

### **DoD Announces Readiness, Environmental Protection Awards**

DEPARTMENT OF DEFENSE NEWS RELEASE (AUG. 1, 2014)

Amaani Lyle

WASHINGTON—Defense Department officials today announced the 2014 Readiness and Environmental Protection Integration Challenge award winners, in which 11 finalists competed to help to sustain military readiness and protect critical test, training, and operational missions.

REPI Program Director Kristin Thomasgard-Spence said Fort Huachuca, Ariz., and Naval Air Station Patuxent River, Md., best demonstrated the spirit of the program to promote innovative land conservation solutions that benefit military readiness, neighboring communities, and the environment while helping installations reduce and avoid restrictions.

“DoD’s ability to conduct realistic live-fire training and weapons system testing is vital to preparing warfighters and their equipment for real-world combat,” Thomasgard-Spence said. “There is a direct relationship between realistic training and success on the battlefield.”

An REPI Challenge award of \$4 million for Fort Huachuca will leverage just over \$9 million in partner contributions to permanently restrict development on 5,900 acres of rangeland, Thomasgard-Spence reported. Partnerships include Arizona Land and Water Trust, Arizona Department of Emergency and Military Affairs, U.S. Department of Agriculture, Natural Resources Conservation Service, the Bureau of Land Management, and the National Fish and Wildlife Foundation.

“This buffer protects more than 160,000 annual air operations and reduces proliferation of electromagnetic interference for 800 square miles of air space,” she said. “Protecting these lands will prevent the development of up to 1,400 new wells, ensuring availability of scarce groundwater resources for the installation, the surrounding community, and the local native grassland habitat.”

Meanwhile, Thomasgard-Spence noted, NAS Patuxent River is working with the Chesapeake Conservancy, the U.S. Fish and Wildlife Service, USDA, NRCS, Maryland, Delaware, and the Conservation Fund to protect a corridor along the Nanticoke River under the Atlantic Test Range airspace. Aircraft use the area for research, development, test and evaluation missions, she added.

“An REPI award of \$1 million at NAS Patuxent River will be leveraged more than 5:1 with contributions from this cohesive partnership to protect 2,259 acres of forests, wetlands, and farmland, as part of a broader 8,500-acre wildlife cor-

ridor area,” Thomasgard-Spence said. “The project helps reduce noise and safety concerns, and prevents costly restrictions and delays to training and testing.”

According to Thomasgard-Spence, in the late 1990s the REPI program was borne from DoD’s increasing concern about encroachment.

“Specifically, installations saw two main threats to their ability to train: nearby incompatible development and regulatory restrictions on DoD lands to protect species and habitat under the Endangered Species Act,” she said.

As such, the impacts of encroachment can have serious consequences if military installations are to remain active and contributing economic participants in their communities, she added.

“Together, the Fort Huachuca and NAS Patuxent River projects leverage over \$14 million in non-DoD partner contributions and will permanently protect more than 8,150 acres of land adjacent to two important military bases that are essential for testing and training,” Thomasgard-Spence said.

“These projects go above and beyond in providing significant benefit to the military, the taxpayer, and the environment.”

### **Luke Civilian Earns Coveted Marquez Award**

56TH FIGHTER WING PUBLIC AFFAIRS (AUG. 8, 2014)

Air Force Staff Sgt. Luther Mitchell Jr.

LUKE AIR FORCE BASE, Ariz.—An aircraft armament systems technician at Luke Air Force Base, in Arizona, distinguished himself by earning the 2013 Air Force Lt. Gen. Leo Marquez Award for Outstanding Munitions/Missile Maintenance Person of the Year, civilian technician category. It was announced July 22.

David Moore, 56th Equipment Maintenance Squadron, surpassed his peers at the base and MAJCOM levels to go on and earn the award at the Air Force level. Brig. Gen. Scott Pleus, 56th Fighter Wing commander, presented Moore with the award.

Moore, a prior enlistee, has more than 20 years of experience working as a weapons loader and armament specialist. From testing and evaluating new weapons systems to inspecting, repairing, and loading ordnance, aircraft armament systems specialists are critical to the success of the Air Force mission.

Moore said earning awards is all about “showing up, doing your job, and doing it to the best of your ability.”



Brig. Gen. Scott Pleus, 56th Fighter Wing commander, presents David Moore, 56th Equipment Maintenance Squadron Aircraft Armament Systems technician, with the 2013 Air Force Lt. Gen. Leo Marquez Award for Outstanding Munitions/Missile Maintenance Person, civilian technician category at Luke Air Force Base July 22. Moore, a prior enlistee, has more than 20 years of experience working as a weapons loader and armament specialist.

U.S. Air Force photo/Airman 1st Class Pedro Mota

The Marquez Award recognizes base-level military and civil service aircraft, munitions, and missile maintenance personnel who perform hands-on maintenance or manage a maintenance function. In 2013, Moore enhanced the ability of the 56th EMS to meet the very high mission tempo of the wing. His leadership during the inspection and repair of 389 pieces of munitions handling equipment helped solidify a 99.2 percent weapons release rate during more than 23,000 F-16 Fighting Falcon sorties. Additionally, he displayed exceptional technical skill when he rewired three bomb rack switches and avoided more than \$47,000 in replacement cost.

This is the third year in a row an airman from the 56th EMS Armament Flight has earned this award. John Gaines, 56th EMS Armament Flight, Aircraft Ordnance Systems supervisor, earned the award in 2011; and Dale Wollschlager, 56th EMS Armament Flight Weapons Systems technician, in 2012.

For Gaines, Moore's current supervisor, the continued success of his flight is made possible by "having a bunch of good guys" working for him.

"Moore has done a lot of outstanding stuff here," Gaines said. "He is the go-to guy for a lot of problems. He is the go-to guy if you need training or instruction on how to do something, and he is the most knowledgeable guy in here for all of the systems we use."

Moore loves the career he chose and finds satisfaction working around aircraft and weapons systems. It's not all glamorous, but the reward comes with a job well done, he said.

"I'm humbled," Moore said. "If you stick to integrity, work ethic, and can relate to people, sooner or later that will show up among your peers."

### **Instructor at Naval Explosive Ordnance Disposal School Honored With Purple Heart**

NAVAL SCHOOL EXPLOSIVE ORDNANCE DISPOSAL PUBLIC AFFAIRS OFFICE (AUG. 11, 2014)  
*Billy P. Martin*

EGLIN AIR FORCE BASE, Fla.—Saying he joined the military to save lives, Air Force Staff Sgt. Douglas Ryan was presented the Purple Heart Medal by Navy Capt. William Noel, commanding officer, Naval School Explosive Ordnance Disposal (NAVSCOLEOD) during a ceremony on Eglin Air Force Base, Aug. 8.

Ryan, currently an instructor in the Air Ordnance Division at the school, received the Purple Heart for wounds received in action while deployed to Afghanistan Mar. 18, 2010. The event took place at the Explosive Ordnance Disposal Memorial.

"The Purple Heart is a physical reminder of how precious and fragile life is," Ryan said. "I originally joined the military to save lives and to be a part of something bigger than myself. I have a beautiful wife and son, and my goal is to be an example to them and to leave this world better than I found it."

While serving as an Explosive Ordnance Disposal technician in the vicinity of Marjah, a Taliban stronghold in the Helmand Province, Ryan and other members of the Coalition Forces were clearing a route for troops and supplies when the vehicle Ryan was driving was struck by an Improvised Explosive Device (IED). He immediately began conducting a post blast analysis to collect evidence and ensure the area was free from any further explosive devices. Ryan's actions directly contributed to the safe movement of the other members of his team away from the kill zone.

Upon completion of the mission, he was evacuated to Camp Bastion to undergo medical evaluations and treatment for injuries sustained during the blast.

Any military member of the United States Armed Forces is entitled to awarding of the Purple Heart, in the name of the President of the United States, for injury or death during direct or indirect combat operations.

NAVSCOLEOD, located on Eglin Air Force Base, Fla. provides high-risk, specialized, basic, and advanced EOD training to U.S., partner nation military, and selected U.S. government personnel each year.

For information about the EOD School and its training visit <http://www.netc.navy.mil/centers/ceneoddive/eods/>.

To learn more about the Naval Education and Training Command, visit <https://www.netc.navy.mil>.

For more news from Naval Education and Training Command, visit <http://www.navy.mil/local/cnet/>.



Photo by Danielle Freeman

### **Navy Engineers Cut Costs with New Inventory System**

NSWC PANAMA CITY OFFICE OF CORPORATE COMMUNICATIONS (AUG. 13, 2014)

Jacqui L. Barker

PANAMA CITY, Fla.—A new, first-of-its-kind automated inventory information system developed by engineers at Naval Surface Warfare Center Panama City Division (NSWC PCD) will provide significant cost avoidance and labor savings for the Navy, and is one step closer to final implementation.

The Mission Package Automated Inventory Information System (MPAIIIS) is a Radio Frequency Identification (RFID) inventory system that operates inside metal tool cabinets without requiring special modifications. The benefits of employing MPAIIIS include high return on investment and workload reduction for littoral combat ship (LCS) mission package (MP) crews and shore based logistics support.

"Sailors have families, too," said NSWC PCD MPAIIIS Lead Software Engineer Ryan Mabry. "This technology allows the sailors to spend less time on the weekends or late nights on pre-deployment inventory. They are excited about using it because it works, and it makes their deployment preparations easier."

Passive RFID (pRFID) tags and unique emplacement of the hardware enables multiple tool and support equipment configurations. NSWC PCD's project MPAIIIS team designed the inventory system in 2009 to reduce the amount of time U.S. Navy sailors spend conducting inventories. The software

has recently received its Interim Authority to Test (IATT) information assurance accreditation and is on schedule to receive its Authority to Operate (ATO) accreditation in October 2014.

"This is a milestone achievement," said Robert Gibson, former project engineer and now MPAIIS team consultant at NSWC PCD. "It's very gratifying to see our vision turned into a product that supports these sailors."

To date, MPAIIS has continued to exceed all performance standards, including those defined in its Technology Transition Agreement (TTA). The project will cut down the time that sailors spend inventorying mission packages at the MPSF and also on board the LCS ships when they are swapping out mission packages.

"For PMS 420, we installed MPAIIS in an LCS Support Container, tagged more than 290 items and, overall, reduced inventory time from more than 32 manhours to less than five minutes," said Mabry.

According to Mabry, MPAIIS averages seven-and-a-half minutes per container to conduct each inventory. The system as initially implemented is comprised of pRFID tags, handheld readers, a laptop, and software. MPAIIS supports a wireless configuration, but that configuration is yet to be authorized aboard Navy ships.

The tasking includes pRFID tagging of Mission Package Support Containers to support planned maintenance, corrective maintenance, embarkation, and debarkation.

For more news from Naval Surface Warfare Center Panama City Division, visit <http://www.navy.mil/local/NSWC/>.

### **NSWC Scientists Patent Innovative Electromagnetic Technology to Impact Future Navy**

NAVAL SURFACE WARFARE CENTER DAHLGREN PUBLIC AFFAIRS  
(AUG. 15, 2014)

DAHLGREN, Va.—A new development in electromagnetic technology patented in May of this year will impact future military capabilities, Navy officials announced Aug. 13.

The superconducting stator patent describes a discovery that enables a magnetic flux compression generator to produce an electromagnetic pulse (EMP).

"Most conventional magnetic flux compression generators are explosively driven, dangerous to handle, and limited to one-time use," said Albert Corda, a Naval Surface Warfare Center Dahlgren Division (NSWCDD) physicist. "The novel

architecture of the generator described in this patent, however, is not explosive in nature. It's inherently safer to handle and potentially reusable."

An EMP is characterized as a broad band signal with a frequency-power distribution ranging from a few hundred kilohertz to a few gigahertz. The magnetic flux compression generator is designed to generate a high voltage pulse output that can be incorporated into an EMP generator.

The patent—jointly filed by scientists from NSWCDD in Virginia and NSWC Carderock Division in Maryland—began as they collaborated at the Chief of Naval Operations Strategic Studies Group in 2008.

"The idea originated from a side-bar discussion that centered on the utility of high temperature superconducting materials," said Dr. Jack Price, NSWC Carderock scientist. "These materials—composed of particular copper oxides called cuprates and typically layered on top of a nickel substrate—have very low resistance at liquid nitrogen temperatures. Someone posed a 'what if' question. We earnestly discussed all the possibilities and technical difficulties, and the concept was born."

The concept resulted in a device designed to produce a short duration, highly localized electromagnetic pulse controlled by a superconducting stator that also enables multiple activations of the flux compression generator.

"The architecture provides elements of scalability and control not possible with conventional magnetic flux compression generator designs," said Corda.

Conventional magnetic flux compression generators have been in existence since the 1950s with initial work for the United States being carried out at Los Alamos, New Mexico. Now, much smaller generators featuring high power pulses with very fast rise times can be made.

"The proposed superconducting stator is potentially practical and affordable given the commercial availability of high temperature superconductor materials that operate at liquid-nitrogen temperature," said Price.

Military and industrial applications depend on the output configuration, but can range from the production of broadband radio frequency transmissions to the rapid acceleration of physical mechanisms to high velocities.

"Each of the warfare center divisions has particular mission areas of expertise," said Blaise Corbett, of the NSWCDD

EMP Assessment Group. “Dahlgren has a long history and expertise in pulsed power systems and applications. Carderock has expertise in high temperature superconducting [HTS] materials and applications evidenced by their development of an HTS degaussing system and motor.”

The patent’s inventors included Price and Dr. Y. Dan Agassi from NSWC Carderock Division in addition to Corda, Corbett, and Dr. Walter Sessions from NSWC Dahlgren Division.

“Our leadership encourages collaboration between the warfare center divisions when synergies exist that can be effectively leveraged to benefit the Navy,” said Corbett. “This is only one of a number of collaborations between scientists at Dahlgren and Carderock. Ongoing collaborative efforts can be expected to yield other novel and innovative concepts focused on the Navy’s needs in the months and years ahead.”

### **Air Force Funds Small Business Participation in Research and Development Programs**

*88TH AIR BASE WING PUBLIC AFFAIRS NEWS RELEASE (AUG. 20, 2014)*

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—The Air Force is searching for innovative, technology-based small businesses to compete for Small Business Innovation Research and Small Business Technology Transfer, or SBIR and STTR, research and development contracts.

“We’re trying to foster innovative technology solutions for the warfighter and the U.S. Air Force SBIR and STTR programs [by providing] more than \$300 million in funding for research and development activities by small businesses annually,” said David Sikora, the Air Force SBIR/STTR program manager. “With this budget, the Air Force funds research from the early stages of concept development until it transitions to military or commercial use.”

During a September roadshow, Sikora will visit several western U.S. cities, meeting with small business owners and community leaders to discuss funding for high-risk projects that meet Air Force needs, intellectual property rights for the small business, and Air Force assistance with transitioning or commercializing SBIR- and STTR-funded technology. The roadshow will take place September 22-26, visiting locations in Bozeman, Montana; Idaho Falls and Boise, Idaho; and Salt Lake City.

The Air Force SBIR and STTR programs are mission-oriented programs that integrate the needs and requirements of the Air Force through research and development topics that have military and commercial potential. The SBIR program was established by Congress in 1982 to fund research and

development, or R&D, through small businesses of 500 or fewer employees. The STTR program was established in 1992 to fund cooperative R&D projects with small businesses and nonprofit U.S. research institutions, such as universities.

For more information about the roadshow and the programs, including commercialization readiness assistance for existing contracts, visit the program website at <http://www.afsbirsttr.com>.

### **Career Ordnance Corps Member Earns Sharpe Award**

*PROGRAM EXECUTIVE OFFICER-INTELLIGENCE, ELECTRONIC WARFARE AND SENSORS NEWS RELEASE (AUG. 28, 2014)*

*Brandon Pollachek*

TOBYHANNA ARMY DEPOT, Pa. —A Tobyhanna Army Depot maintenance professional continues one man’s legacy of service to the Army Ordnance Corps—nearly 400 years later.

Rodney Thomas, who has deployed to the combat zone 13 times, received the Ordnance Order of Samuel Sharpe Award during a ceremony at Aberdeen Proving Ground, Md. Thomas is the chief of the Field Logistics Support Directorate’s West Division and a retired warrant officer with 28 years of federal service.

The award is the culmination of Thomas’ long career that most recently included a tour in Afghanistan serving as Tobyhanna’s theater supervisor and deputy product manager Counter Remote Controlled IED Electronic Warfare System (Forward), or CREW. There he supported a number of Army systems, including a large portion of the Program Executive Officer for Intelligence, Electronic Warfare and Sensors (PEO IEW&S) portfolio.

“Certainly joining such a distinguished society as the 2,097th inductee is a highlight of my life,” Thomas said after receiving the Sharpe award. “More amazing was the opportunity to shake hands with triple-digit award winners of this time honored society.”

The Sharpe award recognizes those individuals who have served the U.S. Army Ordnance Corps with demonstrated integrity, moral character, and professional competence over a sustained period of time. Dr. Richard Wittstruck, deputy PEO IEW&S, presented the award.

The history behind the Sharpe award comes from its namesake, who according to the U.S. Army Ordnance Corps Association, “was appointed to many positions in government during the very early years of this country. As the first set-



Rodney Thomas (right), chief of the Tobyhanna Army Depot Field Logistics Support Directorate's West Division, accepts the Samuel Sharpe Award from Dr. Richard Wittstruck, Deputy Program Executive Officer-Intelligence, Electronic Warfare and Sensors, during an Aug. 28, 2014, ceremony conducted at Aberdeen Proving Ground, Md.

U.S. Army photo

tlers were arriving at the New World, many things would change about the government and life in general. The government of the Massachusetts Bay colonies was resided over by a governor, deputy governor, and a council consisting of 13 freemen. Sharpe served as one of these freemen.

In 1628 he was also charged with the care of the "five pieces of ordnance that belonged to the colony."

Thomas continues the long tradition of service set by Sharpe to the Ordnance Corps and greater Army serving as a long-time maintenance professional. A combination of experience and expertise afforded Thomas the opportunity to lead a team focused on sustaining many of the Army's critical life-saving systems operating in Southwest Asia.

"Thomas managed the day-to-day execution and oversight of Department of the Army assets in excess of \$1 billion," said Edwin Henry, former director of PEO IEW&S Forward in Afghanistan. "He led more than 150 Army civilians in the sustainment of over 50,000 force protection electronic devices and systems [meant to protect the warfighter from improvised explosive devices] at nearly 100 forward operating bases in Afghanistan."

Thomas and his team supported CREW, the Base Expeditionary Targeting Surveillance System-Combined, counter fire radars, and Rapid Aerostat Initial Deployment.

"Under Thomas' leadership, the workforce was able to retain an overall system operational readiness rating in excess of 90 percent for assigned systems," Henry noted. "He also implemented several responsible retrograde plans, resulting in a 50 percent manning reduction. His knowledge of logistics and the Army culture was truly a force multiplier for the PEO IEW&S team."

Tobyhanna Army Depot is a recognized leader in providing world-class logistics support for Command, Control, Communications, Computers, Intelligence, Surveillance and Reconnaissance (C4ISR) Systems across the Department of Defense. Tobyhanna's Corporate Philosophy, dedicated work force, and electronics expertise ensure the depot is the Joint C4ISR provider of choice for all branches of the Armed Forces and industry partners.

Tobyhanna's unparalleled capabilities include full-spectrum support for sustainment, overhaul and repair, fabrication and manufacturing, engineering design and development, systems integration, technology insertion, modification, and global field support to warfighters.

About 3,300 personnel are employed at Tobyhanna, which is located in the Pocono Mountains of northeastern Pennsylvania. Tobyhanna Army Depot is part of the U.S. Army Communications-Electronics Command. Headquartered at Aberdeen Proving Ground, Md., the command's mission is to research, develop, acquire, field, and sustain communications, command, control, computer, intelligence, electronic warfare, and sensors capabilities for the Armed Forces.

### **AFRL's Directed Energy Receives AF Organizational Excellence Award**

*AIR FORCE RESEARCH LABORATORY NEWS RELEASE (AUG. 28, 2014)*

*Jeanne Dailey*

KIRTLAND AIR FORCE BASE, N.M.—The Air Force Research Laboratory's Directed Energy Directorate received the Air Force Organizational Excellence Award, its fifth AFOE award since 1997.

Bringing "Speed of Light to the Fight," the directorate focuses its research and development on high power electromagnetics, laser systems, adaptive optics, and weapons modeling and simulation for directed energy technologies.

"This award recognizes the extraordinary work our airmen do each and every day," said Maj. Gen. Tom Masiello, AFRL commander. "Directed energy technologies are providing unique and revolutionary capabilities to several United States Air Force mission areas. The men and women of the Directed Energy Directorate can be proud of their game-changing advances in support of the nation and our warfighters."

The award recognizes the directorate for transforming modern high energy laser systems by improving the size, weight, and power of lasers needed to make them combat ready, and for developing a non-lethal technology that can be used on air platforms to disrupt an enemy's electronics while causing little or no damage to buildings or harm to people.

It also cites the directorate's breakthroughs in space situational awareness research that provides 24/7 space imaging and the best-ever images of satellites with ground-based adaptive optics. The directorate operates the Department of Defense's largest telescopes, the 3.6-meter telescope on Maui, Hawaii, and the 3.5-meter telescope located on Kirtland Air Force Base.

"Innovation in science and technology, along with our great airmen, will keep our Air Force ready for any challenge," said Dr. David Hardy, director of the Directed Energy Directorate.

"We have a superb team here, and I'm thrilled to see our people recognized for their creativity."

Military and civilian members assigned or attached to the AFRL Directed Energy Directorate from May 1, 2011, to April 30, 2013, are authorized to wear the ribbon. Personnel who have questions regarding the wear of the ribbon should contact their local Force Support Squadron.

The Air Force Research Laboratory headquarters is located at Wright-Patterson Air Force Base, Ohio, and is a unit of the Air Force Materiel Command.

### **Counter-IED Branch Receives Top AFA Award**

*66TH AIR BASE GROUP PUBLIC AFFAIRS (SEPT. 3, 2014)*

*Justin Oakes*

HANSCOM AIR FORCE BASE, Mass. (AFNS) -- A team of Counter-Improvised Explosive Device Branch members from Hanscom Air Force Base here will take center stage and receive one of the Air Force Association's top honors during the 2014 Air and Space Conference Award Ceremony, Sept 15.

The 12-member C-IED program office, a unit within the Life Cycle Management Center's Force Protection Division, was named the winner of the Theodore von Karman Award -- an honor given to those who have made significant contributions to national defense in the field of science and engineering.

"We have a very important mission," said 1st Lt. Wesley Thomas, a C-IED project engineer. "And it's definitely an honor to be recognized, but the real validation comes from knowing our work saves lives."

Just as the name suggests, the C-IED program office is responsible for capabilities and technology used to detect and destroy one of the most common and damaging weapons found on today's battlefield -- IEDs.

"IEDs come in many shapes and sizes," Thomas said. "These devices are hidden on vehicles, planted within the soil on roadways and also come in the form of humans as suicide bombers."

While the team's contributions are numerous, several particular efforts led to its recent recognition.

The development and deployment of the world's smallest synthetic aperture radar, or SAR, for airborne IED detection is one such example.

The team equipped four RQ-7 Shadow unmanned aerial vehicles with a lightweight Ku band SAR and an ultra-wide band, ultra-high frequency SAR. Integrated onto the Shadow, the system provides threat detection capabilities to dismounted troops and route clearance patrols. This capability is currently unavailable on any other lightweight portable aircraft.

However, the SAR system wasn't the only piece of equipment the C-IED team procured for UAVs.

A system called the "Terminator," a lethal miniature aerial munitions system, is now in use as a result of the C-IED team. And the system does exactly what its name implies—destroy threats.

"It's a small UAV packed with a miniature warhead," Thomas said. "It allows ground troops to engage enemy forces and IEDs from a distance, behind obstacles, without exposing the warfighter to direct enemy fire."

In addition to advancements in aerial technology, the C-IED team recognized that improvements were needed on the ground as well.

The program office was able to provide metallic and non-metallic handheld detectors—equipment that uses ground penetrating radar—to all 36 deployed Air Force explosive ordnance disposal teams.

"We also conducted a study and solicited feedback from operators to determine what types of upgrades were needed to their bomb suits," Thomas said.

Identified upgrades include an improved communications system between the operators inside and outside the suit as well as adjustments in the lighting and speakers within the helmet that provide visual and audible validation of threats.

"This is in response to an urgent operational need and is a crucial upgrade that is now well in the works through the Air Force quick reaction capability process," Thomas said.

Integration of the SAR system, deployment of the Terminator capability, and upgrades to Air Force EOD equipment were just a few of the reasons that led to the AFA award.

"I couldn't be more proud of the Counter-IED team and their contributions," said Steven Wert, the Battle Management program executive officer. "It is an extremely small team doing critically important work. Their rapid response and innovation is an outstanding example of the Battle Man-



An explosive ordnance disposal member scans the soil using a Vallan "Minehound" VMR2 metal detector during a 2012 operational utility event at the Naval Surface Warfare Center in Panama City, Fla. The detector uses ground penetrating radar to locate low- to non-metallic mines that can elude traditional metal detectors. The Counter-Improvised Explosive Device Branch, a Life Cycle Management Center team based out of Hanscom Air Force Base, Mass., was responsible for equipping 36 deployed Air Force EOD teams with the latest handheld detectors.

U.S. Air Force photo/Donald MacMillan

agement team's commitment to meet today's warfighting challenges using cutting edge technology and a 'Can do, will do' attitude."

### **Wolfenbarger Notified of Order of the Sword Induction**

AIR FORCE MATERIEL COMMAND PUBLIC AFFAIRS (SEPT. 8, 2014)  
WRIGHT-PATTERSON AIR FORCE BASE, Ohio—In a ceremony Sept. 3, Gen. Janet Wolfenbarger, commander of Air



Gen. Janet Wolfenbarger, Air Force Materiel Command commander, expresses her surprise and gratitude to Chief Master Sgt. Michael Warner, AFMC command chief (left)—and all the command’s enlisted airmen—at being selected for induction into the Order of the Sword.

U.S. Air Force photo/J. C. Snediker

Force Materiel Command, learned she has been selected for induction into the AFMC Order of the Sword.

The surprise notification was made in front of hundreds of airmen from Wright-Patterson as well as senior leaders from across the command—gathered at the base for a senior leader conference—at the close of the day’s conference sessions.

Chief Master Sgt. Michael Warner, AFMC’s command chief and senior enlisted leader, announced the induction and explained the significance of the honor.

“This award was established by our enlisted force to recognize and honor senior officers for distinct and significant contributions to the welfare and prestige of the enlisted force, to mission effectiveness, and to the overall military establishment,” he said.

Wolfenbarger’s nomination was reviewed by the AFMC Order of the Sword executive committee, who represent the command’s 12,666 enlisted airmen. The committee, com-

prised of the AFMC command chiefs, voted unanimously in favor of the general’s induction.

“You lead with passion; you care about every one of your airmen; you have made their quality of life, their training and development, and their resources in a tough environment a priority,” Warner told her. “We are excited to induct you into our Order of the Sword because you are a leader among leaders and an airman among airmen!”

The general was noticeably surprised and humbled by the notification.

“This has got to be the highest honor I could ever have bestowed on me, of anything that I could think of in my entire three-plus decades in the United States Air Force. It doesn’t get any better than this,” she said. “Thank you all very, very much.”

Wolfenbarger’s formal induction ceremony is scheduled for Feb. 5, 2015.

### **Continuous Improvement Central to Better Buying Power 3.0**

DEPARTMENT OF DEFENSE NEWS RELEASE (SEPT. 19, 2014)

Claudette Roulo

WASHINGTON—The undersecretary of defense for acquisition, technology and logistics released a draft of the third iteration of the Pentagon's Better Buying Power initiative today, noting that it emphasizes innovation and technical excellence while remaining focused on continual improvement.

The final version is expected to be released in January, Frank Kendall said during a presentation at the Center for Strategic and International Studies.

At their hearts, each Better Buying Power version has been based on the principle of evolutionary change, he said. "It isn't about throwing out one set of ideas and completely replacing them with another set," the undersecretary noted.

The evolution of Better Buying Power BBP 1.0 emphasized specific best practices. BBP 2.0 built on those practices to emphasize the development of critical thinking skills and better decision-making tools.

And BBP 3.0 continues the focus on continuous improvement, Kendall said, through a new emphasis on initiatives that encourage innovation and promote technical excellence. "There's an enormous amount of continuity between 2.0 and 3.0," he noted.

This version of BBP renews the focus on the capabilities the department provides to troops, the undersecretary said.

"Our technical superiority is at risk," Kendall said. "It is eroding, because we're not making the investments we should be making." Sequestration is posing significant problems for the department in terms of maintaining technical superiority, he added.

BBP 3.0 is aimed at strengthening the professionalism of the acquisitions corps and developing better relationships with industry through incentives and removal of barriers and red tape to ensure the department can achieve dominance while still controlling life-cycle costs, the undersecretary said.

### **Eight Focus Areas**

The new BBP will have eight focus areas:

- Achieve affordable programs;
- Achieve dominant capabilities while controlling life-cycle costs;
- Incentivize productivity in industry and government;
- Incentivize innovation in industry and government;

- Eliminate unproductive processes and bureaucracy;
- Promote effective competition;
- Improve tradecraft in acquisition of services; and
- Improve the professionalism of the total acquisition workforce.

Some of these focus areas carried over from BBP 2.0, Kendall said, because they are central to what the department is trying to achieve and are likely to be in any version of Better Buying Power.

### **A Narrower Focus**

While some of the larger objectives remained the same, their focus has narrowed, Kendall explained. In addition, the circle of stakeholders has expanded. For example, he said, it's no longer sufficient just to control life-cycle costs, as was the case under BBP 2.0. Now, acquisition professionals are asked to ensure their programs will build dominant capabilities. To do so, it is necessary to build the relationship among the acquisition, requirements, and intelligence communities, the undersecretary said.

As adversaries have become more technically adept and new threats emerge, the acquisition community has to be prepared to adjust as it plans new programs, Kendall said.

"The idea is to get to the next generation of those things, find out what they are, do it in a coherent way, and then focus our resources on programs that are going to change the game," he said. "If we don't do that, the concern I have about technology priorities is going to become even greater."

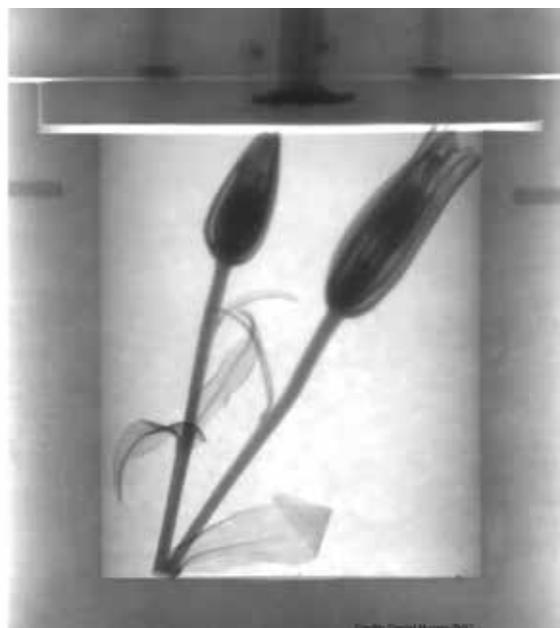
### **Industry Incentives**

Getting to the next generation of development requires research, and one way Kendall said the department will seek to spur research is through incentive programs. The Superior Supplier Incentive Program will expand across all the military services, he said. The Navy ran a pilot program that already has shown results, the undersecretary said.

"The Navy published its list. I had a CEO come in to me and say that because [his company] was in the bottom third of the three segments, he had to go explain to his board why," Kendall said.

"I thought, 'This is terrific. This is exactly what I want to see because of this,'" he added.

Another way of encouraging research is through the removal of barriers to the Defense Department's use of commercial technologies, the undersecretary said. "We want to find a way to bring innovators who are in the commercial world



DARPA's Intense and Compact Neutron Sources (ICONS) program seeks to develop a portable unit able to generate both neutrons and X-rays. Such a device would harness the complementary strengths of the two imaging sources and enable much more detailed radiography in field settings. Pictured above is an example of neutron imaging provided by the National Institute of Standards and Technology (NIST) with the following explanation: A digital camera took an overhead picture of the open cask (left) and a neutron imaging system photographed the lilies through the lead walls of the cask (right). This image demonstrates the power of neutrons to easily pass through otherwise "impenetrable" materials, such as the lead cask, and yet have enough sensitivity to reveal fine details such as the leaf veins of the Asiatic lilies. The neutron image has been sharpened slightly to improve black-and-white contrast for viewing on the Web.

NIST Photo/caption

[and] give them a reason to be involved with the government and do business with the government," he said.

In the end, Kendall said, BBP 3.0 attempts to balance two competing goals: affordability and technological development. "We have no choice," he added. "We can't be complacent and sit and wait. We have to have decisions about how to use our resources in some way to stay ahead of the other guys."

### Neutron Vision: Going Beyond X-Rays for Advanced Imaging in the Field

DEFENSE ADVANCED RESEARCH PROJECTS AGENCY PUBLIC AFFAIRS (SEPT. 24, 2014)

Seeking to expand the nation's capability to detect and identify materials that are not easily visualized by conventional imaging technologies, DARPA today released an announcement inviting proposals to develop portable, next-generation imaging tools that combine the complementary benefits of X-ray and neutron radiography.

X-Ray imaging has proven invaluable in a host of military and commercial applications—from spotting tiny cracks in aircraft wings, to making medical diagnoses, to scanning passengers' bags to keep the flying public safe. As useful as X-ray scanning is, however, it is limited in what it detects. For example, while X-ray radiography can highlight heavier chemical elements very well (think of shiny silver fillings on a dental X-ray), it's not very good at revealing lighter elements, such as hydrogen. That's why X-ray radiography machines are generally "blind" to water or other liquids.

By contrast, neutron radiography—which uses neutrons to image objects—is very good at visualizing lighter elements and liquids, in some cases even identifying a substance's atomic makeup. Unfortunately, neutron sources are not nearly as portable and practical as X-ray machines, typically extending up to tens of meters in length and requiring powerful energy sources to generate the neutrons.

DARPA's new Intense and Compact Neutron Sources (ICONS) program seeks to develop a portable unit able to generate both neutrons and X-rays. Such a device would

harness the complementary strengths of the two imaging sources and enable much more detailed radiography in field settings.

"We're looking for innovative designs and construction methods to shrink a neutron accelerator from 10 meters or longer down to 1 meter or less, similar to the size of portable X-ray tubes today," said Vincent Tang, DARPA program manager. "Creating a high-yield, directional neutron source in a very compact package is a significant challenge," Tang added. "But a successful ICONS program would provide an imaging tool with significant national security applications, able to deliver very detailed, accurate internal imaging of objects in any setting."

For example, Tang said, ICONS could enable non-destructive evaluation of military equipment with greater fidelity than X-rays, revealing water penetration and corrosion in aircraft wings, and welds on ships. Neutron imaging could also help detect explosives and contraband by identifying the chemical and atomic make-up of an object or its contents. And it could assist in forensics and attribution, such as differentiating sources of ammunition through imaging of the propellant fill levels.

The ICONS program seeks expertise in accelerator and plasma science, high-voltage engineering, enabling multi-

function materials, integrated design optimization, and pulsed power. The Broad Agency Announcement (BAA) solicitation was released today and is available on FedBizOpps at <http://go.usa.gov/dWJw>.

Media with inquiries should contact DARPA Public Affairs at [outreach@darpa.mil](mailto:outreach@darpa.mil).

### Two AFRL Researchers Honored With 'Oscars' For Public Service

*AIR FORCE NEWS SERVICE (SEPT. 25, 2014)*

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—Two Air Force Research Laboratory engineers here were honored Sept. 22, with coveted Samuel J. Heyman Service to America Medals.

Sean Young and Benjamin Tran were presented the National Security and International Affairs Medal in Washington D.C. by the nonprofit, nonpartisan Partnership for Public Service. Young and Tran are electronics engineers with AFRL's Sensor Directorate.

The two were honored as lifesavers for leading the development, testing, and deployment of a cutting-edge aerial sensor used to locate and destroy improvised explosive devices in Afghanistan. IEDs have historically been the number one threat to American forces in the region.



Deputy Defense Secretary Bob Work, right, presents the 2014 Samuel J. Heyman Service to America Medals to Ben Tran, left, and Sean Young, center, for their work in the field of national security and international affairs at the Sammie Awards national gala Sept. 22, 2014, in Washington, D.C.

DoD photo/U.S. Navy Petty Officer 2nd Class Sean Hurt

In their words, working as a collaborative team with AFRL's Center for Rapid Innovation, Young and Tran took existing capabilities and combined them in a new way to create a game-changing technology so fielded Army, Marine, and special forces units can find IEDs and the individuals manufacturing and placing them.

Young and Tran were honored along with eight other Service to America Medal recipients, who were nominated by colleagues familiar with their work and selected by a committee that includes leaders in government, academia, the private sector, media, and philanthropy. Nearly 400 nominations were submitted for consideration this year. The awards have been likened to the "Oscars" of government service.

"This is a huge honor for the U.S. Air Force and reflects the creativity, skill, and dedication of AFRL people to solving urgent warfighter needs," said Maj. Gen. Tom Masiello, the AFRL commander. "These young men incorporated sensing technology aboard remotely piloted aerial vehicles in a truly innovative way to help American warfighters identify and destroy IEDs before they could cause harm."

For profiles and videos of each of the medalists, visit <http://www.servicetoamericamedals.org>.

The Samuel J. Heyman Service to America Medals program is named in memory of business leader and philanthropist Samuel J. Heyman, who in 2001 founded the Partnership for Public Service to revitalize federal government and to inspire a new generation to serve.

### **DoD Announces Maintenance Award Recipients**

*DEPARTMENT OF DEFENSE NEWS RELEASE (SEPT. 26, 2014)*

WASHINGTON—The Department of Defense today announced the 2014 recipients of the Secretary of Defense Maintenance Awards for depot- and field-level units. These awards are presented annually to recognize outstanding achievements in weapon system and military equipment maintenance.

The depot-level award is named in recognition of Robert T. Mason, a former assistant deputy undersecretary of defense for maintenance policy, programs, and resources. Mason served as the champion of organic depot maintenance for three decades and was instrumental in transforming DoD organic depot-level operations.

The 2014 Robert T. Mason Depot Maintenance Excellence Award recipient is the Air Force F-22 Raptor Depot Maintenance Team, Ogden Air Logistics Complex, Utah. With meticulous management, the team repatriated a \$41 million

workload to Air Force oversight, generating 242,557 man-hours of critical maintenance activities supporting units across the world. The team's dedication to velocity and forward progress enabled a 109-day average turnaround time per aircraft, setting a program milestone.

A total of six field-level awards are presented in three categories—large, medium, and small. The recipients of this year's Secretary of Defense Field-level Maintenance Awards in the large category are the 1st Maintenance Battalion, Camp Pendleton, Calif., and the *USS GEORGE WASHINGTON*, Yokosuko, Japan. Winners in the medium category are the 333rd Signal Company, 78th Signal Battalion, Okinawa, Japan, and the 801st Special Operations Aircraft Maintenance Squadron, Hurlburt Field, Fla. The small category winners are the Helicopter Maritime Strike Squadron 75, Naval Air Station North Island, Calif., and the Strike Fighter Squadron 211, NAS Oceana, Va.

The Secretary of Defense Field-level Maintenance Awards are symbolized by the legendary Phoenix, a mythological bird which lived for some five centuries, died, was consumed by flames, and then reborn from its own ashes. Periodically, so states the myth, the Phoenix would again and again be reborn. This unique ability of the legendary Phoenix to rejuvenate and renew itself characterizes the role of weapon systems and maintenance in the DoD. The winner of the Phoenix Award, recognized as the best of the best field-level maintenance units, will be selected from the six field-level award winners.

Additionally, the Department has established a new award category recognizing excellence in maintenance training, advice, and assistance of foreign security forces to emphasize the growing importance of capability of our international partners and our role in maturing that capability. Awards are presented in three categories—ministerial, operational (large), and operational (small).

The recipients of this year's Secretary of Defense Award for Excellence in Maintenance Training, Advice, and Assistance of Foreign Security Forces Award in the ministerial category is the Ministry of Defense Ministerial Advisory Group Logistics Advisory Team and Sustainment Enterprise Advisory Group Strategic Initiatives Team, International Security Assistance Force, Headquarters, Kabul, Afghanistan, United States Central Command.

The winner of the operational (large) category is the 438th Air Expeditionary Wing (438 AEW), 9th Air Expeditionary Task Force, Kabul International Airport, Kandahar Air Field,

and Shindand Air Field, United States Air Force Central Command.

The winner of the operational (small) category is the 526th Brigade Support Battalion, 2nd Brigade Combat Team, 101st Airborne Division, Combined Joint Task Force-10, Regional Command-East, ISAF, Bagram Air Field, Afghanistan, U.S. Central Command.

The awards will be presented to the winners on Nov. 18, 2014, in the Sheraton Birmingham Hotel, Birmingham, Ala., during the awards ceremony that's part of the 2014 DoD Maintenance Symposium.