



## In the News

AMERICAN FORCES PRESS SERVICE  
(MARCH 2, 2007)

### GATES, PACE CALL ON CONGRESS TO FUND IED RESEARCH

*Jim Garamone*

**W**ASHINGTON—Defense leaders called on Congress to approve a further \$2.4 billion to defeat the biggest killer of Americans in the Middle East: the improvised explosive device.

Defense Secretary Robert M. Gates and Chairman of the Joint Chiefs of Staff Marine Gen. Peter Pace told the Senate Appropriations Committee that the fiscal 2007 emergency supplemental request includes money to fund research into defeating IEDs. The money is in addition to \$2 billion Congress already has appropriated this year to deal with the problem.

Gates stressed to the senators that this is an overriding concern in DoD. “The most unpleasant aspect of my job is every night going home and hand-writing notes to the families of those who have been killed in action,” Gates said. “And there’s a sheet behind every one of those letters that tells me how they died, and about 70 percent of them are the IEDs. So the whole Department of Defense is as highly motivated as an organization can be to try and figure out a way to get around these.”

Gates said he has met with retired Army Gen. Montgomery Meigs, the director of the Joint IED Defeat Organization. “I asked General Meigs, ‘Do you have enough money? Are you pursuing every avenue that makes any sense at all? And he assured me that with the enactment of the request that we have made both for the supplemental and then for (fiscal) ‘08, that he has the resources that he needs to do this,” he said.

Pace said the effort against IEDs is more than simply looking for a technological answer. Experts in Iraq learn from every device that explodes, then they take the information and share it widely, “so the troops training right now to go overseas in the future have the information from the most recent tactics, techniques, and procedures of the enemy,” Pace said.

Pace said the coalition and Iraqi forces look at the entire IED process, adding that coalition forces have secured 435,000 tons of ammunition from more than 15,000 locations in Iraq. “Just getting at the source of the explo-



U.S. Army Cpl. Joseph Casiano utilizes a detainee kit to check a holster for chemicals used to make improvised explosive devices during a combined cordon and search with the Iraqi National Police in Ghazaliya, Iraq, March 23, 2007. Casiano is with Black Hawk Company, 1st Battalion, 23rd Infantry Regiment, 3rd Stryker Brigade Combat Team, 2nd Infantry Division.

U.S. Army photograph by Sgt. Tierney Nowland, USA

sives is part of the problem,” he said, “then the factories where they’re built, and the individuals who build them, and then the individuals who deliver them, and then the individuals who put them in place. So we go after the entire chain of events.”

Pace said coalition and Iraqi security forces find more than half of IEDs that are emplaced. “And then, thanks to the technologies involved, we have fewer and fewer casualties for the explosions that do take place,” he said.



There is no easy solution, Gates said, and the United States must keep pushing at the problem. “The reality is we face an agile and a smart adversary, and as soon as we ... find one way of trying to thwart their efforts, they find a new technology or a new way of going about their business,” he said. “But I can assure you this is a very high priority for us.”

*Garamone is with American Forces Press Service.*

### AIR FORCE PRINT NEWS (MARCH 2, 2007) **AIR FORCE LOGISTICS CENTERS SUPPORT WARFIGHTERS 24/7**

**W**RIGHT-PATTERSON AIR FORCE BASE, Ohio—When aircraft maintainers half-way around the world need help fast, round-the-clock support is now available at Air Force Materiel Command’s three air logistics centers.

The customer support centers, or CSCs, at Tinker AFB, Okla., Robins AFB, Ga., and Hill AFB, Utah, are the product of AFMC’s Logistics Transformation Program, an ongoing effort to provide warfighters what they need in minimum time. The centers are open 24 hours, seven days per week.

The CSC specialist’s job goes beyond answering questions from maintainers in the field. It also involves cooperatively solving problems those maintainers confront as they work to keep aircraft flying operational missions anywhere in the world—in a rapid reaction way.

“Our goal is to ensure every caller’s questions are answered satisfactorily on the first call,” said Kitty Broussard, CSC flight chief at Tinker AFB. “In December, we processed more than 3,500 calls, and answered 99 percent of the questions on the first call. The work is very rewarding as we can see first-hand the support we provide to our warfighting customers,” she said.

The Customer Relationship Management concept, under which the CSCs operate, includes not only responses to maintainers’ questions but a partnership in solving problems. Each party has a stake in finding solutions. Each CSC incorporates a team at each air logistics center to provide a “track and capture” capability for all customer queries and requests.

In recent surveys, customers reported getting their queries answered or issues resolved on their first call 74 percent of the time. Another 87 percent reported they felt the

CSC representative understood their question or need. Prior to stand up of the CSCs, customers reported they routinely made five phone calls to resolve a mission-capability question. About 63 percent indicated it was “difficult” to reach the right person to help them.

“A key part of providing ‘war-winning capabilities, on time and on cost’ is to provide logistics support for Air Force weapon systems around the globe,” said Lt. Gen. Terry L. Gabreski, AFMC vice commander. “Establishment of customer service centers that do more than just answer questions is critical to us keeping the warfighter in the center of the radar. When maintainers in the field succeed, we succeed.”

Customer involvement and customer satisfaction are the measures of success for the CSCs. To validate results, the CSCs were collecting from their own internal customer satisfaction surveys; the Air Force Institute of Technology conducted an independent audit. AFIT researchers deployed, collected, and reported results from more than 1,500 customer satisfaction surveys developed specifically for the CSC validation. Feedback showed that 88 percent of customers felt they were getting satisfactory or above service from their CSC. Another 64 percent reported they used the CSC at least weekly.

Another advantage of CSCs is that if an item manager is out of the office on sick leave or vacation, the center has staff duty officers who can track down the information needed without any delay, said George Swinehart the KC-135 Stratotanker Weapons Systems Spares manager at Scott AFB, Ill.

Accurate and timely information is what the warfighter needs most, said Les Parnacott, the director of supply operations at the Combat Air Forces Logistics Support Center at Langley AFB, Va.

“If the guy on the flight line in Iraq or Afghanistan knows a part will be in his hands in two days, odds are he won’t have to cannibalize parts from other aircraft,” Parnacott said. “There’s nothing more frustrating than to cannibalize a part and four hours later that part shows up because the information wasn’t available.

“And there’s little that’s more rewarding to the logisticians who created the CSCs than to hear positive feedback such as this comment that came from the Selfridge Air National Guard Base in Michigan: “The rest of the world should be this way.”



## In the News

*Courtesy Air Force Materiel Command Logistics Directorate; Ron Mullan contributed to this story.*

### AIR FORCE PRINT NEWS (MARCH 10, 2007) **LOGISTICS OFFICIALS DISCUSS STRATOTANKER SUSTAINMENT**

*Debra Bingham*

**R**ICHMOND, Va.— “Air Force and Defense Logistics Agency partnership is critical to success.”

That’s the message Michele Rachie, deputy director of the 827th Aircraft Sustainment Group at Tinker Air Force Base, Okla., focused on during her visit March 1.

Rachie met with members of Defense Supply Center Richmond’s Aviation Customer Operations and Aviation Supplier Operations directorates to discuss KC-135 Stratotanker programmed depot maintenance supportability. During the morning session, Rachie briefed the DSCR team on the planning cycle for future programmed depot maintenance. She said her goal is to make sure that needed parts will be available for the maintainers to perform new work tasks at the four aircraft depot repair locations.

“The KC-135 celebrated its 50th birthday in September [2006],” Rachie said. While reaching that milestone is a testament to those who collectively work to sustain it, she said the ongoing mission is to “provide a healthy and effective fleet of KC-135 aircraft through 2040.”

Air Mobility Command manages more than 490 KC-135 Stratotankers. The tankers provide aerial refueling support to Air Force, Navy, and Marine Corps aircraft as well as aircraft of allied nations. KC-135s also transport cargo and ambulatory patients during aeromedical evacuations.

As the war on terrorism continues, actual flight hours on the KC-135 continue to exceed the original planned hours.

“We’re replacing parts we didn’t plan on replacing, so partnering with DLA is the key to future supportability,” Rachie said. She added that she also wanted to explore joint actions to ensure supportability for new actions that will begin in October.

Lt. Col. Joe Edwards, chief of the Oklahoma City Air Logistics Center customer relationship management cell, discussed its role in providing streamlined customer support. That process includes facing the customer directly



U.S. Air Force Capt. James Wiley, of the 355th Fighter Squadron, positions his A/OA-10 Thunderbolt II aircraft behind a KC-135 Stratotanker aircraft from the 168th Air Refueling Squadron for aerial refueling over the Pacific Alaska Range Complex April 4, 2007. The 355th Fighter Squadron is tasked to provide mission ready A/OA-10s as well as search and rescue capability in Alaska and deployed sites worldwide.

U.S. Air Force photograph by Master Sgt. Robert Wieland, USAF

to identify, prioritize, validate, and implement actions necessary to improve support.



“Our goal is to continuously improve asset supportability,” said Edwards. “Consistent communication and collaboration are a key part of that effort. That means building the relationship by meeting the key personnel, reviewing the joint business processes, and by looking for ways to make the human communication enhance the data exchange used in the business system modernization process.”

David Huguet, DLA KC-135 weapon system support manager, said DLA manages over 100,000 items of supply that support KC-135 aircraft operations, in the form of aircraft spares and piece parts for support equipment.

Because the average age of the aircraft is over 45 years, engineers continue to find new areas that need parts replaced due to wear, metal fatigue, and corrosion.

“We face many challenges maintaining data and procuring the necessary parts to keep this fleet operational for its critical mission. The Air Force recognizes the need to partner with DLA to help meet its mission objectives, while allowing DLA to execute effective material support when both sides don’t have unlimited funds, said Huguet.

Huguet said DLA recognizes that being proactive on customer-forecasted requirements will minimize the need for time-consuming and expensive expedite work later. That requires collaboration and the necessity of working from a common set of focused metrics.

Another discussion centered on DLA support to the upcoming KC-135 flight control overhaul program.

“This joint effort will require DSCR Supplier Operations to increase buying activity on almost 2,000 national stock numbers needed for the repair shops to perform deep overhaul on 26 aircraft flight control surfaces,” Huguet said. “This will reduce maintenance manhours and cost burden to meet critical Air Force aircraft availability improvement goals.”

*Bingham is chief, Defense Supply Center Richmond Public Affairs.*

### ARMY NEWS SERVICE (MARCH 15, 2007) **ABERDEEN TEST CENTER FOCUSES ON WARFIGHTERS WHILE ADVANCING INNOVATIONS**

*Donna Miles*

**A**BERDEEN PROVING GROUND, Md.—As the Defense Department hurries to get the latest weapons systems and protective equipment to deployed troops, the Aberdeen Test Center is operating at what its commander calls a “fast and furious rate” to ensure effectiveness and safety remain top priorities.

The center, on the shores of the Chesapeake Bay, is the most diverse of seven Department of Defense test facilities and is a critical partner in the Army’s Rapid Fielding Initiative, said Col. John Rooney, center commander.

During the past two years, the center’s scientists, technicians, and engineers have tested about 30 rapid fielding initiatives a week, with more than 1,400 tests conducted last year alone. There’s been an 87 percent increase in range activity here since fiscal 2001.

“That’s all being driven by technologies to support the warfighter in the global war on terror,” Rooney said.

Technologies undergoing testing range from enhancements to improve the way vehicles operate in combat to protective gear that helps troops survive enemy attacks.

“Our focus is on identifying the best technology available now, getting that capability to the warfighter today, and then improving on it,” Rooney said.

This concept, referred to as “spiral development,” turns the military’s traditional fielding method on its head. Rather than developing, testing, then fine-tuning systems before sending them to the field, the priority now is to get new technologies to the troops as quickly as possible, while continuing to improve on them, Rooney explained.

“We’re inserting them into the war without the breadth and depth of testing we would go through in peacetime,” he said. “There’s a whole different dynamic of supporting an Army at war that’s different from that in peacetime. You have to make sure you do an adequate job of testing, but not at the expense of withholding capabilities.”



An up-armored Humvee undergoes a mine test at the Vehicle Vulnerability/Lethality Test Range at Aberdeen Test Center. The center, at Aberdeen Proving Ground, Md., tests equipment ranging from tanks to protective vests and helmets to ensure they're effective and safe for warfighters.

Photograph courtesy Aberdeen Test Center



Even with the big push to get new systems to deployed forces, Rooney said the military holds the line when it comes to safety. "We always do safety testing up front," he said. "But once we've done that, the big question becomes, 'What's enough testing to understand how the system is going to work in combat?'"

Evidence of this balancing act is prevalent throughout the combat theater. The Aberdeen Test Center staff tested for electromagnetic interference in Blue Force Tracker, a satellite-based Force XXI Battle Command, Brigade and Below communications system, as well as for additional radios placed on M1A1 Abrams command vehicles.

They tested new software for the tank's nuclear, biological, and chemical protective system, and a variety of bridging systems so deployed forces could cross gullies and low spots throughout the Iraqi desert.

But few examples demonstrate the emphasis on expedient fielding more clearly than how the military gets new vehicle protection to deployed troops.

As DoD's primary ground-vehicle tester, the Aberdeen Test Center started exploring ways to protect troops

against roadside bombs in August 2003, as soon as these weapons began appearing in Iraq.

Rooney described the motivation that drove testers here to move quickly to evaluate the first add-on armor prototypes. "We knew that every day we didn't get the test finished was another day we weren't getting these kits to the field, and that could have a direct impact on someone's life," he said.

The earliest add-on armor kits sent to the combat theater had limitations, he acknowledged, but still offered far more protection than no additional armor. Even as these kits were being sent to the field, the Aberdeen Test Center staff continued to look into new systems to improve on them.

Since the start of the terror war, the center staff has subjected more than 500 potential solutions to the rigorous testing that takes place every day, Rooney said. These prototypes have been fired at to test their ballistic protection and run through simulators, computer models, and outdoor tracks to see how they stand up to real-world road conditions like they'll encounter in Iraq and Afghanistan.



A drive around the test ranges here—nine miles of interconnecting roads and 25 permanently constructed courses—shows some of the armor enhancements undergoing testing now. They range from a new add-on armor kit for Humvees that includes 450 pounds of armor to the front door alone and extra baseboard armor to a one-piece door assembly for the 5-ton M977 heavy expanded mobility tactical truck to an improved slat armor kit for the Stryker light armored vehicle.

The staff developed the initial prototype for the Stryker's slat armor—a cage-like apparatus bolted to the Stryker to protect it from rocket-propelled grenades—and Rooney calls it one of the staff's proudest achievements. Although the first users didn't necessarily like the slat armor's looks, they quickly grew to love its protective qualities, he said.

While continuing to seek out newer, more effective ballistic protections, the staff recognizes the impact of these improvements on overall vehicle performance, Rooney said. Putting additional armor on vehicles affects everything from the way they handle, to their tip-over point, to the life cycle of their shocks and suspension systems, to their overall reliability.

"Every time something gets added or placed on a vehicle, you have to look at the whole range of effects," Rooney said. "When you evaluate protective armors, you have to work hand-in-glove with the automotive side, because even if a vehicle stops everything in terms of ballistics, if it can't drive, it's of no value."

So evaluators put vehicles through the paces in both outdoor courses and indoor simulations to replicate the worst of real-world conditions. Vehicles get exposed to bumps, ditches, slopes, mud and sand courses, fording basins, and other difficult conditions similar to what deployed troops experience regularly.

"We're trying to create the circumstances that might cause failures so we can learn from it and address those issues," Rooney said. "The whole intent is to fully understand the vehicle's capability."

Once a vehicle passes through the rigors imposed, Rooney said he's confident they'll be ready for the demands warfighters will subject them to.

That's the mindset at the Aberdeen Test Center that Rooney said has continued to turn ideas into solutions

for combat troops. "Our end product is a better equipped, better protected warfighter," he said.

As the Aberdeen Test Center supports today's warfighters, it's carrying on a tradition that began in 1917 when it helped prepare the military for World War I.

Today, the center continues testing a broad spectrum of military weapons systems and equipment: vehicles, weapon systems, ammunition, portable bridges, generators, night-vision devices, individual equipment ranging from boots and uniforms to helmets, and even surface and underwater naval systems.

As it conducts this testing, Rooney said the staff never loses sight of the men and women on the front lines whose lives are at stake.

"We are a very busy, very diverse, and very relevant test center, doing things people know matters," he said. "We are helping the warfighter tremendously. And because people here recognize the direct impact of what they're contributing, job satisfaction is pretty easy to come by here."

*Miles writes for the American Forces Information Service.*

### DEPARTMENT OF DEFENSE NEWS RELEASE (MARCH 15, 2007) **SECRETARY OF THE NAVY RECOMMENDS WAY AHEAD FOR LITTORAL COMBAT SHIP PROGRAM**

**B**ased on a comprehensive review of the Littoral Combat Ship (LCS) acquisition program, Secretary of the Navy Donald C. Winter announced today that he is prepared to lift a previously issued stop work order for construction of LCS 3. The ship is currently under contract to Lockheed Martin Corp. Maritime Systems & Sensors unit, Moorestown, N.J. Lifting the stop work order is contingent upon the Navy and Lockheed Martin reaching agreement on a renegotiated contract.

As a result of a nearly two-month assessment, the Navy has revalidated the warfighting requirement and developed a restructured program plan for the LCS that will improve management oversight, implement more strict cost control, incorporate selective contract restructuring, and ensure that an important warfighting capability is provided to the fleet consistent with a realistic schedule.



This plan will ensure best value to the Navy for the completion of LCS ships 1-4, procurement of existing designs in fiscal 2008 and 2009 to fill the critical warfighting gap, and establish a sound framework for transition to a single selected design in fiscal 2010. The Navy will work closely with Congress on reprogramming actions necessary to bring this program forward.

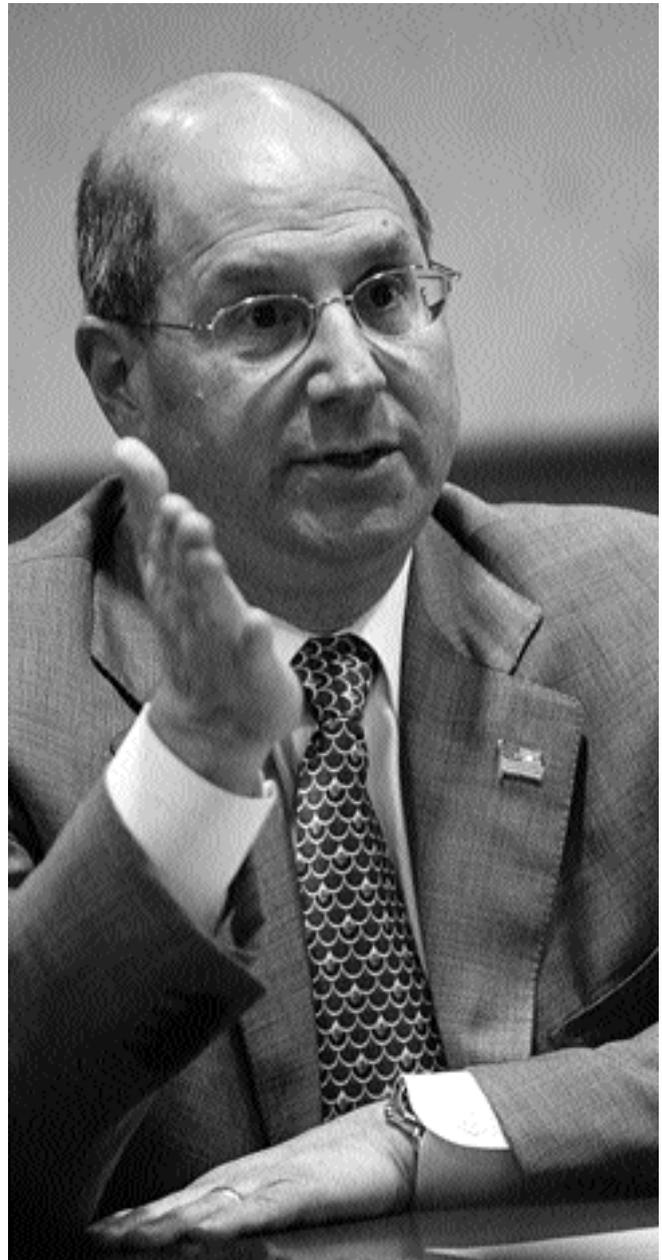
“It is vital that the Navy continue through first-of-class construction challenges to complete LCS 1 and LCS 2. When these ships are delivered, we will be able to fully evaluate their costs and capabilities,” said Winter. “LCS 3 construction may be resumed under revised contract terms that rebalance the risk of cost growth between the government and industry. LCS 4 construction will continue as long as its costs remain defined and manageable.”

Under the restructured program plan, the Navy will recommend deferral of procurement of LCS in fiscal 2007 and use those funds to complete the construction of LCS 1-4. The Navy intends to continue with a plan to procure a reduced number of ships in fiscal 2008 and 2009 within existing budget resources and with the approval of Congress because of the compelling need to address critical warfighting gaps in the littorals and strategic choke points.

The Navy will transition to a single seaframe configuration, incorporating a Navy-specified open architecture combat system, in fiscal 2010 after an operational assessment of all critical factors between LCS 1 and LCS 2. The Navy will hold a full and open competition of the selected design (flight 1) for the fiscal 2010 seaframe procurement to reduce life cycle costs of the program.

“LCS is needed now to fill critical, urgent warfighting requirements gaps that exist today. It is imperative that the Navy deliver this warship class and its important capabilities to the fleet as soon as possible,” said Chief of Naval Operations Adm. Mike Mullen. “It is just as imperative that we do so in the most cost-effective manner possible.”

The LCS is an entirely new type of U.S. Navy warship. A fast, agile, and networked surface combatant, LCS’s modular, focused-mission design will provide combatant commanders the required warfighting capabilities and operational flexibility to ensure maritime dominance and access for the joint force. LCS will operate with focused-mission packages that deploy manned and unmanned vehicles to execute missions as assigned by combatant commanders.



WASHINGTON (March 15, 2007) - Secretary of the Navy Donald C. Winter discusses the Littoral Combat Ship (LCS) acquisition program during a press conference in the Pentagon. The new program plan will improve management oversight, implement more strict cost controls, incorporate selective contract restructuring, and ensure vital warfighting capability is provided to the fleet in a timely manner.

U.S. Navy photograph by Chief Mass Communications Specialist Shawn P. Eklund



Operational experience and analyses indicate that potential adversaries will employ asymmetric capabilities to deny U.S. and allied forces access in critical coastal regions to include strategic choke points and vital economic sea lanes. Asymmetric threats will include small, fast surface craft, ultra-quiet diesel submarines, and various types of mines.

LCS will also perform special operations forces support; high-speed transit; maritime interdiction operations; intelligence, surveillance, and reconnaissance; and anti-terrorism/force protection. While complementing capabilities of the Navy's larger multi-mission surface combatants, LCS will also be networked to share tactical information with other Navy aircraft, ships, submarines, and joint units.

*For further information, contact the Navy Office of Information at (703) 697-5342.*

### DEPARTMENT OF DEFENSE NEWS RELEASE (MARCH 20, 2007) **AIR FORCE, DLA JOINTLY PLAN FOR BRAC 2005 IMPLEMENTATION**

*Sue Murray • Lynne Allen*

**W**RIGHT-PATTERSON AIR FORCE BASE, Ohio—Efforts are under way by a joint implementation team to plan the execution of the Base Realignment and Closure 2005 Supply, Storage, and Distribution Management Reconfiguration decision at Warner Robins Air Logistics Center, Robins Air Force Base, Ga.

The team consists of Air Force Materiel Command and Defense Logistics Agency personnel charged with creating a plan of action and milestones for the supply, storage, and distribution implementation. The action plan will define specific tasks to be completed that will support a successful transfer of functions and people without degradation of support to readiness and the warfighter.

The BRAC 2005 decision calls for the Department of Defense to reconfigure its industrial supply, storage, and distribution infrastructure into one integrated provider supporting WR-ALC depot maintenance requirements. This infrastructure will reduce duplication of functions and inventory, optimize resources, and streamline processes. WR-ALC is the first of the Air Force's three air logistics centers and the first of 13 industrial sites across all four military services to implement this BRAC decision.

According to Army Brig. Gen. Dave Kee, executive director of the DLA BRAC Implementation Office, the main focus continues to be support to the warfighter.

"As we continue to integrate with the Air Force BRAC implementation team to meet the BRAC 2005 decisions, DLA pledges to ensure uninterrupted customer support," said Kee.

"The joint implementation team is at the forefront of planning a critical transformation of the DoD supply chain," said Lorna Estep, deputy director of supply for AFMC's Directorate of Logistics.

"Our depots deliver the aircraft and repair parts that keep Air Force missions flying. A superb plan, executed well, will ensure our maintenance lines keep delivering and our Air Force keeps flying."

This joint implementation planning team will serve as a model for subsequent DoD SS&D implementations at the Tinker and Hill Air Logistics Centers, as well as the other military industrial sites.

Plans call for supply, storage, and distribution implementation to take place at AFMC's air logistics centers in fiscal 2008. WR-ALC is planned for the first quarter; Oklahoma City ALC at Tinker AFB, Okla., is scheduled for the second quarter; and Ogden ALC at Hill AFB, Utah, is scheduled for the third quarter.

*Murray is with the Materiel Readiness Project Office and Allen, the BRAC Implementation Office.*

### AMERICAN FORCES PRESS SERVICE (MARCH 29, 2007) **MISSILE DEFENSE SYSTEM PROTECTS UNITED STATES, ALLIES**

*John J. Kruzal*

**W**ASHINGTON—The United States has been fielding a missile defense system aimed toward defending itself, its deployed forces, and its allies against emerging threats, a top Air Force official said March 28.

"We initially turned our attention to North Korea because we felt that that had the higher sense of urgency, and we believe that that was somewhat justified by the activities last summer," said Lt. Gen. Henry A. "Trey" Obering III, director of the U.S. Missile Defense Agency, referring to North Korea's July 2006 missile tests.



"We have since begun to turn our attention to Iran, as well," he told reporters at a State Department foreign press briefing on missile defense and Europe.

Obering said he has briefed the NATO-Russia Council and has opened discussions with German, French, and Ukrainian officials in their respective European capitals. Talks with the Czech Republic and Poland are ongoing; and visits to Spain, Turkey, Greece, and Hungary to discuss missile defense issues will take place in coming weeks, he said.

During these discussions, Obering said he has been asked several recurring questions.

"I get asked, 'Well, first of all, doesn't this upset the balance that we've achieved in the past between deterrence? And what about arms control? Doesn't this contradict arms control measures?'" he said.

Obering said he reminds European officials that missile defense is part of a spectrum.

"It's part of an entire toolbox that we try to use to address the ballistic missile threat," he said. "At one end of that spectrum you have deterrence, and we believe that that is still a very viable concept.

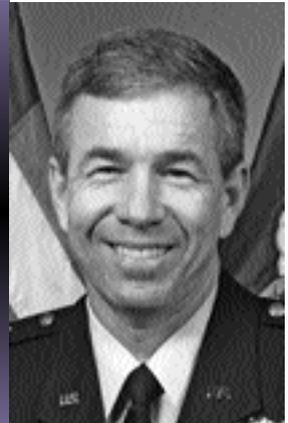
"We also believe, though, that we may come into contact with nation-states or non-state actors that are not deterrable, that are not affected by arms control measures," he continued. "And when you have warheads flying in the air, it is a moral obligation to do something about that for the population (rather) than turning around and just saying, 'Sorry, we can't do anything about that.'"

General Obering said ballistic missiles, which have proliferated for many years around the world, would be made less valuable by a global missile defense system.

"If you begin to deploy defensive capabilities to where you can negate these missiles, it begins to devalue them ... to the nations or to the organizations [that have them],

***"Missile defense is part of a spectrum ... it's part of an entire toolbox that we try to use to address the ballistic missile threat. At one end of that spectrum you have deterrence, and we believe that that is still a very viable concept."***

***--Lt. Gen. Henry A. "Trey" Obering III  
Director, Missile Defense Agency***



because we believe we can render them ineffective," he said.

Obering emphasized that missile defense weapons are "defensive assets."

"These are not offensive missiles. They do not even carry warheads. There are no explosives on these missiles," he said. "We operate on a hit-to-kill technology, which [means] we actually drive a very small kill vehicle into an enemy warhead to destroy it."

This method is effective, Obering said, because the missiles used are so small and fast, they destroy enemy warheads with kinetic energy. "In fact, the kill vehicles that we're talking about that would be placed on the interceptors in Poland are no more than about 70 to 75 kilograms," he said.

Listing the system's recent benchmarks, Obering said that since 2001, the United States has had 24 successful hit-to-kill intercepts in about 32 attempts, including about 15 consecutive successful intercepts, over roughly the past two-and-a-half years.

"We have had very good success in the past two-and-a-half years with respect to testing of this system," he said. "It is a capability that does work, and that we will rely on as we move into this 21st century."



### ARMY NEWS SERVICE (MARCH 29, 2007) **AERIAL COMMON SENSOR GETS GREEN LIGHT FROM ARMY LEADERSHIP**

*Lt. Col. Carl Ey, USA*

**W**ASHINGTON—The Army's next-generation airborne intelligence, surveillance, and reconnaissance platform has a new runway to get off the ground.

"The Army remains committed to ACS (Aerial Common Sensor) to meet current and emerging reconnaissance, surveillance, and target acquisition requirements," said Col. John Burke, deputy director, Army Aviation, Deputy Chief of Staff for Operations and Plans at the Pentagon.

The ACS is intended to detect troop movements, intercept enemy communications and radar transmissions, and communicate with other aircraft.

After terminating an \$879 million contract with Lockheed Martin for the development of the system in early 2006, the Army is returning to the drawing board to focus on system requirements.

"The prudent course of action at this time was to terminate the contract and bring the various players—industry, the acquisition and user communities, the Navy and Air Force—back to the drawing board to make sure we all have a firm understanding of what the requirements are and the various challenges we need to overcome to make this program succeed," said Claude M. Bolton, assistant secretary of the Army for Acquisition Logistics and Technology in 2006. "We are not terminating the program."

Vice Chief of Staff of the Army Gen. Richard A. Cody approved the development of an ACS blocked requirements and acquisition strategy March 16. By blocking the acquisition, the ACS capability can achieve the full system's performance by taking advantage of mature payloads early and then integrating those in development when prudent, he said.

"We didn't want to wait 10 years or more for the big bang of trying to wait for everything at once," Cody said.

An Armywide team is now assessing requirements, acquisition, and funding, and will report findings in all areas in a decision briefing next quarter.

In the next 60 days, the Army will:

- Refine the specific ACS requirements in a blocked strategy and develop an acquisition strategy to meet these requirements against the desired capability delivery timeline
- Establish an interoperability plan with the Navy's similar capability for their maritime applications
- Develop the manned-unmanned teaming concept to operations
- Conduct a mini-joint functional needs analysis
- Use all the expertise in our intelligence, aviation, and communications domains to bear against the ACS requirements.

ACS is a responsive, worldwide, self-deployable, airborne Reconnaissance, Surveillance, Targeting and Acquisition/Intelligence, Surveillance, Reconnaissance system capable of providing real-time sensor-to-shooter information.

The ACS initiative will merge and improve the capabilities of the Army's Guardrail Common Sensor and Airborne Reconnaissance Low systems into a single multi-function platform, and eventually replace those legacy airborne ISR systems.

### DEPARTMENT OF DEFENSE NEWS RELEASE (APRIL 2, 2007)

### **FISCAL 2007 NEW START AND ADDITIONAL FISCAL 2006 JOINT CAPABILITY TECHNOLOGY DEMONSTRATIONS ANNOUNCED**

**T**he Department of Defense announced the selection of seven Joint Capability Technology Demonstration (JCTD) projects for fiscal 2007 and three JCTD projects that started at the end of fiscal 2006.

Entering its second year, the JCTD business model replaces the Advanced Concept Technology Demonstration model in fiscal 2007 to rapidly move advanced technology and innovative concepts into the hands of warfighters in the field.

Building on the successful ACTD model in which new operational concepts are combined with maturing technologies in a joint environment, JCTDs focus more on tailoring projects to a combatant commander's specifically identified needs—emphasizing "needs pull" over historical "technology push."

This new program will enable faster project start-up by providing: 1) more resources earlier in the traditional two-year DoD budget cycle, and 2) a flexible start process



that facilitates urgently needed combatant command-driven capabilities throughout the fiscal year.

One key aspect of the new JCTD program is the enhanced transition planning process, which seeks to deliver enduring capabilities to the combatant commands.

The new program also will:

- Demand faster fielding of interim capabilities
- Structure funding to provide incentives for military service and agency participation without requiring the Services or agencies to fund from their existing programs
- Provide Services and agencies clear visibility in their participation of joint efforts.

### Fiscal 2007 New Starts

**Tactical Service Provider (TSP)**—Mobile, wireless, high-throughput broadband connections over long distances

**Mapping the Human Terrain (MAP-HT)**—Visualization of socio-cultural information

**Joint Multi-Mission Electro-Optical System (JMMES)**—Counter camouflage, concealment, and deception

**Smart Threads Integrated Radiation Sensors (STIRS)**—Radiation sensors for state-of-the-art maritime interdiction and battlefield radiation detection

**Maritime Automated Supertrack Enhanced Reporting (MASTER)**—Enhanced maritime tracking

**Internet Protocol Router In Space (IRIS)**—Satellite Internet resource allocation capabilities

**Coalition Mobility System (CMS)**—Rapid access to and coordination of coalition movements.

There were also three later fiscal 2006 new starts:

**Coalition Joint Spectrum Management Planning Tool (CJSMP)**—Radio frequency coordination

**Regional Maritime Awareness Capability (RMAC)**—Collaborative surface vessel location and tracking for ungoverned maritime environments

**Focused Lethal Munition (FLM)**—Collateral damage minimization using precision-guided weapon.

For more information on the ACTD/JCTD programs and project summaries, visit <[www.acq.osd.mil/jctd](http://www.acq.osd.mil/jctd)>.

## DEPARTMENT OF DEFENSE NEWS RELEASE (APRIL 9, 2007)

### DEPARTMENT OF DEFENSE RELEASES SELECTED ACQUISITION REPORTS

The Department of Defense has released details on major defense acquisition program cost, schedule, and performance changes since the September 2006 reporting period. This information is based on the Selected Acquisition Reports (SARs) submitted to the Congress for the December 2006 reporting period.

SARs summarize the latest estimates of cost, schedule, and performance status. These reports are prepared annually in conjunction with the president's budget. Subsequent quarterly exception reports are required only for those programs experiencing unit cost increases of at least 15 percent or schedule delays of at least six months. Quarterly SARs are also submitted for initial reports, final reports, and for programs that are rebaselined at major milestone decisions.

The total program cost estimates provided in the SARs include research and development, procurement, military construction, and acquisition-related operations and maintenance (except for pre-Milestone B programs, which are limited to development costs pursuant to 10 USC §2432). Total program costs reflect actual costs to date as well as future anticipated costs. All estimates include anticipated inflation allowances.

The current estimate (shown at the top of the next page) represents program acquisition costs for programs covered by SARs for the prior reporting period (September 2006) was \$1,617,710.1 million. After adding the costs for two new programs, Longbow Apache Block III and the Light Utility Helicopter (LUH) from the September 2006 reporting period, the adjusted current estimate of program acquisition costs was \$1,627,687.0 million.

For the December 2006 reporting period, there was a net cost increase of \$56,286.8 million or +3.5 percent, excluding costs for the aforementioned programs submitting initial SARs. The net cost increase was due to a net stretchout of development and procurement schedules (+\$22,644.8 million), higher program cost estimates (+\$18,888.6 million), an increase in support requirements (+\$14,381.7 million), the application of higher escalation rates (+\$6,957.0 million), additional engineering changes (hardware/software) (+\$3,188.4 million), and the impacts on LPD 17 from Hurricane Katrina (+\$1,075.6 million). These increases were partially offset by a net decrease of planned quantities to be pur-



## CURRENT ESTIMATE (\$ IN MILLIONS)

**September 2006 (87 programs) . . . . . \$1,617,710.1**

Plus two new programs  
(Longbow Apache Block III  
and LUH) . . . . . +9,976.9

**September 2006 Adjusted  
(89 programs) . . . . . \$1,627,687.0**

### Changes Since Last Report:

Economic . . . . . \$ +6,957.0  
Quantity . . . . . -7,454.6  
Schedule . . . . . +22,644.8  
Engineering . . . . . +3,188.4  
Estimating . . . . . +18,888.6  
Other . . . . . -2,319.1  
Support . . . . . +14,381.7  
Net Cost Change . . . . . \$ +56,286.8

**December 2006 (89 programs) . . . . . \$1,683,973.8**

chased (-\$7,454.6 million) and the termination of the Land Warrior program (-\$3,394.7 million). Further details of the most significant changes are summarized below by program.

There are eight programs with Nunn-McCurdy unit cost breaches to their “current” or “original” acquisition program baselines (APBs): C-130 Avionics Modernization Program (AMP), Expeditionary Fighting Vehicle (EFV), Force XXI Battle Command Brigade and Below Program (FBCB2), Guided Multiple Launch Rocket System (GMLRS), Joint Air-to-Surface Standoff Missile (JASSM), Joint Primary Aircraft Training System (JPATS), Land Warrior, and Warfighter Information Network-Tactical (WIN-T). That is, the program acquisition or average procurement unit costs for these programs have increased by 15 percent or more to their “current” APB or by 30 percent or more to their “original” APB. For those programs that have increased by 25 percent or more to their “current” APB or by 50 percent or more to their “original” APB (i.e., C-130 AMP, EFV, GMLRS, JASSM, JPATS, Land Warrior, and WIN-T), a determination of whether to certify the programs will be made no later than June 5, 2007, except Land Warrior, which will not require certification because the program was terminated.

### New SARs (As of December 2006)

The Department of Defense has submitted initial SARs for the following programs for the December 2006 re-

porting period. These reports do not represent cost growth. Baselines established on these programs will be the point from which future changes will be measured.

### Summary Explanations of Significant SAR Cost Changes As of Dec. 31, 2006

## CURRENT ESTIMATE (\$ IN MILLIONS)

### Program

DIMHRS (Defense Integrated  
Military Human Resources  
System) . . . . . \$ 805.1  
ERM (Extended Range  
Munition) . . . . . 1,478.0  
FAB-T (Family of Beyond  
Line-of-Sight Terminals) . . . . . 3,167.4  
NMT (Navy Multiband  
Terminal) . . . . . 2,133.8  
RMS (Remote Minehunting  
System) . . . . . 1,411.7  
VTUAV (Vertical Takeoff and  
Landing Tactical Unmanned  
Aerial Vehicle) . . . . . 2,100.6  
**Total . . . . . \$11,096.6**

### Army

**ARH (Armed Reconnaissance Helicopter)**—Program costs increased \$1,787.4 million (+ 49.6 percent) from \$3,602.8 million to \$5,390.2 million, due primarily to a quantity increase of 144 aircraft from 368 to 512 aircraft to support the Air National Guard combat aviation brigades (+ \$901.6 million). There were estimating allocations\* (+ \$85.0 million) as well as increased spares and support (+ \$570.3 million) associated with the quantity increase. Costs also increased due to higher estimates for production (+ \$295.7 million) and the application of revised escalation indices (+ \$41.0 million).

**FCS (Future Combat System)**—Program costs decreased \$2,698.2 million (-1.6 percent) from \$164,628.3 million to \$161,930.1 million, due primarily to the program adjustments that deferred the Class II and Class III Unmanned Aerial Vehicles (UAVs), Armed Robotic Vehicles-Assault (ARV-A), Armed Robotic Vehicles-Reconnaissance (ARV-R), and Intelligent Munition Systems (IMS) (-\$17,557.9 million). These decreases were partially offset by revised cost estimates based on a more detailed



design (+\$1,364.9 million), and a procurement stretchout from 1.5 brigade combat teams (BCTs) to 1.0 BCTs per year (+\$10,573.7 million) and associated increases in support costs (+\$3,260.7 million).

**FMTV (Family of Medium Tactical Vehicles)**—Program costs increased \$3,351.9 million (+19.2 percent) from \$17,450.1 million to \$20,802.0 million, due primarily to the addition of Long Term Armor Strategy (LTAS) A-Cab (+\$1,257.1 million) and associated LTAS installation kits (+\$1,319.1 million). There were also increased recurring costs for planned model mix changes (+\$672.8 million) and the application of revised escalation rates (+\$64.6 million). These decreases were partially offset by an acceleration of the annual procurement buy profile (-\$149.7 million).

**GMLRS (Guided Multiple Launch Rocket System)**—Program costs decreased \$9,262.2 million (-57.8 percent) from \$16,034.7 million to \$6,772.5 million, due primarily to a quantity reduction of 96,444 rockets from 140,004 to 43,560 rockets (-\$8,922.7 million) and associated schedule and estimating allocations\* (-\$1,645.2 million). These decreases were partially offset by a stretchout in the annual procurement buy profile (+\$292.7 million) and increased unit costs of the lower annual buys (+\$936.3 million).

**HIMARS (High Mobility Artillery Rocket System)**—Program costs decreased \$1,249.4 million (-37.4 percent) from \$3,338.1 million to \$2,088.7 million, due primarily to a quantity reduction of 210 launchers from 591 to 381 (-\$924.1 million) and associated schedule and estimating allocations\* (-\$448.1 million). These decreases were partially offset by higher estimates based on actuals (+\$96.7 million) and the application of revised escalation rates (+\$29.6 million).

**Land Warrior**—Program costs decreased \$3,382.8 million (-83.4 percent) from \$4,054.2 million to \$671.4 million, due to termination of the program by the Army Acquisition Executive.

**Longbow Apache**—Program costs increased \$1,629.6 million (+17.3 percent) from \$9,405.2 million to \$11,034.8 million, due primarily to a quantity increase of 29 war replacement aircraft (+\$850.0 million) and 24 Extended Block II aircraft (+\$309.5 million). As a result, the total quantity increased 53 aircraft from 613 to 666 aircraft. There were also programmatic changes in Longbow Apache requirements, such as the Modernized Target Acquisition Designation Sight/Pilot Night Vision

Sensor (MTADS/PNVS), which increased the estimated costs (+\$412.6 million).

**Longbow Apache Block III**—Program costs increased \$896.5 million (+11.1 percent) from \$8,093.9 million to \$8,990.4 million, due primarily to a quantity increase of 37 aircraft from 602 to 639 aircraft (+\$395.5 million). There were also increases in software maintenance and system engineering/program management costs due to the increase in aircraft quantity and a stretchout of procurement profile (+\$353.0 million).

**Stryker**—Program costs increased by \$1,770.1 million (+15.6 percent) from \$11,360.8 million to \$13,130.9 million, due primarily to a quantity increase of 256 vehicles from 2,641 to 2,897 vehicles (+\$1,058.9 million) and associated spares and support (+\$254.2 million). There were also increases from an extension of the procurement schedule from fiscal year 2011 to fiscal year 2012 (+\$213.8 million), and the addition of development effort for the mast-mounted sensor, active protection systems, and mobile gun system environmental control (+\$236.9 million). These increases were partially offset by a change in the mix of models to be procured (-\$357.1 million).

**WIN-T (Warfighter Information Network-Tactical)**—Program costs increased by \$2,190.9 million (+15.5 percent) from \$14,170.5 million to \$16,361.4 million, due primarily to an increase in communications equipment to procure for the Total Army (+\$1,517.9 million). Costs also increased due to a refinement of the estimate for recurring engineering (+\$559.4 million), an increase in flyaway cost to account for technology changes during the procurement schedule (+\$417.5 million), and an increase in fielding and initial spares (+\$386.6 million). These increases were partially offset by a decrease due to the removal of Joint Tactical Radio System (JTRS) equipment (-\$482.0 million) and a reduction in technical refresh and post deployment sustainment and support (-\$483.1 million).

### Navy

**ADS (Advanced Deployable System)**—Program costs decreased \$883.8 million (-62.6 percent) from \$1,412.6 million to \$528.8 million, due to termination of the program by the Navy Acquisition Executive in October 2006.

**E-2D AHE (Advanced Hawkeye)**—Program costs increased by \$1,765.5 million (+11.2 percent) from \$15,721.5 million to \$17,487.0 million, due primarily to higher Mission Electronics, general procurement, and



mission systems pricing (+ \$653.7 million), a stretchout of the annual buy profile in fiscal year 2009-2020 (+ \$374.8 million), and additional pilot production funding (+ \$169.0 million). There were also increases for the addition of the automatic identification system, dual transit satellite communication, and in-flight refueling requirements (+ \$137.1 million), a revised estimate to reflect new pricing for the system development and demonstration contract (+ \$234.3 million), and increases in initial spares, peculiar support equipment and training, and other production support costs (+ \$159.1 million).

**F/A-18E/F**—Program costs increased by \$2,358.3 million (+ 5.4 percent) from \$44,030.5 million to \$46,388.8 million, due primarily to the increase of 32 aircraft from 462 to 494 aircraft (+ \$1,716.0 million) and associated schedule, engineering, and estimating allocations\* (+ \$334.1 million). There were also increases in support costs related to the higher quantity (+ \$446.5 million).

**LCS (Littoral Combat Ship)**—Program costs increased \$237.0 million (+ 13.9 percent) from \$1,701.9 million to \$1,938.9 million, due primarily to longer than expected development time for Flight 0 and the postponement of Flight 1 (+ \$162.2 million). There was also additional scope for Mission Module development and Flight 0 training and testing (+ \$73.0 million) and sea frame pricing increases (+ \$25.9 million).

**LPD 17**—Program costs increased by \$1,107.4 million (+ 8.9 percent) from \$12,486.6 million to \$13,594.0 million, due primarily to the addition of Hurricane Katrina Supplemental funding (+ \$1,155.4 million).

**SSN 774 (Virginia Class)**—Program costs decreased by \$2,813.5 million (-2.9 percent) from \$95,821.7 million to \$93,008.2 million, due primarily to a lower estimate for labor, materials, rates, and profit (-\$1,971.1 million). Cost estimates also decreased for the technology insertion of the advanced sail program (-\$541.8 million) and a reduced estimate of plans, change orders, hull, and mechanical/electrical changes (-\$549.2 million).

**V-22**—Program costs increased \$4,139.7 million (+ 8.2 percent) from \$50,497.1 million to \$54,636.8 million, due primarily to revised airframe and engine costing methodologies (+ \$3,147.9 million), and a stretchout of the annual buy profile (+ \$218.8 million). There was also additional schedule variance for manufacturing inefficiencies, outyear labor rates, and sustaining work impacts from delaying 22 MV-22 aircraft beyond fiscal year

2013 (+ \$538.4 million) and the application of revised escalation rates (+ \$283.6 million).

### Air Force

**AMRAAM (Advanced Medium Range Air-to-Air Missile)**—Program costs increased \$1,603.2 million (+ 12.2 percent) from \$13,188.7 million to \$14,791.9 million, due primarily to lower-than-expected Foreign Military Sales (FMS) projections (+ \$557.9 million) and an acquisition strategy pricing change (+ \$859.2 million). There were also increases related to a stretchout of the annual procurement buy profile (+ \$93.7 million), additional special tooling and test equipment (+ \$54.8 million), and an overrun in the AIM-120D (Phase 4) system development and demonstration contract (+ \$32.7 million).

**C-5 AMP (Avionics Modernization Program)**—Program costs increased \$551.2 million (+ 64.1 percent) from \$859.3 million to \$1,410.5 million, due primarily to a quantity increase of 51 kits from 59 to 110 (+ \$291.4 million), and associated increases in initial spares, peculiar support equipment, and other weapon system costs (+ 229.1 million).

**C-17A**—Program costs increased by \$2,909.9 million (+ 4.9 percent) from \$59,552.7 million to \$62,462.6 million, due primarily to an increase of 10 aircraft from 180 to 190 aircraft (+ \$2,093.9 million) and revised peculiar support estimates (+ \$618.5 million). There were also Congressional adds in support of the global war on terrorism (GWOT) (+ \$227.5 million), higher estimates for continuing development (+ \$126.0 million), and an extension of the development program out to fiscal year 2012-2013 (+ \$450.1 million). These increases were partially offset by revised project estimates and Air Mobility Command priorities (-\$364.0 million) and a revised production shutdown estimate (-\$271.2 million).

**C-130 AMP (Avionics Modernization Program)**—Program costs increased \$1,047.8 million (+ 21.2 percent) from \$4,933.2 million to \$5,981.0 million, due primarily to increases in labor rates and install hours (+ \$691.4 million) and increases in mission support equipment, simulator/trainers, depot costs, and other weapon system costs (data, peculiar support equipment, interim contractor support and training (+ 810.5 million). These increases were partially offset by a quantity decrease of 166 aircraft from 434 to 268 aircraft (-\$560.6 million).

**EELV (Evolved Expendable Launch Vehicle)**—Program costs increased \$3,825.9 million (+ 12.0 percent) from



\$31,903.0 million to \$35,728.9 million, due primarily to increased costs for Buy 3 Launch Services (+\$3,943.5 million) and Launch Capabilities contracts (+\$298.4 million). There were also increases for the application of revised escalation rates (+\$214.5 million) and an adjustment to the annual mission procurement buy profile (+\$55.0 million). These net increases were partially offset by budget reductions (-\$365.4 million) and estimating adjustments (-\$319.7 million).

**F-22A**—Program costs increased \$2,692.7 million (+4.3 percent) from \$62,600.0 million to \$65,292.7 million, due primarily to a revised estimate for the replan of Increments 3.1 and 3.2 (+\$1,987.1 million), the additional of funding for the first year of multiyear procurement (+\$1,416.5 million), an increase in peculiar support for two operating locations (+\$311.1 million), and the application of revised escalation indices (+\$197.1 million). These increases were partially offset by reductions in development funding for the modernization program (-\$110.0 million), revised estimates for the second and third years of multiyear procurement (-\$980.6 million), and an acceleration of the annual procurement buy profile from a four-year to a three-year schedule (-\$161.1 million).

**GBS (Global Broadcast Service)**—Program costs increased \$111.3 million (+15.0 percent) from \$744.0 million to \$855.3 million, due primarily to a new GBS Simplified Robust Architecture (SRA) that will address broadcast shortfalls. The SRA upgrade is scheduled for implementation in fiscal year 2008-2010. Beginning in fiscal year 2008, the SRA upgrade will develop custom software, procure commercial hardware/software, integrate into the Defense Enterprise Computing Centers (DECCs), integrate Joint Internet Protocol Modem (JIPM) hubs into two Ultra-high Frequency Follow-on (UFO) uplink sites, establish JIPM upgrade kits for receive suites, transition to DoD teleports as required for wideband gap-filler satellite (WGS) broadcasts, and perform developmental/operational tests leading to follow-on operational test and evaluation events.

**JASSM (Joint Air-to-Surface Standoff Missile)**—Program costs increased by \$882.3 million (+18.0 percent) from \$4,914.0 million to \$5,796.3 million, due primarily to engineering increases for JASSM extended range, weapon data link, and maritime interdiction (+\$133.9 million), implementation of a robust reliability improvement program (+\$599.8 million), and stretchout of the annual buy profile (+\$79.7 million).

**MP-RTIP (Multi-Platform Radar Technology Insertion Program)**—Program costs decreased by \$321.7 million (-20.6 percent) from \$1,559.7 million to \$1,238.0 million, due primarily to the termination of MP-RTIP Wide Area Surveillance (WAS) radar development efforts associated with the E-10A technology development program (-\$351.0 million).

**NPOESS (National Polar-Orbiting Operational Environmental Satellite System)**—Program costs decreased by \$2,649.6 million (-19.2 percent) from \$13,810.2 million to \$11,160.6 million, due primarily to the decisions made as a result of a Nunn-McCurdy certification process that concluded in June 2006. The findings and recommendations coming out of the Nunn-McCurdy certification resulted in significant changes to the satellite procurement quantity, launch dates, sensor payloads, and funding. The Conical Scanning Microwave Imager/Sounder (CMIS) and seven other sensors were demanifested from the program (-\$570.6 million), the development baseline program was restructured (-\$506.2 million), the quantity of procurement satellites was reduced from 4 to 2 (-\$594.5 million), the procurement baseline program was restructured (-\$772.2 million), and the procurement costs were reduced due to the demanifestation of the sensors (-\$292.1 million).

### DoD

**BMDS (Ballistic Missile Defense System)**—Program costs increased by \$17,377.4 million (+20.2 percent) from \$85,910.7 million to \$103,288.1 million, due primarily to the addition of fiscal year 2012 and fiscal year 2013 funding (+\$19,350.1 million), increases in Terminal High Altitude Area Defense program content (+\$1,036.0 million), restructure of the Sea-Based Terminal program (+\$860.4 million), additional sensors to support a proposed European site (+\$2,489.3 million), and revised escalation indices (+\$727.6 million). These increases were partially offset by delaying the Space Tracking and Surveillance System beyond fiscal year 2013 (-\$1,472.3 million), restructuring the Kinetic Energy Interceptor program (-\$3,396.5 million), and program-wide reductions (-\$2,304.4 million).

**F-35 (Joint Strike Fighter)**—Program costs increased by \$23,365.2 million (+8.5 percent) from \$276,458.9 million to \$299,824.1 million, due primarily to a decrease in the annual procurement quantities and a stretchout of the production buy schedule from fiscal year 2027 to fiscal year 2034 (+\$11,207.8 million), revised estimate for airframe materials due to commodity market increases (+\$5,472.8 million), increase due to revised as-



assumptions based on contractor LRIP I proposals and methodology (+ \$8,307.1 million), and support increase due to aircraft configuration update, revised procurement profile, and methodology changes (+ \$6,423.2 million). These increases were partially offset by revised assumptions for prime and subcontractor labor rates (- \$3,576.3 million) and revised assumptions for subcontractor costs (-\$5,201.4 million).

**JTRS (Joint Tactical Radio System) Waveform**—Program costs increased \$317.5 million (+ 17.8 percent) from \$1,786.6 million to \$2,104.1 million, due primarily to revised estimate for Network Engineering Services (NES) (+ \$241.0 million) and fiscal year 2008 President's Budget updates (+ \$65.7 million).

\* Note: Quantity changes are estimated based on the original SAR baseline cost-quantity relationship. Cost changes since the original baseline are separately categorized as schedule, engineering, or estimating "allocations." The total impact of a quantity change is the identified "quantity" change plus all associated "allocations."

### ARMY NEWS SERVICE (APRIL 2, 2007) **ARMY TO FIELD IMPROVED BODY ARMOR**

*Debi Dawson*

**F**ORT BELVOIR, Va.—The Army continues to upgrade body armor to increase protection from bullets and fragments, and soon will field the Improved Outer Tactical Vest to soldiers deploying to Iraq and Afghanistan.

The IOTV meets Program Executive Office Soldier's goals of providing soldiers with the most advanced protective gear available while also improving comfort and mission effectiveness.

"The IOTV is more than three pounds lighter than the current OTV, but provides an equal level of protection over an increased area," said Brig. Gen. R. Mark Brown, Program Executive Officer Soldier. "This vest epitomizes our continuous efforts to seek the next improvement and to provide our soldiers the best body armor available, bar none. It is live-fire tested—we know it will prove itself in combat."

"The weight of the IOTV was reduced by eliminating overlap," said Maj. Carl Fulmore, assistant product manager for Soldier Survivability. "With the IOTV, we were able to streamline previous improvements."

For example, the vest now has a higher cut in the underarm area, which will eliminate the need to attach the axillary or underarm protector to the current deltoid axillary protector set. The deltoid protector can still be attached at the commander's discretion. The vest's integrated throat protector provides the same protection as the current attachable version, but it's designed to be more comfortable. The now integrated side plate carriers decrease the vest's profile, and a lower back protector extends the vest's coverage by 52 square inches.

The IOTV's numerous improvements go beyond increased protection. A single-stage quick release added to the front of the vest allows a soldier to doff the IOTV and its attachments with one pull. The vest then falls to the ground in two pieces and can be put back together in minutes. "This feature would be used by soldiers in emergency situations only, such as being trapped in an overturned or submerged vehicle. It's not meant to simply be a quick way to get out of the IOTV at the end of the day or mission," Fulmore said.

Medics could use the quick release to treat wounded soldiers, or they could use an opening on the left shoulder, which allows easy access while still providing protection to the patient.

Comfort and utility features are also part of the improved design. The most notable may be the IOTV's overhead opening. An internal waistband provides a snug fit and moves much of the weight from the shoulders to the waist.

"This design significantly decreased the vest's profile and should increase mobility. We believe mobility equals survivability," Fulmore said.

Other features include:

- The addition of a long variant to sizes medium through extra large. This extends the size range from eight to 11 and should result in a near-custom fit for soldiers.
- Additional modular lightweight load-carrying equipment attachments as a result of moving the opening from the front of the vest. These attachments are now in the universal camouflage pattern.
- Enhanced small arms ballistic insert pockets with four inches of vertical adjustability, which will allow for better placement of the plates based on individual body proportions.
- Additional storage pockets.
- A mesh lining to aid ventilation.
- Vertical adjustability of side plate carriers.



Soldiers will continue to use the enhanced small arms protective inserts and the enhanced side ballistic inserts.

The IOTV is a result of research and development that began with a body armor industry day in the spring of 2006. Seventeen vendors came forward with designs for improved body armor, and six were selected to provide prototypes for a user evaluation conducted in January and February this year. The vest was then tested by soldiers at Fort Lewis, Wash.

*Dawson writes for Program Executive Office Soldier Strategic Communications Office.*

### ARMY NEWS RELEASE (APRIL 4, 2007) **PICATINNY DESIGNS LATEST ADVANCEMENT IN GUNNER PROTECTION**

*Picatinny Arsenal Public Affairs Office*

**P**ICATINNY ARSENAL, N.J.—The Armament Research, Development and Engineering Center at Picatinny has designed a new armor shield that provides much needed protection for Humvee gunners in combat situations.

The Picatinny Objective Gunner Protection Kit was a joint development by Picatinny engineers and soldiers recently returned from active duty in Iraq. With more than 2,500 of the systems already being used in theater, the O-GPK is currently in mass production at Army depots and field-ready kits are arriving in Iraq and Afghanistan on a weekly basis.

“The O-GPK provides significant force protection and situational awareness for the Humvee gunner,” said Thomas Kiel, lead designer of the O-GPK. “The system includes a combination of steel and transparent armor that is configured to protect our soldiers against enemy rifle fire and IED blasts.”

The O-GPK includes transparent armor windows and rear-view mirrors that allow soldiers to maintain a protected posture while performing mission objectives with full visibility through the windows. The kit is modular and utilizes the existing features of Humvee design for quick installation onto the overhead turret with no special tools required.

In just six months, the system was transformed from conceptual design models to full-scale production—an effort that would historically take more than a year to complete for a program of this magnitude.

The kit consists of the turret shield, gun shield, and everything needed to mount the shield to a Humvee. All the elements are shipped overseas as a kit where they are assembled in theater.

“The O-GPK is a tremendous improvement over previous shields used in theater,” said Maj. Antonio Ralph, who led the user evaluation effort for the O-GPK. “Picatinny’s extensive background in weapons development allowed for proper integration of the systems that our soldiers need to fight effectively.”

Early in the development cycle, four prototype systems fabricated at Picatinny were evaluated by soldiers performing live missions in Iraq.

“The feedback from soldiers in theater was critical in finalizing the design and kicking off production,” said Ralph.

The ARDEC design enables the use of modern production equipment including laser cutting, robotic welding, automated forming and finishing operations, which results in virtually unprecedented production rates, said Kiel. ARDEC has fully documented the design and processing methods for each component to maximize production rates and minimize manufacturing and logistics costs.

“Advances in manufacturing science research at Picatinny have allowed us to develop affordable and efficient production processes for armor components,” Kiel said. “Now that the O-GPK design is complete, the goal is simple—to produce large numbers of kits very quickly and send these to our soldiers as soon as possible.”

Rock Island Arsenal, located in Illinois, leads the production effort and will produce 7,500 kits by this July and 20,000 by 2008.

“The O-GPK has already saved lives in Iraq,” Kiel said. “The engineers and scientists at Picatinny are very proud to be supporting the men and women that ensure our freedom at home.”

Other recent developments by the Picatinny Force Protection Team include a new customized Special Forces Gunner Protection Kit for Humvees and the Picatinny Blast Shield, which is now being used by the Marine Corps on their Light Armored Vehicles.