth.

The test is critical since future conventional prompt global strike projects will depend on its success. Even though the demonstration is based on a CONUS-based expendable rocket, this does not mean a reusable vehicle is out of the question some day, White noted.

Lockheed began work in August 2008 and will complete the first phase this month, the spokeswoman said. The Air Force first awarded the Bethesda, MD-based company last year.

Meanwhile, the Air Force is preparing for at least four experiment trials this fall with Boeing’s X-51 WaveRider scramjet demonstrator in which the vehicle will fly for 300 seconds at hypersonic speeds (*ITAF*, Jan. 30, p5). If successful, the series of tests will mark a critical advancement in hypersonic development.

SMC requires that the prompt global strike payload delivery vehicle share the aerodynamics, thermal protection, avionics and structural design developed by Lockheed in an earlier project known as FALCON (Force Application and Launch from the Continental United States), the spokeswoman said.

The FALCON program is an Air Force- and Defense Advanced Research Projects Agency-led effort to launch a reusable hypersonic cruise vehicle that can deliver 12,000 pounds of payload at a distance of 9,000 nautical miles from the continental United States in less than two hours, according to a DARPA fact sheet. The first overarching milestone of the program is to develop an affordable and responsive space lift capability that can quickly launch a small satellite -- weighing 1,000 pounds -- into low-Earth orbit. There are two planned flights of the vehicle -- known as the Hypersonic Test Vehicle, or HTV-2 -- this year.

“The first two flights under the Falcon program can be used to qualify the payload delivery vehicle’s design specifications, avionics, and flight software,” she said. “The scope of the contract includes the redesign of the internal packaging to accommodate an 800- to 1,000-pound payload, fabrication and delivery of the flight vehicle.”

White attributed his program’s aggressive pace due to the fact that it can use FALCON’s flight tests as risk mitigation activities for the 2012 exercise.

Follow-on prompt global strike demonstrations and contracts “are subject to future decisions on the direction of the program and the availability of funds,” the spokeswoman said.

White would not speculate on the cost of an expendable production conventional PGS weapon. -- *Jason Simpson*

LEVIN, McCAIN VOICE SUPPORT FOR CONTINUED UAS AIR STRIKES IN PAKISTAN

The Senate Armed Services Committee’s leaders this week endorsed the use of unmanned aircraft systems in air strikes against insurgent forces in Pakistan while underscoring the high stakes involved.

“I feel it’s necessary, it should be focused -- and I think it is focused -- on the high-level targets,” Sen. Carl Levin (D-MI), the panel’s chairman, said. “It is an extremely effective tool.”

The Obama administration’s newly minted strategy for Afghanistan and Pakistan, with its focus on eliminating targets tied to al Qaeda and other terrorist organizations operating in the region, would ensure the continued focus of the air strikes, Levin told reporters Tuesday during a breakfast in Washington.

“That is one of the real pluses of the president’s new approach,” according to Levin.

Pakistani government officials have spoken out against the air strikes, noting the number of innocent civilians that have been killed during those operations.

“It’s got to be done -- and this is where intelligence is so critically important -- with the understanding that when we make mistakes . . . the price is a very heavy price, in terms of what our goal is,” Levin said.

But continued U.S. operations in Pakistan are necessary, according to Levin, because Pakistan’s government is unable or unwilling to address the terrorist threat within its own borders.

“I do not have a lot of confidence that the Pakistani government has the will or the capability to take on the violent forces inside their” country, Levin said. Specifically, Pakistani President Asif Ali Zardari’s administration, he said, “is not strong enough” to combat al Qaeda and others operating in the country.

Instead, Pakistani officials have tried to “to buy some peace” by bribing or intentionally turning a blind eye to extremist organizations in the country, as long as their actions are not directed at Pakistan, Levin said, citing al Qaeda forces operating out of the Swat Valley in the Northwest region of the country as an example.

Pakistan’s focus on its ongoing conflict with India continues to drive its national security policy, leaving little military resources to go after insurgent groups, particularly in the federally administered tribal areas along the Afghanistan-Pakistan border.

The key, Levin said, is that Pakistan’s leaders must understand that insurgent forces operating out of Pakistan are not only a threat to U.S. and coalition forces, but to Pakistan itself. “They have got to see that it is in their own

interests," he said.

Sen. John McCain (R-AZ), the committee's ranking Republican, also endorsed U.S. drone attacks in Pakistan at an event sponsored by the Foreign Policy Initiative.

"My view is that it's probably -- and I'm glad I'm not part of the administration -- it's probably a wise thing to do, particularly when we can specifically identify these people," McCain said Tuesday. "And it is part of an overall strategy. But it's only a part."

When there were 120,000 troops in Iraq, American forces used nightly drone attacks to kill off enemy leaders, yet U.S. forces were still losing the war, McCain said. "So it can't be the only strategy, is what I'm saying," he added. "I think it should probably be done. But don't think it's the strategy that will achieve success." -- *Carlo Muñoz*

USAF 'LOOKING VERY, VERY HARD' AT OA-X REQUIREMENT . . . begins on page one

the early stages.

The OA-X capabilities-based assessment follows a similar ACC irregular warfare study -- which included an analysis of light-attack and other propeller-driven aircraft -- conducted last year. Air Force Chief of Staff Gen. Norton Schwartz ordered the study in September 2008, ACC officials told *Inside the Air Force* in October (ITAF, Nov. 7, 2008, p1).

"Embedded within that capabilities-based assessment are the concepts such as an OA-X [light-attack plane] or an enduring RC-12 mission," Col. George Bochain, then-chief of ACC's Joint Air-Ground Combat Division, said in an Oct. 29 interview at Langley Air Force Base in Virginia.

Air Force officials believe some type of multirole, light-attack aircraft could have a role in counterinsurgency operations and assist in building partnerships with nations that cannot afford -- or do not have a need for -- pricey fighter jets or unmanned aerial systems.

"Who knows where that's going to go, but certainly our Air Force is looking very, very hard at it and looking at the various courses of action and potential CONOPS and then fitting it into that big thing called reality of money and budget prioritization," 12th Air Force and Air Forces Southern Commander Lt. Gen. Norman Seip said in a March 30 telephone interview.

The three-star -- who oversees Air Force operations in the Caribbean and South and Latin America -- likened potential foreign sales of an OA-X aircraft to the service's highly successful international F-16 fighter program.

"When you join the F-16 club, you've got great support from all aspects of that weapons system," he said. "The same thing can happen with a . . . light-attack, light-interdiction, OA-X . . . aircraft there.

"You can envision some day where everyone would come up to the states for that training, or you'd have some regional training centers and now you've got the exchange pilots in place [and] exchange maintenance officers in place," Seip continued.

An Air Force endorsement and purchase of an aircraft helps if a foreign nation eventually acquires the platform because supply systems, training, logistics and maintenance pipelines are already established.

"Anytime the United States is buying something and putting it into their Air Force . . . lots of people are going to have an interest in it because we will have worked through all the bugs," Seip said.

Still unclear is when the OA-X capabilities-based assessment will be complete, or how much it will cost.

-- *Marcus Weisgerber*

As Pentagon tenure nears end . . .

YOUNG SLAMS GAO STUDY, DEFENDS DOD EFFORTS TO IMPROVE ACQUISITION

The Government Accountability Office's finding that weapons programs face \$296 billion in cost overruns is sensational and misleading, Pentagon acquisition executive John Young contends in a five-page memo to Defense Secretary Robert Gates and Deputy Defense Secretary Bill Lynn, sister publication *Inside the Pentagon* has learned.

Young's missive criticizes the Defense Department's acquisition of the Army's Future Combat Systems, the Joint Strike Fighter, the V-22 Osprey tiltrotor, the Virginia-class submarine, the C-17 and C-130J cargo planes, and the Family of Medium Tactical Vehicles, which have exceeded cost goals.

But Young, whose tenure at the Pentagon is set to end, also defends his office's efforts to grapple with acquisition challenges. And he bemoans the management of military requirements and the defense budget.

"The DOD budget is generally over programmed, seeking to buy more programs than DOD can afford and thus underfunding all programs and preventing efficient execution," Young contends. GAO's report similarly states the problems are rooted not only in the acquisition process, but also in the requirements and funding processes.

Young penned the memo -- which is dated March 31 at 3:30 p.m. -- one day after the GAO's 182-page report emerged and made national news. His parting shot also comes as Ashton Carter, the White House's choice to succeed Young, is poised to take over. The Senate Armed Services Committee blessed Carter's nomination on April 1; a vote

by the full Senate is expected soon.

In addition to Gates and Lynn, Young addressed copies of the memo to the service secretaries and acquisition chiefs as well as Chairman of the Joint Chiefs of Staff Adm. Michael Mullen, Pentagon Comptroller Robert Hale, Vice Chairman of the Joint Chiefs of Staff Gen. James Cartwright and the Pentagon's program analysis and evaluation shop.

GAO, the investigative arm of Congress, concluded overall performance of weapon system programs remains poor. There have been modest improvements in DOD's acquisition outcomes, GAO writes, but "the cumulative cost overruns are still staggering -- almost \$296 billion in fiscal year 2009 dollars -- and the problems are pervasive."

The report, issued annually, says GAO and DOD agree on the causes of the trouble: Programs are started with poor foundations and inadequate knowledge for developing realistic cost estimates; programs proceed with artificially low cost estimates, optimistic schedules and assumptions, immature technologies and designs, and fluid requirements; changing or excessive requirements cause cost growth; and an imbalance between wants and needs contributes to budget and program instability.

But Young's memo takes strong issue with the \$296 billion figure that grabbed headlines. "This number has been cited by many people as a condemnation of the defense procurement process," he writes. "I have analyzed the components of this GAO number, and I would suggest that the number is misleading, out-of-date, and largely irrelevant to the current management of DOD programs."

The memo attacks GAO's contention that the cumulative cost growth in major weapons programs is higher than it was five years ago. Only 58 programs are common between the 2003 and the 2008 portfolios, Young notes, adding, "Therefore, it is not possible to draw meaningful conclusions about trends or performance by comparing these dissimilar portfolios."

Last year, he raised similar objections to GAO's findings on defense acquisition costs, urging defense reporters to "look beyond the bumper sticker at the facts.."

In this week's report, GAO notes that the \$296 billion number is driven by older programs. Young, in his memo, seizes on this point, stressing that 41 of the 96 programs in the 2008 portfolio received initial milestone approval for development before 2001, and these programs are responsible for roughly \$189 billion of the cost growth. Further, 12 of the programs in the 2008 portfolio received development milestone approval over 15 years ago, and these programs are responsible for roughly \$69.8 billion of cost growth, he writes.

"Defense programs formulated and initiated in the 1980s and 1990s do not really provide a valid basis for assessing the current state of defense acquisition programs or the defense acquisition process," Young asserts. "Recent DOD policies have required full funding of defense acquisition programs to independent cost estimates, a practice which should avoid the unrealistically low initial cost estimates at program initiation which are largely reflected in the GAO's cost growth over original program baselines." GAO notes that newer programs, on average, have not shown the same degree of cost and schedule growth.

Young has categorized 94 programs in the 2008 profile based on the severity of their woes and the factors involved. These are the 91 programs reviewed by GAO, three of which -- the Joint Stand-Off Weapon, the Navstar Global Positioning System and the Patriot Medium Extended Air Defense System -- count twice because they have two separate baselines. His memo notes that DOD records only allow him to account for cumulative cost growth of \$278 billion, not \$296 billion. "GAO will not share its numbers with the Defense Department, so I cannot mathematically reproduce their results," he adds. A call to the GAO was not returned a press time.

The memo says \$95.7 billion associated with 18 programs is a result of increased procurement quantities over the original program baseline. "Higher costs due to increased quantities do not constitute true cost growth and do not reflect a problem with defense acquisition processes or defense industry," Young argues.

He writes that \$72.2 billion associated with nine programs is a result of lowering procurement quantities and slowing program execution. Young argues that higher costs due to slower procurement and quantity reductions as a result of budget cuts and program stretches are not true cost growth and do not reflect trouble with defense acquisition processes or defense industry.

Young admits 39 programs have caused \$57 billion of cost growth, but stresses that 27 of these programs are being completed within 10 percent of their original cost baseline.

"As I have often expressed to you, our goal is to have no cost growth," he writes. "However, this small amount of cost growth is a result of a number of factors: DOD weapons programs frequently use exotic materials, include a significant amount of software, are purchased under limited competition, are driven by excessive DOD certification requirements and are subject to annual budget fluctuations imposed by the Defense Department and the Congress."

Limited cost growth under these circumstances would not necessarily reflect a failed DOD acquisition process, Young contends. He also writes that several programs experienced quantity reductions and were still executed with good unit cost control. This was generally a result of buying the lower quantity efficiently and not stretching the program, according to Young.

Increased quantities, reduced quantities and small (10 percent) growth cumulatively account for a net cost growth of \$110.9 billion, or 40 percent, of DOD's \$278 billion figure and 66 of the 96 programs in the portfolio, the

memo states.

“Again these programs do not constitute legitimate cost growth that can be attributed to a failed defense acquisition management process,” Young argues. “Indeed, this data makes clear that 66 programs have performed reasonably well, sometimes even in the face of budget churn or quantity changes. Thus, I would reiterate the view that the \$296 billion is a sensational number that is misleading, out-of-date, and irrelevant to the current DOD procurement process.”

But Young also identified a group of programs that have not performed to their initial cost estimate. The memo says \$166.6 billion of the net cost growth is attributable to 28 programs for which the dominant factor driving cost growth was not quantity increases or decreases.

Some of these programs, such as the JSF, the CH-47F helicopter, the C-17A cargo plane, the Space Based Infrared System High and the Black Hawk Upgrade program, have been impacted by quantity changes, but those revisions did not drive the cost growth, according to Young.

The dominant factors in cost growth for these programs were excessively low initial cost estimates, fluid requirements, optimistic schedules and assumptions, excessive application of government certification standards, initiation of development with immature design or technology and poor performance by government and industry teams, the memo states. “Again, some of these factors are totally out of the control of acquisition program managers and do not necessarily indicate a broken defense acquisition management and oversight process,” Young writes.

The memo also says eight programs -- the DDG-51 destroyer, the Army’s FCS, the JSF, the V-22, the C-17, the Virginia-class sub, C-130J, and the FMTV -- account for \$220.4 billion, or 79 percent of the \$278 billion in DOD-measured cost growth. Six of these programs were begun in or before 1996.

“For the DDG-51 and C-130J programs, the cost change was driven by quantity increases, accounting for \$59.9 billion of the \$278 billion total,” Young writes. “In the other cases, the entire national enterprise -- acquisition, requirements, budgeting and funding and industry -- performed poorly on these programs, resulting in cost growth of \$160.5 billion -- a disturbing 36 percent over their original estimates. These programs, as well as many others on the list, have failed to deliver to their cost baselines, and this requires us to review the reasons and take corrective actions to prevent any reoccurrence.”

These eight programs, and their entire data set, make clear the importance of initiating programs with a solid analytical foundation, initial systems engineering, realistic cost estimates and rational requirements, according to Young. The remaining 86 programs account for a net \$57.1 billion of cost growth on a base of \$741.8 billion -- 7.7 percent average cost growth, the memo states.

“To be clear, every program on the list has been impacted to varying degrees by excessively optimistic pricing, annual budget churn, significant requirements changes, and excessive applications of service technical certification authority,” Young writes. “Further, DOD programs face unique challenges in terms of limited competition, specialty materials (which have increased two to five times in price in recent years), high software content, and demanding technology.”

Faulting the DOD acquisition process alone is unfair, Young contends. “It is crystal clear that programs must be started on a solid foundation of knowledge with realistic cost estimates and requirements,” he writes. “I would suggest it is equally clear that many factors outside the DOD acquisition process are significant contributors to the poor performance of a number of acquisition programs, specifically the annual budgeting and funding process and the requirements process.”

Young adds that he agrees there is significant room for improvement.

“We have implemented a wave of changes seeking to make these improvements -- budgeting to independent cost estimates, questioning requirements, implementing configuration steering boards, issuing acquisition decision memorandums which fix requirements and guide contract strategies, conducting enhanced oversight, establishing program management agreements, requiring competitive prototyping, completing independent program reviews and planning material development decisions at program initiation,” he writes.

Over time, these policies have the potential to improve the acquisition team’s performance on defense development and procurement programs, according to Young.

“The defense acquisition team cannot successfully control or reduce costs if requirements regularly change, budgets annually churn, independent cost estimates are ignored, quantities are constantly varied, military service technical certification standards are excessively applied, and programs are formulated on viewgraphs in program budget reviews,” he warns.

No cost growth is acceptable as any cost growth comes at the expense of the opportunity to buy additional capability for the warfighter or to lower costs for the taxpayer, Young notes in his closing.

“However, I think it is necessary to look more carefully at the highly publicized \$296 billion number which has been used to condemn the defense acquisition process,” he adds. “This detailed review makes clear that it is unfair to characterize only the current defense acquisition process as broken based solely on the misleading and out-of-date \$296 billion number cited by GAO.” -- *Christopher J. Castelli*

DOD AGAIN SCRUTINIZES BELL HELICOPTER'S MANAGEMENT PRACTICES

The Pentagon is scrutinizing Bell Helicopter Textron this week to determine if the aircraft maker's management practices have improved enough to warrant the restoration of a high-profile certification that Bell lost in 2006, *Inside the Pentagon* reports.

Ann Jensis-Dale, a spokeswoman for the Defense Contract Management Agency, told *ITP* the review of Bell's earned value management system began Monday and will conclude Friday. She declined to predict how quickly officials might reach a decision.

"We will know more once the review is complete and the report is final," she said. It took the agency two months to complete a report after the agency's last review of Bell in August 2008. That review found Bell had significantly improved its compliance with Defense Department rules that are designed to control the cost and schedule of major weapons -- but not enough to earn back the certification.

Earned value management, which involves 32 rules, aims at coordinating key project goals and objectively measuring progress. Many defense contractors and program officials have failed to use the tool properly, according to defense officials. In response, Pentagon acquisition chief John Young tapped his deputy, Shay Assad, to spearhead a renewed focus on controlling the cost and schedule of major weapons programs via the oft-ignored tool.

Last fall's review found Bell was still not following three of the 32 rules. Bell needs a perfect score to earn back its certification. Bell lost its certification in March 2006 for failing to heed 14 rules. Since then, the company has sought to make improvements and win back the certification. But it has repeatedly struggled to apply the management guidelines to development of the V-22 Osprey, which it manufactures with Boeing, and to its military helicopter programs.

NAVY PLANS MORE CONTRACTS FOR TROUBLED PRESIDENTIAL HELICOPTER

Despite uncertainty about the future of the VH-71 presidential helicopter program, the Navy is moving ahead with contract awards to support the aircraft's development, *Inside the Pentagon* reports.

Naval Air Systems Command, which manages the program for the sea service and the White House, announced plans for two separate sole-source awards in *Federal Business Opportunities* notices published March 25.

One deal would go to prime contractor Lockheed Martin in Owego, NY, to buy parts in support live-fire testing of the helicopter. Such testing, which is routine for military aircraft in development, is supposed to determine how the VH-71 would stand up to enemy fire.

Live-fire test and evaluation of the VH-71 began in January 2007 and is scheduled to conclude in April 2011 with a full-up system level live-fire test, according to a program official, who said 46 percent of testing has been completed.

The second award is slated to go to General Electric Aircraft Engines to upgrade a previously purchased CT7-8E engine to the current VH-71 engine configuration as well as to support of follow-on Accelerated Simulated Mission Endurance Testing (ASMET). Such tests assess an engine's durability by replicating anticipated missions.

The first ASMET concluded in April 2007 with approximately 800 hours of data collected from the GE CT7-8E engine, the program official said, noting the validated engine performance data, which was collected to uncover potential engine safety or reliability risks, revealed zero anomalies. A second ASMET is planned using same GE CT7-8E engine that was used in the first test, with additional reliability enhancements installed. The test, scheduled to begin in the fall of 2010, will verify reliability improvements and will last approximately eight weeks, the official said.

ARMY STILL WORKING OUT THE REPERCUSSIONS OF TERMINATING ARH

The Army is still dealing with the fall-out from the termination of the Armed Reconnaissance Helicopter program, working three different initiatives to fill the capability gap left behind, a senior Army aviation official tells *Inside the Army*.

The first two efforts pertain to upgrading existing platforms that will now be flying longer than expected.

"One of the good things is, as part of this, there has been a groundswell of support for Kiowa Warrior, whereas there wasn't a lot invested into that platform before because there was a replacement coming," said Col. Randy Rotte, deputy director of Army aviation, in a March 26 interview with *ITA*. The ARH was set to serve as that replacement.

Even before the ARH program was officially canceled, the Army realized Kiowas would be flying longer than planned because the ARH capability would at least be delayed, according to Rotte.

In response to this slip, the Army started the Life Support 2020 program, designed to keep Kiowas flyable and relevant on the battlefield out into the late 2020s, said Rotte.

The improvements to the airframe are in the areas of weight reduction, sensors and survivability. "There's going to be some really good products coming out of that," said Rotte.

MURTHA WANTS TO ADD ONE E-2D TO SUPPLEMENTAL TO OFFSET FY-09 CUTS

The House Appropriations defense subcommittee will recommend the addition of one E-2D Advanced Hawkeye surveillance aircraft to the upcoming supplemental war-spending bill to replace the aircraft that was cut from the baseline fiscal year 2009 defense budget, *Inside the Navy* reports.

"We're going to recommend that to the committee," the subcommittee's chairman, Rep. John Murtha (D-PA), told reporters following a March 25 hearing on Air Force and Navy combat aircraft. "It's a legitimate war-cost expense."

The FY-09 defense appropriations bill cut \$165 million from the E-2D program, which amounted to a cut of one of the three aircraft requested by the Pentagon. The program warned that this could cause a slip in the E-2D's initial operational capability (IOC) of up to a year, from 2011 to 2012. The E-2D is slated to replace the Navy's aging fleet of E-2C Hawkeyes.

"The Navy was upset about it at the time," Murtha said. "I said, 'Well, reprogram something.' They couldn't find the money to reprogram it."

Congress also cut \$37 million for advanced procurement of the aircraft in the budget. When asked about that money, Murtha said he had not made a decision on that issue yet.

Problems with the development of the aircraft's radar have provided a rationale for lawmakers to cut funds from the program. The Pentagon is seeking \$200 million for the E-2D from FY-10 to FY-13 to pay for research and development to solve those issues, according to a Pentagon document outlining aspects of the Navy's program objective memorandum 2010 (POM-10) obtained by *InsideDefense.com* in October. However, budget discussions are ongoing and those plans may change.

MURTHA: CONGRESS TO RECEIVE DETAILED DOD BUDGET REQUEST MAY 4

The House's chief defense appropriator said today he expects to receive the Obama administration's detailed fiscal year 2010 defense budget request on May 4, *InsideDefense.com* reports.

Additionally, Rep. John Murtha (D-PA), the chairman of the House Appropriations defense subcommittee, told committee members at a hearing on shipbuilding programs he hopes the defense budget can be ready by July 30 for consideration on the House floor.

"That's about the same schedule as last year," Murtha said. "And it's a very ambitious schedule, but we stuck to it last year and we got it done. So it gives you an idea of the work we've got to do."

To date, the administration has released only a topline figure for the FY-10 baseline defense budget request: \$533.7 billion. The detailed budget request was put on hold as the Pentagon reviewed Bush administration plans and prepared for widely expected changes to weapon program budgets, including significant cuts.

Senate Armed Services Committee Chairman Sen. Carl Levin (D-MI) told defense reporters at a breakfast March 31 that Defense Secretary Robert Gates likely will announce his recommended defense budget changes before submitting the full plan to the Office of Management and Budget. That announcement could come as early as next week, according to sources.

Murtha also said his subcommittee expects to get the detailed version of the final FY-09 war-cost supplemental appropriations request on April 9. *Inside the Pentagon* reported March 26 that OMB has approved the Pentagon's \$75.5 billion supplemental but is delaying its submission to Congress until lawmakers wrap up work on the FY-10 budget resolution, according to a government source.

The House is scheduled to recess from April 6 to 17.

SENATE COMMITTEE APPROVES ASHTON CARTER AS DOD ACQUISITION CHIEF

The Senate Armed Services Committee on April 1 approved President Obama's nomination of Ashton Carter to be the Pentagon's next under secretary of defense for acquisition, technology and logistics, *InsideDefense.com* reports.

The panel also approved the nominations of James Miller to be deputy under secretary of defense for policy and Amb. Alexander Vershbow to be assistant secretary of defense for international security affairs, according to a committee statement. In addition, 3,952 pending military nominations in the Army, Navy, Air Force, and Marine Corps were granted.

"All nominations were immediately reported to the floor following the committee's action," the statement reads.

Carter overcame the doubts of Ranking Member John McCain (R-AZ) due to the nominee's lack of acquisition experience. While Carter served as assistant secretary of defense for international security policy from 1993 to 1996, he has not previously held a management post in the defense acquisition realm.

Carter will succeed John Young as acquisition chief.

SEN. LANDRIEU ASKS COLLEAGUES TO SUPPORT GUARD'S BLACK HAWK MOD EFFORTS

Sen. May Landrieu (D-LA) is joining Rep. Rodney Alexander (D-LA) asking congressional leaders for their support for the National Guard's H60 Black Hawk helicopter recapitalization and modernization programs, *InsideDefense.com* reports.

In a March 6 letter, Landrieu asks the leaders of the Senate Armed Services and Appropriations committees for an additional \$184.4 million in the fiscal year 2010 defense bills to accelerate the helicopter modernization programs.

Alexander, in a Feb. 25 letter, states that older, A-model helicopters cannot carry the same payload as the newer models, are less effective at high altitudes and are more costly to maintain. He writes that the program approved last April, which funds the conversion of older UH-60A-As to the newer UH60-L models at a rate of 38 per year over the next five years, is not sufficient.

Under this plan, the Army will not divest itself of A-model Black Hawks until 2023, according to both letters.

To address this problem, the Guard wants to accelerate these conversions and speed up the fielding of newer M-model helicopters as well.

Like Alexander, Landrieu asks for \$164 million for 10 more UH-60M helicopters and \$20.4 million for 12 more UH-60A-A to UH-60L conversions for the National Guard.

Citing more than 830,000 flight hours logged for operations in Iraq and Afghanistan, Landrieu's letter states that the Army National Guard Black Hawk fleet is being worn out "much faster than planned." Buying new models and recapitalizing older ones is particularly necessary to keep the fleet deployable in places with high altitudes like Afghanistan, Landrieu writes.

These issues and others will be discussed tomorrow at a House Appropriations defense subcommittee hearing on Army aviation.

PAYTON NOT SURE OF TSAT'S FATE . . . begins on page one

"A lot of things have changed in the past few months, and budget scrutiny has been going on, and, in all honesty, I don't know whether or not TSAT's in the program," Payton said.

If TSAT "as an entity" is not included in DOD's FY-10 spending allotment, the Air Force will still provide protected communications for the warfighter, "so AEHF [the Advanced Extremely High Frequency satellite system, built by Lockheed Martin] will have to continue if we do not have TSAT; WGS [the Wideband Global Satellite Communications system, built by Boeing] will have to continue if we do not have TSAT." Both contractors are vying for the \$11 billion next-generation communications satellite program.

The Air Force has the defense giants under contract to work on risk-reduction and concept-development activities to improve the technology-readiness levels of the system's "piece parts," he added.

"The advancements there could be applied to be bolted together in a different shape to have a different kind of satellite, but we are not specifically asking those folks to look at different designs other than the design that we call Block 10," the "digital core" design of the constellation, Payton said.

Asked if follow-on buys of AEHF or WGS satellites would necessitate a new competition, rather than continuing the current contracts with the legacy system builders, Payton said: It "depends on what does the warfighter need in the individual capability and in the capacity and how much of a change is that system to the current or the legacy system.

"If it's technically a big change in the subsystems or capacity, then it's probably smart to re-compete that," he continued. "If you do a cookie-cutter approach, you're going to get what you're going to get. But, if the warfighter needs something dramatically different than that, then the cookie-cutter approach would be inadequate, and then that's when you would re-compete." -- *Jason Simpson*

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MARINES LAUNCH GUNSHIP-LIKE KC-130J 'HARVEST HAWK' PROGRAM

Responding to an urgent request for additional air power in Afghanistan, the Marine Corps is launching a new program to give its KC-130J Super Hercules aerial refueling tankers unprecedented combat punch -- a rapid-fire cannon, air-to-ground missiles and a sophisticated intelligence, surveillance and reconnaissance capability.

The goal behind the previously unreported "Harvest Hawk" program -- focused on a KC-130J equipped with a modular package of capabilities that allow it to perform gunship-like missions as well as its traditional refueling and hauling tasks -- is to begin deliveries to Afghanistan this summer, according to military officials.

Last week, lawmakers approved a Defense Department request to shift \$50.8 million between fiscal year 2009 Pentagon accounts to immediately launch work on the new ISR and combat capabilities.

"These modular mission kits are intended to complement, not replace, the primary mission of the KC-130J which is aerial refueling of fixed-wing, rotary-wing, and tilt-rotor aircraft," Maj. Eric Dent, a Marine Corps spokesman, told *InsideDefense.com* in a written statement.

"The modular aspect of this system allows for intelligence, surveillance, and reconnaissance (ISR) only or ISR with any or all of the munitions [being assembled for the program], depending on the situation and at the discretion of the MAGTF [Marine Air Ground Task Force] commander. We believe that this effort will increase ISR coverage area and provide over-watch for our dispersed Marine ground units in combat," Dent wrote.

'We believe that this effort will increase ISR coverage area and provide over-watch for our dispersed Marine ground units in combat.'
-- Maj. Eric Dent

By equipping KC-130Js with ISR and air-to-ground attack capabilities, the Marine Corps will transform a logistics aircraft into one that is suited to support of key missions including counterinsurgency, Dakota Wood, a senior fellow with the Center for Strategic and Budgetary Assessments, said.

Last July, Marine Corps Central Command forwarded an urgent universal needs statement for a persistent ISR capability paired with a suite of weapons that could lay down a punishing volume of fire from an aircraft,

a request that was validated in September by the Marine Requirements Oversight Council in September, according to Dent.

The Marine Corps "has an urgent requirement in direct support of this effort to provide an armed capability to the KC-130J aircraft to enhance its role in assault support by enabling the aircraft to field a rapid-response, defensive-suppressive fire and persistent-fire-support capability," the Defense Department's reprogramming request states. It was submitted to Congress in mid-January.

On March 26, according to a congressional source, the Senate Armed Services Committee agreed with the urgency of the need and approved a Pentagon request to shift \$22.7 million between research and development accounts to support testing for the Harvest Hawk program as well as \$28.9 million for the procurement of weapon suites -- which will be rolled on and rolled off the aircraft -- and associated ISR packages.

Three KC-130Js will be outfitted to meet an immediate need; the goal is to acquire a total of nine Harvest Hawks, Dent said.

Among the ISR targeting systems under consideration for the Harvest Hawk are Lockheed Martin's Target Sight System used in the AH-1Z upgraded Cobra attack helicopter and the L-3 Wescam's MX-15D, according to Dent. The pod would be mounted on the rear portion of the left external fuel tank in a configuration currently used by the Air Force.

Firepower options, according to the Marine Corps, include an Mk 44 30-millimeter cannon on a trainable mount at the left-hand paratroop door; Hellfire missiles on the left wing station; and standoff precision-guided munitions that would be fired from the aircraft's ramp.

Naval Air Systems Command in Patuxent River, MD, is working with Lockheed Martin, Wescam, ATK, Northrop Grumman, Raytheon and U.S. Special Operations Command to integrate the system, according to Dent.

The reprogramming request, which seeks permission to use funds appropriated for fiscal year 2009 to start a new program -- a type of request often denied by lawmakers who prefer new-start programs to be funded through the annual budget request -- was signed on Jan. 15 by then-acting Pentagon comptroller Douglas Brook. -- *Jason Sherman*