

DoD Makes Strides in Wartime Contracting, Officials Say

AMERICAN FORCES PRESS SERVICE (OCT. 20, 2011)

Jim Garamone

WASHINGTON—The Defense Department has made tremendous strides in executing and managing contracts in war zones and will continue to build on the work of the Commission on Wartime Contracting in Afghanistan and Iraq, the acting under secretary of defense for acquisition, technology and logistics said here yesterday.

Frank Kendall and Air Force Lt. Gen. Brooks L. Bash, the Joint Staff's director of logistics, testified before a subcommittee of the Senate Armed Services Committee. Both officials told the subcommittee that contractors have become an integral part of operations in wartime, and discussed the commission's final report.

"The department has been working closely with the commission since its inception in 2008, and we appreciate and welcome its efforts to assist the department in eliminating waste, fraud, and abuse in wartime contracting," Kendall said.

The department has worked closely with the commission, which made 82 recommendations for streamlining contracting and putting controls in place, Kendall said. DoD is implementing most of the commission's recommendations and is studying the final 15 recommendations included in the final report, he added.

"For the new strategic recommendations, the department is currently completing its analysis," he said. "In broad terms, however, we agree in principle with the overarching precepts driving the commission's final report recommendations."

An example is the commission's recommendation for the department to use risk factors in deciding whether to contract out certain services during contingency operations.

"We agree on the importance of risk-based assessments, and the department has already taken some steps in this direction," Kendall said. In Afghanistan, the commander already is on board and includes risk as part of the decision process for undertaking projects, he told the panel.

Another recommendation calls for DoD to develop deployable cadres for acquisition management and contractor oversight. The Army has already begun this with the Expeditionary Contracting Command, Kendall said.

The commission also calls for reducing the use of private security contractors in Afghanistan.

"In Afghanistan, ... we are implementing the recommendation," Kendall said. "A plan is in development to transition selected private security contractor contracts to an Afghan public protection force. As the capability and size of this force mature, certain security functions will transition."

Other recommendations call for strengthening oversight rules to ensure U.S. money doesn't go to firms that trade with the enemy. Another recommendation calls for adequate staffing and resources in establishing procedures to protect the government's interest.

"We have already implemented several improvements in this area," Kendall said. "We have strengthened our ability to withhold payments to contractors with inadequate business systems as a means to protect U.S. government interests."

DoD uses contract support to operations to provide a number of important capabilities, from fuel delivery to food service, Bash said in his testimony.

"We have come to leverage contracting as an important force multiplier to overcome fiscal, political, and cultural realities," he said, noting that contracting "is an important and necessary capability for our forces."

The Joint Staff, Bash said, has led a variety of efforts to "institutionalize this critical capability to ensure that when we go to war in the future, we are better prepared to execute effectively and efficiently, and, most importantly, to provide the best possible support to the warfighter at a reasonable cost."

Officials Outline Pentagon's Support to Industrial Base

AMERICAN FORCES PRESS SERVICE (NOV. 2, 2011)

Karen Parrish

WASHINGTON, Nov. 2, 2011 - The Defense Department's role in sustaining its industrial base is as complex as the base itself, a senior defense official told Congress yesterday. Testifying before the defense industry panel of the House Armed Services Committee, Brett Lambert, deputy assistant secretary of defense for manufacturing and industrial base policy, said the defense industrial base is not a monolithic entity.

It includes companies of all shapes and sizes, from garage start-ups to some of the world's largest public companies, he noted. The vast majority of those companies act as suppli-

ers, and only a few deal directly with the federal government, Lambert added.

"Companies at any tier and at any size may offer critical or hard-to-produce products that ultimately lead to the systems used by our warfighters," he said.

Lambert said the challenge for defense officials is analyzing the mass of companies that provide goods and services to the military. As defense budgets grow leaner, the nation's military superiority can be maintained only if key elements of the industrial base are sustained, matured, and nurtured, he added.

"For decades, the U.S. has commanded a decisive lead in the quality of the defense-related research and engineering conducted globally, and in the military capabilities and products that flow from this work," he said.

That advantage is not a birthright, Lambert told the panel. "In the high-budget environments of the past, many companies have grown to expect high [profit] margins, independent of quality," he said. "As budgets shrink, this practice must end. As the budget environment changes, we do expect some niche firms to face difficulty due to decreased demand."

Those niche firms may be suppliers to prime contractors and may not be readily apparent to defense program managers, who typically have "soda-straw visibility" of projects, he explained.

"We do need greater insight. ... We need better data at that second- or third-tier level," he acknowledged.

DoD officials are working to map and assess the industrial base tier by tier and sector by sector so they can identify "fragility" in the industrial base before critical capabilities are lost, Lambert explained.

Defense officials also are increasing industry outreach efforts, investing in research and development programs and pursuing purchasing strategies that diversify acquisitions across multiple companies, rather than relying on single providers, he said.

"Our commitment to working with industry, however, does not mean the department should underwrite sunset industries or prop up poor business models," Lambert noted. "It does mean the department will create an environment in which our vital industrial capabilities, a foundation of our

strength, can thrive and continue to provide our warfighters with the best systems available at a reasonable cost."

Andre Gudger, director of DoD's Office of Small Business Programs, also testified before the panel on the department's initiatives to expand defense market opportunities for small businesses.

His office manages three programs aimed at fostering small business opportunities, Gudger said: the mentor-protégé program, which gives small businesses one-time help from a larger company to develop future capability; the small-business research and technology transfer program, under which DoD funds technology and services development to meet urgent department needs; and the Indian incentive program, which authorizes contracting officers to make 5 percent incentive payments to Native American-owned subcontractors.

Gudger said his office also has changed acquisition regulations to speed payments to small businesses.

"We recognize access to capital [is] a challenge for most small businesses," he explained. "This put billions of dollars into small-business pockets ... to allow them to hire workers, expand their capabilities, and look for ways to participate in new contracting opportunities more rapidly."

Gudger said the continuing resolutions that have funded federal spending since September 2010, along with uncertainty over the depth of future defense budget cuts, have hindered opportunities for small businesses.

"With the amount of uncertainty, small businesses tend to not invest and make key hires for the future," he noted.

DoD Monitors Supply System to Prevent Counterfeit Parts

AMERICAN FORCES PRESS SERVICE (NOV. 9, 2011)

WASHINGTON—The Defense Department is taking added steps to ensure that its equipment and supply chains contain no counterfeit parts, officials said.

The department has a quality assurance process that identifies material that doesn't conform to standards and determines the authenticity of parts, DoD officials said in a report released today.

When counterfeit parts are identified, the department works with law enforcement investigations that sometimes result in actions against companies and counterfeiters. Professional organizations such as the Aerospace Industry Association

and the Society of Automotive Engineers have anti-counterfeiting standards and groups that work with the department, the DoD report says.

The department's release came after a Senate Armed Services Committee hearing yesterday inquired about counterfeit parts at the U.S. Missile Defense Agency. The agency's director, Army Lt. Gen. Patrick J. O'Reilly, told the committee that counterfeit parts are a big concern because they reduce reliability in a technically complex system.

Some parts may be used and resold as new, O'Reilly said. Others might be labeled as military-compliant when they're really just commercial versions of the part that don't meet rigorous DoD standards. And because counterfeiters are becoming increasingly sophisticated, counterfeit electronic parts might even disable or steal critical information from the systems in which they're embedded, he said.

A Defense Department spokesman, Navy Capt. John Kirby, was asked about counterfeit parts during a meeting with Pentagon reporters after the hearing.

"I think the best description for what we are talking about in this case are typically used, discarded parts that are then refurbished," Kirby said.

"This is an issue we take very seriously," DoD Press Secretary George Little said at the same meeting. "We have detected in the supply chain some counterfeit parts, but I would emphasize that there has been no loss of life or catastrophic mission failure as a result of these parts entering the supply chain."

To ensure against counterfeit parts, the department is implementing recommendations by the Government Accountability Office that include policy modifications, internal process improvements, and collaboration with industry, the DoD report says.

Pentagon Office to Coordinate New Air-Sea Strategy

AMERICAN FORCES PRESS SERVICE (NOV. 10, 2011)

Jim Garamone

WASHINGTON—A new Pentagon office will coordinate efforts to counter an emerging threat to the global commons, officials announced yesterday.

The new Air-Sea Strategy Office will counter the anti-access/area denial threat. New technologies and capabilities make this threat far more potent than in the past, and advances will likely make it more of a danger, said an official speaking on background.

The office grew out of the 2009 Quadrennial Defense Review and seeks to build forces that can navigate in the global commons and operate in an area of denial environment.

The global commons comprise the geographic and virtual realms of space, international waters and airspace, and cyberspace, according to the Defense Department. These are areas that are accessible to all but owned by none.

Nations and regional/non-state actors have been developing, proliferating, and acquiring emerging modern military capabilities and technologies. These capabilities include precision fires, increasingly accurate long-range missiles, expanded electronic warfare capabilities, and the whole notion of cyberwar.

Submarines, integrated air and missile defense systems, expanded capabilities for surface warships, and more capable and stealthy aircraft all combine into the anti-access/area denial threat.

"All of these things combined together could be used to create challenges to access and challenges to ... keep you out of an area or make it very difficult for you to maneuver within an area," the official said.

The American goal is to maintain access and to continue the ability to operate in these areas, the official said. "That environment demands that U.S. forces be able to turn quickly from a defensive posture to one of offensive posture—not to turn and leave an area, but to stay in place and to continue to operate within an area of the global commons and not to be pushed out," the official said.

The office will deal with all warfighting domains: The typical one of land, sea, and air; and the more nontraditional, but increasingly important, domains of space and cyber.

"We cannot cede a single domain in order to prevail," the officials said.

The threat will require the Services to work more closely together, and joint training and doctrine will play in this. "So it's not just that I'm training Navy how to act in this environment," an official said. "I'm training Navy how to know what to get from this colleague and from this colleague so that we can collectively ... fight."

This will mean being joint in the sense of collaborating together.

This is not going to be a tough mountain to climb for American servicemembers. Soldiers, sailors, airmen, and Marines have been fighting counterinsurgency campaigns in Iraq and Afghanistan for a decade now. They are used to working together. They are used to using capabilities from a different Service.

The Navy, Air Force, and Marines are currently the main players in the office, but the Army is joining soon. The officials see the office and the air-sea battle concept acting as a focusing lens.

“Absent the air-sea battle, our Services would still be spending on A2/AD capability,” one official said. “But with the focusing lens of air-sea battle and understanding how to operate in an environment such as that, we can make smarter decisions.”

Understanding the problem will help eliminate redundancy and allow the military to field shared, sustained advancements. “That’s what we’re seeking so that we can man, train, and equip the right types of forces able to succeed in the A2/AD environment, and ultimately ensure freedom of access in the global commons,” the official said.

Logistical Drawdown Progresses Smoothly in Iraq

AMERICAN FORCES PRESS SERVICE (NOV. 14, 2011)

Donna Miles

WASHINGTON—The logistical drawdown in Iraq is progressing well and on track to meet the Dec. 31 deadline, the commander of the unit that oversaw the mission since January reported as he and his soldiers prepared to return home early this week.

Army Col. Stephen Falcone, commander of the Army Reserve’s 77th Sustainment Brigade, said his troops faced tough demands in Iraq as they supported two seemingly opposite requirements: keeping troops on the ground supplied while orchestrating the United States’ largest logistical drawdown since World War II.

“It’s been a big balancing act,” Falcone told American Forces Press Service from Camp Virginia, Kuwait, as he and his soldiers awaited their flight home to Joint Base McGuire-Dix-Lakehurst, N.J. “And it’s something we’ve had to focus on every day to make sure we give [troops on the ground] just enough, but not too much.”

So as convoys arrived at bases throughout Iraq delivering food, water, fuel, ammunition, and other staples, Falcone and his soldiers ensured they left filled to the brimming

point with equipment destined for Kuwait and, ultimately, the United States.

The 77th Sustainment Brigade was among the last units to deploy to Iraq as the United States began the process of handing over operations to Iraqi forces and other U.S. agencies. Its 300 soldiers arrived in January to serve as the headquarters element for an additional 3,500 soldiers and airmen assigned to put the logistical plan into action.

During their deployment, they ran more than 1,700 convoys, traveled more than 4.2 million miles, issued more than 120 million gallons of fuel, moved out 2,700 tons of ammunition, and transported 20 million pounds of incoming and outgoing mail, Falcone reported.

As they closed warehouses and scaled back support operations, they transitioned more than \$238 million in equipment, repair parts, and other supplies to the Defense Department inventory, he said.

Good planning, hard work, and favorable weather came together to move the transition of bases to Iraqi government control on or ahead of schedule, Falcone said. He noted that three of the largest bases transitioned earlier than planned, including the most recent, Joint Base Balad, which was transferred to the Iraqis three weeks ahead of schedule.

“We have done an orderly and responsible progression of how we transferred those bases,” Falcone said, giving some welcome breathing room in the schedule to complete the process by the year’s end.

As daunting as the logistical drawdown may be, Falcone said it is complicated by the fact that U.S. forces remaining on the ground for the duration of Operation New Dawn still require beans, bullets, and other essentials.

Falcone said he didn’t want them “living in tents and eating [Meals, Ready to Eat] every day,” and took pains to provide them the best quality of life for as long as possible while still adhering to the drawdown schedule.

As bases prepared to close and contractors who had been assigned to them returned home, military members stepped up to conduct missions the contractors had done. They took over the dining facilities, laundry, and other services.

In some cases, they cross-trained into other jobs to keep vital services flowing. Falcone’s water purification specialists, for example, served as fuel handlers as well. Other service-

members volunteered to become crane operators, positions contractors had held.

"The good part is that they stepped up to the plate and did a fantastic job," Falcone said. "We had absolutely no problems."

Falcone called the evolution taking place in Iraq a throwback to the earliest days of Operation Iraqi Freedom, or "OIF in reverse."

"When we first went into Iraq in 2003, it was kind of an austere environment," he said. "And as we transfer those bases over, we go back to that austere environment for the soldiers."

Falcone acknowledged that in the weeks leading up to Dec. 31, conditions will become increasingly austere as the last U.S. forces in Iraq wind down their operations.

With the 77th Sustainment Brigade now redeploying, the active component 4th Sustainment Brigade from Fort Hood, Texas, will oversee the completion of the mission.

Many of the 77th Brigade soldiers elected to extend their deployments to join the 4th Brigade in seeing the mission to completion, he said.

Together, "they are going to do it the right way, they are going to do it on time and, more than likely, ahead of time; and then they are going to go home," he said.

Unlike past rotations in Iraq, no replacement unit will be arriving to take their places. "This is the first time when there is no unit following us," Falcone said. "So when we leave, the job we were asked to do is done. It's not left to someone else to finish up."

Falcone said his soldiers are excited about their role in the historic drawdown mission in Iraq. "They've gone a yeoman's job, working very long hours conducting the largest retrograde operation since World War II," he said.

"I tell them that when they go home, they need to be proud of what they have done here, to stick their chests out farther and to hold their heads high," he said. "They need to walk down the streets of America knowing they have truly ended this operation the way it should have been ended. They did a great job, and they did everything the country asked them to do."

Panetta: Future Rests on Partnerships, Modernization

AMERICAN FORCES PRESS SERVICE (NOV. 18, 2011)

John D. Banusiewicz

HALIFAX, Nova Scotia—Partnerships and modernization hold the key to meeting the challenges facing the United States and its allies as they near a turning point after a decade of war and adapt to new challenges and priorities, Defense Secretary Leon E. Panetta said here today.

In a speech at the Halifax International Security Forum, the secretary said the alliance system remains the bedrock of the U.S. approach to world security and is "an enduring advantage and force multiplier that no rival possesses."

"As we in the United States confront the fiscal realities of limited resources, we believe that we have the opportunity to establish a force for the future that, while smaller, is agile, flexible, deployable, and technologically equipped to confront the threats of the future," he said. "It must be complemented by a full range of America's national security capabilities: strong intelligence, strong diplomacy, a strong economy, strong technology, developments in cyber capabilities—using that great experience we gained from 10 years of war to be innovative, to be creative about the kind of force that we need for the future.

"But it must also be complemented by strong alliances, partnerships, [and] regional efforts at cooperation—all have to be part of the answer," he added.

The U.S. military alone, Panetta said, cannot be all things to all nations.

"We will maintain our excellence. We will maintain our leadership," he said. "But in the effort to maintain our excellence and our leadership, we also have to meet our security commitments around the world. And in doing that, we must—and we will—sharpen the application of our resources, better deploy our forces in the world, and share our burdens more and more effectively with our partners. And frankly, all of our allies need to do the same."

Terrorism, nuclear proliferation, cyber attacks, and other threats facing the world do not recognize national boundaries and can't be addressed effectively by any one nation alone, Panetta said.

"Such transnational threats demand a shared response," he said. "That's why I have made it a priority to build and maintain partnerships across the globe. It's a theme I reiterated extensively during the international travel that I made last month in Europe, in Asia, and in the Middle East. It has thus

loomed large in our strategic review of the Department of Defense. This review is an effort not only to grapple with new budgetary realities, but also to adapt the force to better confront current and future security challenges.”

No global alliance has been more successful than NATO, the secretary said, crediting that success to decades of investment in capabilities and joint training and the determination of leaders in the trans-Atlantic community. Revitalizing NATO, he added, is a centerpiece of President Barack Obama’s administration’s efforts to build stronger alliances and partnerships. He noted that NATO has expanded from being an alliance geared toward collective territorial defense to take on expeditionary operations outside its area.

“We have seen the payoff in Afghanistan,” he said, “where 49 countries have come together largely under a NATO umbrella, expending both blood and treasure to prevent al-Qaida from ever again being able to use Afghanistan as a safe haven. To all our [International Security Assistance Force] partners, we are profoundly grateful for your sacrifice and for your steadfast partnership.”

Panetta praised Canada in particular for its decade of contributions in Afghanistan, noting that Canadian soldiers fought in the Taliban heartland of Kandahar province, and he also praised Canada for its leadership in NATO’s recent success in Libya.

As it works to help in forging a stronger NATO, the United States will continue to play a decisive role in safeguarding its partners’ shared interests, Panetta said. Part of doing so, he added, is enabling allies and partners to contribute their share to the common defense.

“To do that, however, the alliance needs to develop new capabilities to keep pace with emerging threats—even in an era of fiscal austerity,” the secretary said. “As I said [at a NATO defense ministers conference] in Brussels last month, these challenging economic times cannot be an excuse for walking away from our security responsibilities. I refuse to believe that we have to choose between fiscal responsibility and national defense. Instead, we must commit to ensuring NATO addresses key shortfalls in areas such as intelligence, surveillance, and reconnaissance; precision strike munitions; and aerial refueling and lift capabilities.”

NATO Secretary General Anders Fogh Rasmussen’s “Smart Defense” initiative provides a framework for allied nations to pool their declining defense funds more efficiently and effectively, Panetta said, adding that the alliance plans to

make more progress in that regard at its upcoming summit in Chicago.

Modernizing NATO also means ensuring that investments focus on the most likely future threats, particularly those posed by countries like Iran that are developing intermediate-range missiles capable of targeting Europe. The United States has been leading the way in NATO’s missile defense efforts, most recently by announcing it will deploy four Aegis ships to the Mediterranean Sea, the secretary said. Missile defense, he added, also presents an opportunity for NATO and Russia to cooperate in dealing with threats emanating from the Middle East.

But while missile defense is a tangible sign of NATO modernization efforts, the alliance also must constantly assess the forms of engagement that are most appropriate for the alliance’s capabilities and the threats it faces. These, he said, are the kinds of discussions taking place in the Defense Department’s strategy and global posture review, as officials try to be disciplined in setting priorities to maintain the U.S. global leadership role while meeting the department’s fiscal responsibility to the nation’s taxpayers.

Addressing concerns about the effect those discussions may have on the future of the U.S. military presence in Europe, Panetta offered assurances.

“Let me be clear at the outset that the United States will always ensure that we maintain the right mix of forces and capabilities, including those stationed in Europe, prepared to meet the full range of security challenges acting in concert with our allies—including instability on its periphery and unforeseen developments,” he said. “At the same time, we must build on our success with the trans-Atlantic alliance and further enhance our collective security by building enduring and capable 21st century security architecture in other critical regions of the globe, beginning right here in this part of the world.”

The United States has worked with Canada to encourage new partnerships in the Pacific and in the Western Hemisphere, Panetta said, “recognizing that regional challenges—from transnational criminal organizations to natural disasters—require stronger regional institutions that can deliver regional solutions.”

Two regions of the world stand out as posing particularly vexing challenges, the secretary said.

“It is apparent to all that the Asia-Pacific region is going to be a principal force behind world economic growth, with lines

of commerce and trade that are constantly expanding and security challenges that are growing in complexity," he said. "In the Middle East—another region crucial to the global economy and U.S. interests—we've seen dramatic changes as a result of the Arab spring. We see continuing violence. We see continuing extremism. We see continuing instability. And the threat from Iran continues to pose challenges.

"So as the United States draws down its forces in Iraq and begins to draw down its surge forces in Afghanistan," he continued, "we will also have to maintain a strong presence in the Middle East and work closely with our allies and partners to bolster multilateral cooperation in countering threats emanating from al-Qaida, from Iran, and elsewhere."

The global nature of security challenges and the interests at stake require building multilateral structures that enable all allies and partners to improve cooperation in countering common threats, Panetta said. "That includes encouraging Canada and our European allies to join us in meeting common challenges—whether it's in Asia-Pacific, the Middle East, or throughout the Western Hemisphere, and enabling them to do so through NATO when appropriate," he added.

The United States can and will do more than one thing at a time, the secretary said. "U.S. security commitments are not zero-sum," he added. "And even as we enhance our presence in the Pacific, we will not surrender our status as a global power and a global leader. As a country with global interests and responsibilities, and with a military with unique global strength and reach, America will remain committed to global security."

American and Canadian leadership have built a system of alliances and partnerships that have safeguarded and advanced liberty, prosperity, and security for decades, Panetta said.

"And as we move forward—as we make the tough decisions needed to ensure a better life for our children and our grandchildren—we will not back away from these alliances and partnerships. Indeed, they are a key to our ability to provide that strong defense for the future. We will strengthen them, and in so doing, we will strengthen our two great nations so that we know even greater prosperity and even greater security in the century that lies ahead."

Army Successfully Launches Advanced Hypersonic Weapon Demonstrator

ARMY SPACE AND MISSILE DEFENSE COMMAND/ARMY FORCES STRATEGIC COMMAND (NOV. 23, 2011)

Jason B. Cutshaw

REDSTONE ARSENAL, Ala.—At the U.S. Army Space and Missile Defense Command/Army Forces Strategic Command, successes sometimes happen faster than a speeding bullet.

In a flight which lasted less than 30 minutes, USASMDC/ARSTRAT conducted the first test flight of the Advanced Hypersonic Weapon concept Nov. 17. The AHW, a first-of-its-kind glide vehicle, designed to fly within the earth's atmosphere at hypersonic speed and long range, was launched from the Pacific Missile Range Facility, Kauai, Hawaii, to the Reagan Test Site, U.S. Army Kwajalein Atoll, Marshall Islands.

"It is a first-of-its-kind glide vehicle that has a potential to change warfare forever," said Lt. Gen. Richard P. Formica, USASMDC commanding general. "It is a great example of how the material development function in the SMDC Technical Center is a part of ARSTRAT that is developing future capabilities for U.S. Strategic Command—for 'the day after tomorrow.'"

The Army's Advanced Hypersonic Weapon Technology Demonstration is a cooperative effort within the Department of Defense to develop a conventional Prompt Global Strike capability. More specifically, the AHW-TD is an all endo-atmospheric boost glide, nonballistic, missile flight that will advance state-of-the-art thermal protection materials, enabling and integrating systems such as controls and communications, and internal thermal management schemes.

Further, in-flight environmental data collection will advance the understanding and modeling efforts for all Prompt Global Strike concepts such as the Conventional Strike Missile being developed by the Air Force.

The conical-shaped AHW is designed to meet the demanding environments and operations of Continental United States-based systems capable of global strikes. As a precision glide body flying at supersonic speeds, the AHW can deliver a variety of payloads at medium and global ranges.

"This was a total team effort with Sandia National Laboratories, Albuquerque, N.M.; the U.S. Army Aviation and Missile Research Development and Engineering Center, Huntsville, and under the direction and funding of the Office of the Secretary of Defense's Prompt Global Strike," Formica said.

Hypersonic flight is defined as speeds of Mach 5, which is about 3,600 mph or higher.

The objective of the test is to collect data on hypersonic boost-glide technologies and test range performance for long-range atmospheric flight. Mission emphasis is aerodynamics; navigation, guidance, and control; and thermal protection technologies.

“Two key technical challenges that the flight test addressed were thermal protection/thermal management and navigation, guidance, and control,” said Debra Wymer, SMDC Technical Center director.

The AHW program is managed and executed by the SMDC program office in Huntsville. The booster system and glide vehicle were developed by Sandia National Laboratories and the thermal protection system by the AMRDEC.

“The success of the AHW test is a solid step toward demonstrating the technology required to achieve a conventional prompt global strike capability,” Wymer said.

A three-stage booster system launched the AHW glide vehicle and successfully deployed it on the desired flight trajectory. The vehicle flew a nonballistic glide trajectory at hypersonic speed to the planned impact location at the Reagan Test Site. Space, air, sea, and ground platforms collected vehicle performance data during all phases of flight. The data collected will be used by DoD to model and develop future hypersonic boost-glide capabilities for Conventional Prompt Global Strike.

“It was great to have a successful launch,” said Jerry Esquibel, AHW program manager. “I was following it along its trajectory profile, and when it went into its glide phase we considered it a success.

“This is a great team,” he added. “Many organizations came together in order to make this happen. I am proud of everyone involved.”

Cutshaw is with Army Space and Missile Defense Command/Army Forces Strategic Command.

Picatinny Provides Soldiers with Quicker, Safer Mortar Fire Control System

ARMY NEWS SERVICE (DEC. 1, 2011)

Audra Calloway

PICATINNY ARSENAL, N.J.—Picatinny Arsenal recently received kudos from soldiers by developing six out of 10 2010 Army Greatest Inventions. One of the inventions recognized was a dismounted fire control system that will make dismounted 120mm mortars easier to fire and keep soldiers safer.



The U.S. Army Space and Missile Defense Command/Army Forces Strategic Command conducts the first flight of the Advanced Hypersonic Weapon concept Nov. 18, 2011. The AHW is a first-of-its-kind glide vehicle, designed to fly within the earth's atmosphere at hypersonic speed and long range. It was launched from the Pacific Missile Range Facility, Kauai, Hawaii, to the Reagan Test Site, U.S. Army Kwajalein Atoll, Marshall Islands.

Courtesy photo

The M150/M151 Mortar Fire Control System—Dismounted, or MFCS-D, provides mortarmen with increased speed and effectiveness previously only available to the mounted mortar systems using fire control.

“We have a similar system that's used on 120mm mounted mortars—the M1064 Self-Propelled mortar and the Stryker mortar carrier,” said Bob Beck, branch chief of mounted mortar systems at the Armament Research, Development and Engineering Center, or ARDEC. “Both are big heavy platforms, and issued to guys in Heavy Brigade Combat Teams or Stryker Brigade Combat Teams. These guys are mobile and on vehicles, not huffing stuff as much.”

"The challenge was that when you put a fire control system on a vehicle, weight is not as much of a concern because you've got a vehicle to carry it around with," Beck said. "If you have a dismounted system like the Infantry Brigade Combat Teams have, they don't have the luxury of the vehicle at all times."

"The idea was to develop a fire control system that could be implemented onto the dismounted system to give those guys the same capability of increased survivability, increased accuracy, and increased responsiveness," Beck added. "We proved the concept on the heavy platforms, so we needed to tweak it so that it's able to survive not in a vehicle, but out on the ground."

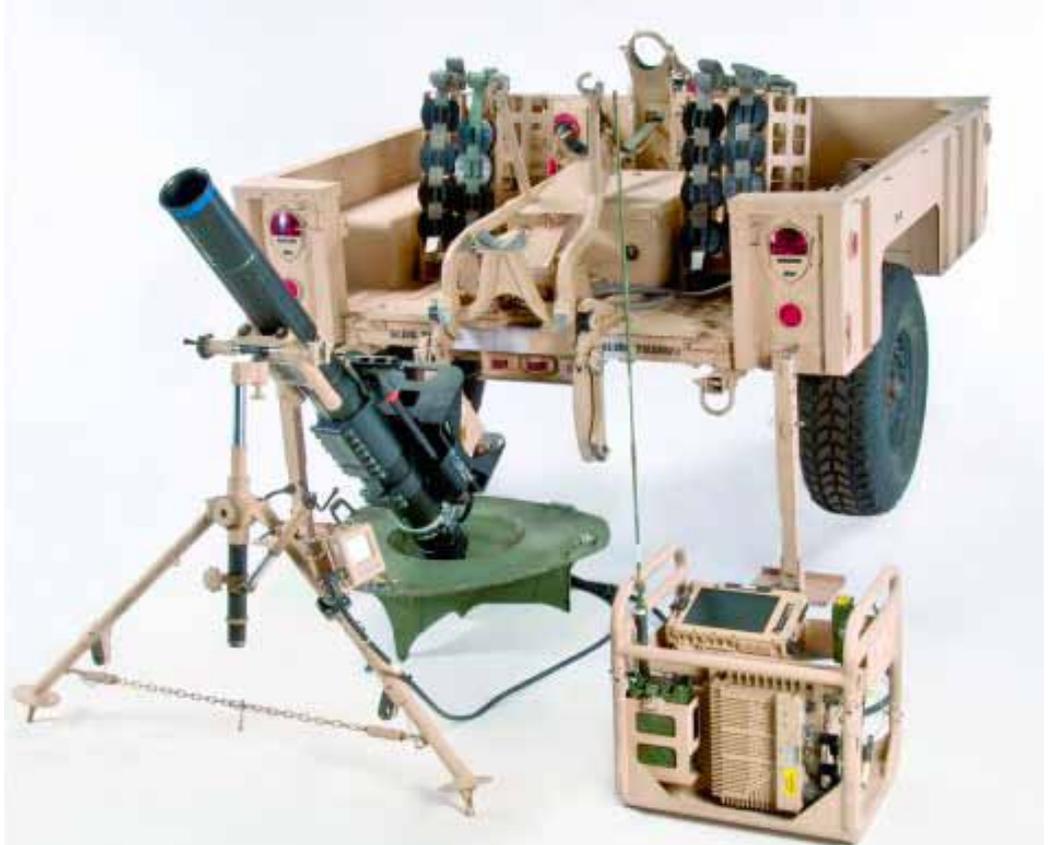
To ensure the light brigades had the same capability as the heavy brigades, ARDEC engineers created the MFCS-D, M150/M151.

Quicker Firing Time

The MFCS-D Improves the Army standard for first mortar round fired from eight minutes (day) and 12 minutes (night) to less than two minutes for both day and night operations.

In addition, it improves Circular Error Probable, or CEP, from 136 meters to 75 meters.

"The MFCS-D also has a computer that calculates the ballistic computations for soldiers, which makes the mortar system more accurate by eliminating human error," said Bob Ucci, chief, Weapons and Fire Control Branch, Office of the Product Manager, Guided Precision Munitions and Mortar Systems, PEO Ammunition.



Picatinny Arsenal recently received kudos from soldiers by developing six out of 10 2010 Army Greatest Inventions. One of the inventions recognized was a dismounted fire control system that will make dismounted 120mm mortars easier to fire and keep soldiers safer.

Courtesy photo

Stowage Kit Adds Speed

The speed of fire is also increased because the MFCS-D is being fielded with the M326 Mortar Stowage Kit. The kit uses a hydraulic lift to remove the entire mortar system from the trailer and place the entire mortar system on the ground in less than a minute.

It can then quickly raise the system back into the trailer.

"The Mortar Stowage Kits help because the weapon doesn't need to be disassembled to be put back on the trailer for transportation," Ucci said.

Speed Contributes To Safety

The increased firing speed of the mortar systems will help keep the mortar crew safer because it allows them the ability to "shoot and scoot."

"We're able to get the mission, stop the vehicle, emplace the mortar on the ground, fire the mission, and within a minute

you're able to lift the weapon off the ground and leave. You can get rounds down range in a minute and displace the weapon in another minute," Beck said.

This attribute helps the mortar crews to evade incoming counter-fire.

Software Redundancy

For mortar crews, there are many similarities between the mounted and dismounted systems.

"A lot of the software was reused for commonality. You don't necessarily want to start from scratch," Beck said of the MFCS-D development process. "You want them to be as common as possible. There are, however, some specific things that were integrated specifically for the MFCS-D, just because it was a dismounted system and the differences in platforms."

Technology has also advanced since the legacy system was fielded, so it was challenging to integrate the new developments into the MFCS-D system.

For instance, the MFCS-D uses a touch-screen instead of the keyboard found in the mounted systems.

"Everyone before had used a keyboard for the computer, but to maximize display size and minimize the size of the computer you can't really get a full-size keyboard that guys can use with arctic gloves," Beck noted.

"A touch screen was the logical choice. But the common software for the mounted and dismounted systems has to be capable of taking input from either, whether you're using the keyboard or the touch screen."

The MFCS-D is also compatible with the Accelerated Precision Mortar Initiative, or APMI. APMI is the world's first fielded 120mm GPS-guided mortar round, which was fielded in March 2011.

The MFCS-D was first fielded to the 3rd Brigade, 25th Infantry Division, Schofield Barracks, Hawaii, in April 2010.

It will eventually be fielded to all U.S. Army Dismounted 120mm Mortar teams.

PEO Ammo is fielding one brigade a month and, to date, the equipment has been fielded to ten IBCTs and four National Guard battalions.

PEO Ammo expects all Infantry Brigade Combat Teams to have been fielded and trained on the equipment by 2016.

New Satellite Terminal Training, Fielding Facility 'Smart' Move for Army

ARMY NEWS SERVICE (NOV. 28, 2011)

Amy Walker

LARGO, Fla.—As the Army looks for innovative solutions to slim its financial waistline, a new facility for the advanced version of its protected satellite terminal has consolidated production, training, and fielding in one location in an effort to save millions of dollars.

"The training facility is co-located with the production facility to reduce our logistical footprint, overhead, and reliability risk," said Larry Raville, project lead for the Secure, Mobile, Anti-Jam, Reliable, Tactical-Terminal, known as SMART-T. "No longer does a team have to travel all over the world to field, ship, and train these systems. It's all done in one location."

The first class of students, consisting of soldiers from the 101st Airborne Division (Air Assault), attended the Advanced Extremely High Frequency, or AEHF, SMART-T New Equipment Training, or NET, at the new facility in Largo, Nov. 7-18. The facility's grand opening ribbon cutting ceremony was held on Nov. 9, with the students from the 101st, members of the SMART-T team, and contractor leadership in attendance.

This is the first time in the Army's history that a weapon system has had a NET/fielding facility embedded with a production plant, Raville said. The AEHF SMART-T facility is expected to yield more than \$9 million in cost avoidance and cost savings by reducing the logistical footprint of training, fielding, and upgrading the terminals.

Product Manager Satellite Communications, or PdM SAT-COM, which manages SMART-T, also expects to see an increase in the terminals' reliability rate, since all of the logistics are centrally located and issues can be more easily addressed, Raville said.

"Prior to the opening of this facility, if a failure occurred during training, we could be 900 miles away and it would take three or four days to get an asset out there, entailing huge shipping costs along with the loss of time," said Mel Pointer, SMART-T Integrated Logistics Support manager. "Now we just have to walk across the street."

SMART-T makes it possible for soldiers to extend the range of their network in such a manner that communications can-

not be jammed, detected, or intercepted. Soldiers can send text, data, voice, and video communications beyond their area of operations without worrying that the information will fall into the hands of enemy forces.

Used at the brigade echelon and above, this satellite terminal mounts on High Mobility Multipurpose Wheeled Vehicles, or Humvees, and provides robust worldwide communications.

"SMART-T provides a means of [protected satellite] communications that isn't available through other terminals," said Sgt. David Carpenter, with the 101st, who was part of the first class at the new facility. "It may not be used quite as often, but when it is needed, no other terminal can do what it does. No other capability can replicate it."

SMART-T enables the soldier to extend communications in harsh environments without the risk of enemy interception or detection, increasing the safety of soldiers on the battlefield. It provides tactical-protected SATCOM for the close fight. When removed from the Humvee it is capable of stand-alone operation and can be airlifted via helicopter so it can get to a particular point on the battlefield in a hurry, establishing and maintaining a link quickly and reliably.

"Any time a commander needs protected, secure throughput for worldwide communications for current operations, this is his only capability," Raville said.

The biggest difference between the legacy and the new AEHF satellite terminal upgrade is a fourfold increase in capacity and improved security features. AEHF terminals will increase satellite throughput with the extended data rate payload.

"Because SMART-T is protected, the systems have a lower bandwidth capability, but the upgrade gives us a higher bandwidth throughput by fourfold," said Lt. Col. Gregory Coile, PdM for SATCOM, which is assigned to Project Manager Warfighter Information Network-Tactical, or PM WIN-T. "The advanced system also provides greater overall satellite access."

Approximately 240 of the legacy systems have been fielded to date, plus an additional 60 AEHF SMART-Ts. Currently 39 new AEHF SMART-T terminals are in production, and the remaining legacy systems will all be upgraded with the AEHF capability. By 2018 the total force is expected to have 411 of the AEHF SMART-Ts, with users including the Navy, Air Force, National Guard, Homeland Security, Missile Defense Authority, international partners, and other special users.

While the Air Force is responsible for developing and maintaining military satellites, the Army develops, procures and fields the earth terminals such as the SMART-Ts. The two work closely together to ensure system interoperability. The Air Force is in the process of changing from the military's legacy satellite constellation to the new AEHF satellite constellation, and it uses the Army's version of the AEHF terminals for satellite testing, Coile said.

"The best benefits [of the new AEHF SMART-T] are the data rate, the bandwidth, being able to push more data and get more users on it, and its reliability," said Sgt. Jesse Murphy of the 101st, who was part of the first training class at the facility and has worked with legacy SMART-Ts for four years. "It will be invaluable."

Along with the NET, the facility will also offer delta training which provides experienced legacy SMART-T operators such as Murphy training on the AEHF version of the terminals. One of the biggest values of the facility is that roughly 75 percent of the training is hands-on, with only a minimum of classroom time involved, leaving the soldier well-prepared upon deployment, Pointer said.

After soldiers complete their training, the unit actually signs for the same equipment that they have trained on, and that equipment is then shipped to their new location. Prior to the opening of the facility, the SMART-T team would have to fly out to the unit several times to get them set up with the equipment, help with training, and then inventory and sign over the equipment. The new facility allows the team to take care of everything in one spot.

The SMART-T NET/Fielding facility will also be a portal for data exchange and will be linked to Tobyhanna Army Depot in Pennsylvania, which will input valuable reset information into the facility's database. The intent is to have a database that follows each SMART-T through all phases of its life cycle, from production to fielding, to upgrades to reset, with all of the data filed at a single source. This information is expected to save time, provide cost avoidance in maintenance, and increase system reliability, Pointer said.

PM WIN-T is assigned to Program Executive Office Command, Control, Communications-Tactical, or PEO C3T.

"The AEHF SMART-T is a new capability within the WIN-T construct and a chance to marry our capability in line with the ARFORGEN [Army Force Generation] cycle requirements," Pointer said. "When a unit rotates out of the box, that whole unit gets reset, and we are making sure that when they move back onto the ready line, we have conformed to



Advanced Extremely High Frequency Secure, Mobile, Anti-Jam, Reliable, Tactical-Terminals, or SMART-T, are shown here at the new Centralized Training and Fielding Facility, in Largo, Fla., Nov. 9, 2011. SMART-T makes it possible for soldiers to extend the range of their network in such a manner that communications cannot be jammed, detected, or intercepted.

Photo by Amy Walker

all of their requirements. Here we have our own resources to get that done. You just can't beat the value of that."

ONR Helps Undersea Robots Get the Big Picture

OFFICE OF NAVAL RESEARCH (DEC. 2, 2011)

Grace Jean

ARLINGTON, Va.—Scientists have successfully transitioned fundamental research in autonomy to undersea gliders, demonstrating in recent sea tests how the new software, sponsored by the Office of Naval Research, can help robots become smarter at surveying large swaths of ocean.

"Using the new algorithms, the vehicle has a greater ability to make its own decisions without requiring a human in the loop," said Marc Steinberg, program officer for ONR's Adaptive Networks for Threat and Intrusion Detection or Termination (ANTIDOTE), a multi-disciplinary university research program.

With plans to deploy squadrons of air, surface, and undersea robotic vehicles later this decade, the Department of the Navy is investing in basic research programs to improve autonomous system capabilities.

"Advancing autonomy for unmanned systems allows you the ability to do things that wouldn't be practical otherwise because we don't have enough warfighters or communication today," said Steinberg, who works in ONR's Naval Air Warfare and Weapons Department. "If you incorporate some intelligence on the vehicles that can solve complex mission problems, then we can enable wholly new capabilities that can be achieved with limited numbers of people and communications in complicated, dynamic environments."

ONR provided funding to researchers at the Massachusetts Institute of Technology (MIT) and University of Southern California (USC) to advance the intelligence of autonomous vehicles under both ANTIDOTE and a related university

program called Smart Adaptive Reliable Teams for Persistent Surveillance. They developed a persistent surveillance theory that provides a framework for decision-making software that maximizes a robot's collection of information over a given area. It gives some guarantees on performance in dynamic environments.

"The ability to do surveillance that takes into account the actual conditions of the environment brings a whole new level of automation and capability," said Dr. Daniela Rus, co-director of MIT's Computer Science and Artificial Intelligence Laboratory Center for Robotics. "We have come up with a solution that lets the robot do local reasoning to make decisions and adjust the path autonomously without having to come up to the surface to interact with humans."

The scientists produced an algorithm that incorporates both the user's sensing priorities and environmental factors, such as ocean currents, into a computer model to help undersea robots conduct surveys and mapping missions more efficiently.

Tests proved the benefits of using the new algorithm. The scientists conducted two separate experiments using underwater robots called gliders, operated by oceanographers. They used two gliders—one with the algorithm and one without—to measure whether the experimental technology yielded better maps of algae blooms and other underwater phenomena in the Pacific Ocean.

"In areas where the oceanographers wanted more information, the persistent surveillance algorithm actually produces more detail," said Dr. Gaurav S. Sukhatme, ANTIDOTE's principal investigator and director of USC's Robotic Embedded Systems Lab. "The system can automatically figure out how to divide its time between areas that are more interesting and areas that are less interesting."

The algorithm helps the gliders decide when to spend more time looking at regions that have changes in activity or environmental factors. Without the control algorithm, gliders paid equal attention to all areas and acquired less information during the experiments in Monterey Bay, Calif.,



The Office of Naval Research conducts Autonomous Underwater Vehicle operations aboard the *USNS Sioux* off San Clemente Island in the Pacific Ocean in September 2010. Recently ONR-sponsored scientists completed sea tests of new control software that makes underwater robotic vehicles smarter at autonomously surveying large swaths of ocean.

U.S. Navy photo by John F. Williams

and along the southern coastal waters near Los Angeles in October and November 2010. The first experiment lasted a period of three weeks; the second ran for two weeks. A third experiment in August 2011 took place in the Southern California Bight for 10 days. Results of the single-glider test are being analyzed.

Though the gliders were an ideal first test of the persistent surveillance theory and algorithm, the software is applicable to many different machines and robots, the scientists said.

ONR provides the science and technology necessary to maintain the Navy and Marine Corps' technological advantage. Through its affiliates, ONR is a leader in science and technology with engagement in 50 states, 70 countries, 1,035 institutions of higher learning, and 914 industry partners. ONR employs approximately 1,400 people, comprising

uniformed, civilian, and contract personnel, with additional employees at the Naval Research Lab in Washington, D.C.

Jean is with Office of Naval Research. For more news from Office of Naval Research, visit www.navy.mil/local/onr/.

Official Calls for 'Radical Changes' in Maintenance, Sustainment

AMERICAN FORCES PRESS SERVICE (DEC. 2, 2011)

Donna Miles

WASHINGTON—Praising the “absolutely phenomenal” way the United States has maintained and sustained its forces on the ground in Iraq and Afghanistan, a senior defense official said the military needs to do even better.

Budgetary demands and a persistent threat that shows no sign of going away require “radical changes” in how the military maintains an engaged, ready force, John B. Johns, deputy assistant secretary of defense for maintenance policy and programs, told attendees yesterday at this year’s Defense Logistics Conference here.

Johns drew a direct correlation between maintenance and sustainment operations and the combat capability and readiness they drive.

“The ability to conduct deterrence or to shape outcomes associated with our conflicts in the world is driven by what we view in the logistics community,” he said. “It is not how much stuff we have; it is how we employ it and how we sustain it.” Yet with the high costs associated with maintenance and sustainment—second only in the Defense Department budget to manpower costs—Johns said it’s obvious that more cuts are on the way.

“If you haven’t felt the pressure yet, then get ready, because it’s coming,” he told the audience.

Also clear, he said, is that what has worked in the past won’t be enough in the future.

“Referring to past success is good ... but not instructive about where we need to go,” Johns said. “We are talking about fundamental new levels of efficiency and effectiveness, of agility and flexibility.”

That includes a 50 percent reduction in average cycle times, Johns said, and a 25 percent cost reduction by 2020. Even defense activities that already have demonstrated major improvements will have to meet these new levels, he said.

“These are not trivial numbers,” Johns acknowledged. “But those are the numbers that are going to get us where we need to be.”

And if the department falls short of that goal, “we are exceeding the resources that we are going to have available,” he said. “We will not make the warfighting requirements or generate the warfighting capability required if we are not operating at that level of performance.”

Johns encouraged leaders within the maintenance and sustainment community to make the hard decisions and encourage innovation to address this challenge. “The change is here, and we can lead and shape it,” he said.

But if pressured to take unacceptably large cuts, he urged them to defend the budgets needed to sustain a force that provides credible deterrence and is able to shape the outcomes of conflict or potential conflict.

What’s at stake for the United States as the department deals with its fiscal challenges is huge, Johns said.

“If we don’t make the right decisions with regard to addressing pressure from a budgetary perspective and pressure generated by the full-spectrum threat, we will make serious mistakes that put this at risk,” he said. “And we cannot afford to do that.”