

DEPARTMENT OF DEFENSE NEWS RELEASE  
(SEPT. 9, 2008)

### **DoD Selects Tribal Colleges and Universities for Grants**

The Department of Defense announced today plans to award instrumentation grants totaling \$2.4 million to 13 tribal colleges and universities. These grants will be made under the fiscal 2008 DoD Historically Black Colleges and Universities and Minority Institutions Infrastructure Support program. The grants will enhance programs and capabilities at these minority institutions in scientific disciplines critical to national security and the DoD.

This announcement is the result of merit competition for infrastructure support funding conducted for the Office of Defense Research and Engineering by the Army Research Office. The solicitation resulted in 15 proposals in response to a broad agency announcement issued in May 2008. The Army Research Office plans to award 13 equipment grants ranging from \$97,000 to \$244,000. Each award will have a 12-month performance period.

Awards will be made only after written agreements are reached between the department and the institutions. The list of recipients is available at [www.defenselink.mil/news/d20080909grants.pdf](http://www.defenselink.mil/news/d20080909grants.pdf).

ARMY NEWS SERVICE (SEPT. 11, 2008)

### **Picatinny Engineer Awarded Two Patents for New Grenade Ammunition Designs**

*Audra Calloway*

PICATINNY ARSENAL, N.J.—On Aug. 5, the U.S. Patent and Trademark Office issued an Armament Research, Development and Engineering Center employee two patent approvals for new designs to be incorporated into the ammunition belt for the MK 19 grenade machine gun. The MK 19 40mm grenade machine gun is used by all military services to deliver intense firepower against enemy personnel and lightly armored vehicles.

The designs to be incorporated into the belt, which is called a 40mm M16A2 link, are meant to keep gunners safer on the battlefield, help conserve ammunition, and save money.

ARDEC engineer Eric Goon designed the new concepts, the first of which is a coupling, or pivoting, used to connect grenade ammunition cartridge loops.

The new coupling design provides a potential life-saving feature. It allows MK 19 gunners to attach ammunition belts without having to reload the weapon when under hostile gunfire, Goon said.

In the current attachment system, grenade ammunition comes in a continuous link of 32 grenades, Goon said. The grenades cannot be detached, or reattached to other ammunition belts, unless they are cut or pried open.

Therefore, if an MK 19 gunner needs more ammunition, the feed cover must be opened to reload. With the new attachment, an assistant gunner could fasten another belt to the partial belt so that the weapon does not require reloading.

Goon said this saves time and potentially a warfighter's life.

The reattachment feature also allows military members to recover partially used clips and attach them to other ammunition belts for future use, he said. This new reattachment feature provides a way of salvaging costly field ammunition that would be rendered useless or costly to recover with the current design.

Goon estimates the coupling will save the Army more than \$2 million dollars per year in unused grenade rounds, which cost approximately \$40 per round.

The second patent invention is for a new method of making 40mm one-piece loops for the grenade ammunition cartridge.

The metal loop, which surrounds the individual grenade, is what the coupling will attach to in order to link the grenades together.

Currently the loop comes in two parts and is bonded together using resistance-welding, Goon said. This welding, although effective, is seen as an undesirable operation because the welded sections could potentially rust over time, weakening the bond and threatening the integrity of the link.

The approach taken for the invention is to eliminate the welds in their entirety, creating a solid one-piece loop, he said.

This new single-piece loop design offers a more durable product, a 15 percent weight reduction of the component, and a potential cost reduction of approximately 30 percent, said Goon.

### **For the Soldier**

Goon said he decided to improve the grenade ammunition link after a request from troops in the field who said they needed a reliable way to reuse ammunition through re-linking the belts.

He heard about the issue through an ARDEC engineer team deployed in battle zones to survey warfighters and gain feedback about complaints or technological deficiencies.

"When I heard about that I said, 'Wait, we need to answer the call for the soldier, our customer,'" Goon said. "I said 'let's do something about it.'"

Goon said he spent approximately six months designing the inventions.

While the patent for the new designs was pending, Goon said he worked with a contractor to ensure the designs were producible.

Once incorporated, Goon said the new invention designs will not be noticeable to the military members who use the product, except for the enhanced pivoting features. There will be no modification in the way the user handles the weapon system.

"I didn't want to change the whole system, because it would be too costly," Goon said. Instead, he "enhanced" the current system to make it more efficient.

Troops could see the coupling device as early as fiscal year 2009 and the one-piece loop as early as fiscal year 2010.

*Calloway writes for Picatinny Public Affairs.*

AIR FORCE MATERIEL COMMAND NEWS RELEASE  
(SEPT. 20, 2008)

### **AF-Funded Engineer Earns Honors for Scientific Achievements**

*Molly Lachance*

ARLINGTON, Va.—After decades of research at the University of Michigan in areas ranging from materials to circuits, 2008 has been an especially noteworthy year for Dr. Pallab Bhattacharya, who earned numerous accolades from the engineering community.

This year, three organizations recognized Bhattacharya for his significant achievements. The National Academy of Engineering elected him as a member; the Institute of Electrical and Electronics Engineers Nanotechnology Council co-awarded him the first ever Pioneer Award in nanotechnology; and The Minerals, Metals, and Materials Society chose him as the 2008 John Bardeen award recipient.

These awards and recognition resulted from Bhattacharya's impact on optoelectronics and nanophotonics. His work with

quantum dots has improved laser, optical communication, and long-wavelength detector technologies.

Quantum dots are very small, self-organized islands of semiconductors that behave like artificial atoms, explains Bhattacharya. One big difference, however, is how they behave when injected with electrons and holes, collectively referred to as charge carriers.

After dedicating considerable effort to understanding the dynamics of these injected charge carriers, Bhattacharya was ultimately able to use quantum dots to create a new type of laser that combined the best qualities from semiconductor lasers and atomic lasers.

"A decade ago, we were the only group in the world looking at the initial deficiencies of high-speed quantum dot lasers," Bhattacharya said. "We solved the problems and now they are awesome devices."

As he and his team learned more about the pros and cons of using quantum dots in laser technology, they found that some of the deficiencies in laser applications are advantages for long-wavelength detectors. One such advantage is the ability to use the detectors at much higher temperatures.

A current project funded by the Air Force Office of Scientific Research has extended this research to terahertz-frequency wavelength detectors. The Air Force plans to use these devices, which measure very long wavelengths, for multispectral detection in airborne and terrestrial settings.

In another AFOSR-funded project, Bhattacharya is exploring the possibility of growing quantum dot lasers directly on silicon, allowing scientists to use light instead of charge to route information on chips. This would eliminate the need for metal interconnects, which generally have problems with heating, electromigration, and propagation delays.

Over the next several years, Bhattacharya will continue his research, focusing primarily on silicon light sources and nanolasers with total dimensions no larger than their wavelengths.

*Lachance is with the Air Force Office of Scientific Research.*

AIR FORCE MATERIEL COMMAND NEWS RELEASE  
(SEPT. 22, 2008)

### **Scientist Receives Air Force Award**

*Pete Meltzer Jr.*

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—An award-winning scientist and a principal electronics research engi-

neer at the Air Force Research Laboratory has been named a 2008 Fellow of AFRL for outstanding contributions to the Air Force and the Department of Defense.

Dr. James Grote has worked at AFRL for 30 years and is an acknowledged leader in several areas of research and development, including laser gyros, nonlinear electro-optic sensor materials and devices, optical interconnects and optical lithography, and DNA-based materials and devices. He has worked on subsurface fractures on mirror substrates, improving position and weapons accuracy, and reducing inertial navigation system drift for ring laser gyros.

Grote developed optical interconnects for communications networks, which are now part of parallel high-speed transceivers for military information systems. He invented the technology for conductive polymer claddings for nonlinear optic polymer electro-optic modulators, resulting in a tenfold improvement and a record 30 percent enhancement in the electro-optic coefficient. Grote initiated AFRL's DNA-photonics research, which has demonstrated unique, state-of-the-art improvements in materials properties and device performance using this new bio-organic-based technology.

Grote's contributions to the Air Force and the Department of Defense are complemented by his stature in the peer research community, evidenced by more than 100 publications, seven patents, and 15 edited books.

He has earned several prestigious awards including the Fritz J. Russ Bio-Engineering Award; the AFRL International Award; the Charles J. Cleary Award for Scientific Achievement; an Air Force Basic Research Award Honorable Mention; Senior Member status in the Institute of Electrical and Electronic Engineers; the Outstanding Professional Achievement in Science Award from the Affiliate Societies Council of Dayton, Ohio; and a Fellow appointment from the International Society for Optical Engineering.

Grote has directed a number of key technologies from seedling research into internationally recognized programs, and his efforts have spurred the production of numerous seminal joint publications and technology transitions. He is credited with more than 100 invited plenary and keynote lectures at symposia, conferences, universities, and industry and government laboratories. He has lectured worldwide and his work has been published in top-tier journals, resulting in numerous successful international scientific collaborations and breakthroughs. His work has been cited more than 200 times in top journals, and his research has been highlighted by coverage in many leading publications.

His current research focus involves DNA-based bio-organic materials and devices. He formulated and currently leads an international effort investigating bio materials for optical waveguides, electro-optic modulators, organic light emitting diodes, field effect transistors, lasers, and sensors.

*Meltzer is with the Air Force Research Laboratory's materials and manufacturing directorate at Wright-Patterson AFB, Ohio.*

ARMY NEWS SERVICE (SEPT. 26, 2008)

### **Two TACOM LCMC Employees Receive First DA Master Black Belt Certifications**

*TACOM LCMC Public Affairs*

Jim Wasiloff and Mary Nelson, assigned to the G5/7 at Tank-Automotive and Armaments Command Life Cycle Management Command, own the distinction of being the first and second Army employees to be granted the Department of the Army Lean Six Sigma Master Blackbelt Certification.

Requirements included several weeks of intensive training in Washington, D.C., a comprehensive exam, eight weeks of co-teaching blackbelt classes at distant locations, coaching and mentoring blackbelts through various projects, while completing their own Lean Six Sigma projects.

Maj. Gen. William M. Lenaers presented Wasiloff with his official certificate at an award ceremony April 16, and the new TACOM LCMC Commander Maj. Gen. Scott G. West presented Nelson with her official certificate Aug. 5.

Kevin Fahey, the program executive for Program Executive Office-Ground Combat Systems, who also serves as the TACOM LCMC Lean Six Sigma executive deployment advisor, presented both of them with unique coins, provided and personalized by the Department of the Army. Each coin has the Master Black Belt's name engraved; and the coins are stamped 00001 and 00002 signifying the first and second DA-certified Master Black Belts.

ARMY NEWS SERVICE (OCT. 2, 2008)

### **RDECOM Inventors Patent Multi-Channel Technology with Wide Array of Uses**

*Cindy Wallace*

Two Redstone Arsenal employees recently developed a patented technology with potential uses in radar, sonar, imaging, satellites, global positioning systems, communications devices, and wireless communications, according to the U.S. Army Aviation and Missile Research, Development and Engineering Center.

The technology, dubbed the Apparatus and Method for Multi-channel Equalization, enables sensors to pick the

best channel from those available and avoid signal quality breakdowns that can wreck system performance, according to inventors Jeffrey Levasseur and Brent Worley. It also brings another patent to the AMRDEC portfolio of technology advances, which the U.S. Army Research, Development and Engineering Command element routinely shares with civilian enterprises.

The two inventors have a long history with AMRDEC. Levasseur began his career there 26 years ago experimenting with prototype radar systems and has earned two Army Research and Development Achievement Awards for his contributions. Worley joined AMRDEC more than 21 years ago experimenting with digital beam forming arrays and adaptive signal processing. The two men both now work at the advanced technology division of the advanced sensors, guidance, and electronics directorate.

Improving the performance of sensor systems is important to AMRDEC, which works to deliver the best performance to Army warfighters. Some advanced sensors use what is called a channel-matching process to work better in environments with a lot of interference. The process involves having the multi-channel system select a reference channel from among the many available to it. Until this advancement, systems would pick a channel arbitrarily. About 10 years ago AMRDEC's researchers realized they could improve that process by coming up with a way for sensors to select a reference channel intelligently. The resulting invention significantly improves performance by increasing system sensitivity and allowing the system to make real-time adjustments to prevent the failures that can occur with existing technology.

"The improvements include an apparatus and an algorithm that select a reference channel in the adaptive process during each system calibration cycle, producing optimal, or near optimal, channel matching" said Levasseur.

The invention now becomes part of AMRDEC's technology commercialization program, which the center uses to stimulate commercial use of technologies it has developed.

*Wallace is with the U.S. Army Aviation and Missile Research, Development and Engineering Center at Redstone Arsenal, Ala.*

MEDICAL COMMUNICATIONS FOR COMBAT CASUALTY CARE (MC4) NEWS RELEASE (SEPT. 29, 2008)

### **MC4 Becomes First Product Management Office to Win Army Superior Unit Award**

FORT DETRICK, Md.—During a change of charter ceremony held Sept. 25 at Fort Detrick, Md., the Army's former Medical Communications for Combat Casualty Care (MC4) Commander Lt. Col. Edward Clayson announced MC4's selection for the Army Superior Unit Award.

Digital health recording and automated medical logistics efforts on the battlefield will be led by the new commander for the MC4 Product Management Office, Lt. Col. William Geesey.

MC4 is the first Army product management office and fifth Army acquisition organization to win the ASUA.

"This award pays as much a tribute to our deployed medical professionals and commanders as it does to the MC4 workforce," Clayson said. "ASUA recipients exemplify superior performance of exceptionally difficult tasks. Expanding MC4 systems and services globally to all deployed medical forces in 13 countries, and closing the digital medical recording gap are a testament of great teamwork between an IM/IT [information management/information technology] solution and its end users and beneficiaries."

Assuming MC4's fourth product manager role since 1999, Geesey forecasts continued improvements on the electronic medical recording efforts, heightened training and support roles, and a renewed focus on medical logistics initiatives.

"Ensuring tactical medical units have the resources, the know-how, and the support necessary to succeed on the DoD's digital medical recording effort is paramount," Geesey said. "The user's success is our success."

To date, MC4 has trained more than 31,000 medical professionals and has fielded 26,000 systems to the battlefield in support of Operations Iraqi and Enduring Freedom, as well as contingency operations worldwide. As a result, more than 8 million electronic health records have been captured on the battlefield via MC4. In May 2008, the Army Surgeon General announced the worldwide expansion of MC4 in the war zone.

MC4 integrates, fields, and supports a medical information management system for Army tactical medical forces, enabling a comprehensive, lifelong electronic medical record for all servicemembers, and enhancing medical situational

awareness for operational commanders. The Army's Program Executive Office, Enterprise Information Systems (PEO EIS), Fort Belvoir, Va., oversees the MC4 Product Management Office, headquartered at Fort Detrick, Md. For more information on MC4, visit <[www.mc4.army.mil](http://www.mc4.army.mil)>.

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U.S. ARMY ACQUISITION SUPPORT CENTER  
(OCT. 5, 2008)

### **U.S. Army Acquisition Corps (AAC) Awards Ceremony Recognizes Acquisition Stars**

ARLINGTON, Va.—The U.S. Army acquisition community held its 2008 Army Acquisition Corps Annual Awards Ceremony Oct. 5. The event, appropriately themed "Celebrating Our Acquisition Stars," honored the outstanding accomplishments of the acquisition workforce's most extraordinary members and the teams they lead, said Dean G. Popp, principal deputy assistant secretary of the Army for acquisition, logistics, and technology, and key speaker for the ceremony.

"We are the Army Acquisition Enterprise with a portfolio of fewer than 43,000 military and civilian workforce members who manage roughly 25 percent of the Army's budget. We are proud of our mission to equip and sustain the world's most capable, powerful, and respected Army," said Popp, emphasizing the mission-critical role acquisition professionals play in supporting the warfighter. "This mission requires a highly skilled workforce capable of developing, acquiring, fielding, and sustaining the equipment our soldiers depend upon."

U.S. Army Acquisition Support Center Deputy Director Col. Brian Winters presided over the event as master of ceremonies. The evening's awards included:

- The Army Life Cycle Logistician of the Year Award
- The Secretary of the Army Award for Excellence in Contracting—Barbara C. Heald Award
- The Acquisition, Logistics, and Technology Continuous Process Improvement Award
- The Inaugural Assistant Secretary of the Army (Acquisition, Logistics and Technology) (ASA[ALT]) Contracting Noncommissioned Officer Award for Contracting Excellence
- The Department of the Army Research and Development Laboratory of the Year Awards
- The Secretary of the Army Acquisition Director and Project and Product Manager of the Year Awards
- The Army Acquisition Excellence Awards

### **2008 U.S. Army Acquisition Corps Annual Awards Ceremony Winners**

#### **2008 Army Life Cycle Logistician of the Year**

Lt. Col. Vincent Johnston, Joint Program Executive Office (PEO) Chemical and Biological Defense

#### **2008 Secretary of the Army Award for Excellence in Contracting—Barbara C. Heald Award**

Suzanne Anderson, U.S. Army Communications-Electronics Life Cycle Management Command (LCMC)

#### **2008 ASA(ALT) Contracting Noncommissioned Officer Award for Contracting Excellence**

Master Sgt. Christopher Bowers, US. Army Acquisition Support Center (with duty at Lackland AFB, Texas)

#### **2008 Acquisition, Logistics, and Technology Continuous Process Improvement Award**

Hellfire Missile System RESET Project Team, PEO Missiles and Space, Joint Attack Munitions Systems Project Office

#### **2008 Department of the Army Research and Development Laboratory of the Year Awards Research Laboratory of the Year**

U.S. Army Engineer Research and Development Center (ERDC), U.S. Army Corps of Engineers

#### **2008 Department of the Army Research and Development Laboratory of the Year Awards Large Development Laboratory of the Year**

U.S. Army Armament Research, Development, and Engineering Center (ARDEC), U.S. Army Materiel Command (AMC)

#### **2008 Department of the Army Research and Development Laboratory of the Year Awards Small Development Laboratory of the Year**

U.S. Army Natick Soldier Research, Development, and Engineering Center, AMC

#### **2008 Department of the Army Research and Development Laboratory of the Year Awards Collaboration Team of the Year**

- U.S. Army Medical Research and Materiel Command, U.S. Army Research Laboratory (ARL), U.S. Army Institute of Surgical Research, and U.S. Army Aeromedical Research Laboratory for the Joint Trauma Analysis and Prevention of Injury in Combat
- U.S. Army Simulation and Training Technology Center, U.S. Army Research Institute for the Behavioral and Social Sciences, and ARL for the Learning with Adaptive Simulation and Training

- U.S. Army Tank Automotive Research, Development, and Engineering Center (TARDEC); ARL; ARDEC; and ERDC for the High-Mobility Multipurpose Wheeled Vehicle Improvements Program
- TARDEC and ARL for the Mine Resistant Ambush Protected (MRAP) Expedient Armor Program
- U.S. Army Communications-Electronics Research, Development, and Engineering Center and TARDEC for the Optimization of Communications and Electronic Warfare Antenna Placement on MRAP Vehicles

### **2008 Secretary of the Army Acquisition Director and Project and Product Manager of the Year Awards Acquisition Director of the Year at the Lieutenant Colonel Level**

Lt. Col. William Sanders, Defense Contract Management Agency (DCMA), DCMA St. Petersburg and DCMA Kuwait

### **2008 Secretary of the Army Acquisition Director and Project and Product Manager of the Year Awards Product Manager of the Year**

Lt. Col. Shawn Gresham, PEO Aviation, Product Manager Medium-Altitude Endurance, Unmanned Aircraft Systems

### **2008 Secretary of the Army Acquisition Director and Project and Product Manager of the Year Awards Acquisition Director of the Year at the Colonel Level**

Col. Joseph Bass, U.S. Army Sustainment Command

### **2008 Secretary of the Army Acquisition Director and Project and Product Manager of the Year Awards Project Manager of the Year**

Col. John McGuinness, PEO Soldier, Project Manager Soldier Equipment

### **2008 Army Acquisition Excellence Awards Individual Sustained Achievement**

Jeffrey Simonis, U.S. Army TACOM LCMC Acquisition Center

### **2008 Army Acquisition Excellence Awards Equipping and Sustaining Our Soldier Systems**

- MRAP Joint-Service Test and Evaluation Team, U.S. Army Test and Evaluation Command, U.S. Army Aberdeen Test Center
- MRAP Expedient Armor Program Team, U.S. Army Research, Development, and Engineering Command, TARDEC

### **2008 Army Acquisition Excellence Awards Information Enabled Army General Fund Enterprise Business System**

PEO Enterprise Information Systems

### **2008 Army Acquisition Excellence Awards Transforming the Way We Do Business**

Rapid Fielding Initiative Team, PEO Soldier

The U.S. Army Acquisition Support Center supports Army warfighter readiness by developing a world-class professional acquisition workforce, effectively acquiring and stewarding resources, and providing customers with the best possible products and services. For additional information about USAASC, visit <<http://asc.army.mil>>.

For more information about the 2008 AAC Awards Ceremony, contact Ben Ennis at 703-805-1035 or [ben.ennis@us.army.mil](mailto:ben.ennis@us.army.mil).

DEPARTMENT OF DEFENSE NEWS RELEASE  
(OCT. 6, 2008)

### **\$1M Wearable Power Prize Competition Winner Announced**

The Department of Defense (DoD) announced today that the DuPont/Smart Fuel Cell (SFC) Team was awarded a \$1 million top prize for winning the Wearable Power Prize competition.

Designed to spur innovation, the competition was launched in July 2007 by the DoD's Research and Engineering Directorate to help develop a long-endurance, lightweight power pack for warfighters in the field. After beginning with 169 registered entries, the ultimate testing concluded on Oct. 4 when the final six teams met at Marine Corps Air Ground Combat Center Twentynine Palms, Calif., to determine the winner.

DuPont/SFC won the competition by building the lightest wearable system that provided an average of 20 watts of power for more than 96 hours and weighed less than 4,000 grams, or 8.8 pounds. AMI of Ann Arbor, Mich., was awarded \$500,000 for second place, and Jenny 600S of Middleburg, Va., won the \$250,000 third place prize.

All of the finalists used either fuel-cell or battery technologies or a combination of both to meet the rigorous standards set by the DoD.

"The winners, and really all the teams that competed, have moved wearable power technology forward," said William Rees Jr., the deputy under secretary for defense laboratories and basic sciences. "But the real winners from this competition are our ground warfighters, as these systems show great promise to reduce the weight of batteries they have to carry while performing their critical missions."

Rees, who sponsored the DoD Wearable Power Prize, also hopes this competition will inspire scientists and engineers.

"The rules we developed for this DoD competition attracted small businesses, individual inventors, and large companies alike," said Rees. "Our nation has tremendous capacity for innovation, so we hope that this and future competitions also motivate the scientific community to continue important advancements in technology."

More information on the Wearable Power Prize can be found at [www.dod.mil/ddre/prize/final\\_event.html](http://www.dod.mil/ddre/prize/final_event.html).

*Media contact: Navy Cmdr. Darryn James, DoD Public Affairs, 703-693-8287.*

AIR FORCE MATERIEL COMMAND NEWS RELEASE  
(OCT. 6, 2008)

### **Civilian Receives Meritorious Service Award**

*Mindy Cooper*

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—A civilian assigned to the Air Force Research Laboratory's Materials and Manufacturing Directorate received the Air Force Meritorious Civilian Service award Sept. 2.

Dr. Roland Dutton received the second highest honorary award provided to civilian employees by the Air Force in recognition of his distinguished performance as the chief of the metals branch of the metals, ceramics, and nondestructive evaluation division. Dr. David Walker, director of the materials and manufacturing directorate, presented the award.

Dutton was noted for leading a branch of over 60 government and contractor personnel to execute a research and development program with an average annual budget exceeding \$30 million.

"His leadership and vision propelled the metals branch to become the leading research and development organization for advanced metals and processes for aerospace applications in the nation," said Dr. Charles Ward, chief of the metals, ceramics, and nondestructive evaluation division. "Additionally, Dr. Dutton led the Air Force's research and development

efforts in metals to not only achieve command-wide impact in technology, acquisition, and system sustainment, but national impact to the aerospace industry."

Dutton also led the joint Air Force-Defense Advanced Research Projects Agency Accelerated Insertion of Materials program to couple materials modeling and simulation with aerospace structural design tools. The multi-million dollar program's goal was to inspire a paradigm shift in the way in which new aerospace metals are developed, transitioned, and sustained.

Officials also noted Dutton's ability to build lasting materials research and development partnerships at the national level. He led and transformed a congressional interest program with the University of Missouri-Rolla to become a national-level materials research and development effort that directly supports the mission of the command. His guidance led to the creation of the Center for Aerospace Manufacturing Technologies, an innovative center for research and development collaboration between academia, industry, and government.

Dutton continues to support and guide the 10-year-old Metals Affordability Initiative, or MAI, program to grow to a model for government research and development. The collaborative-based approach he has nurtured means that all interested Air Force suppliers conduct pre-competitive, collaborative research on advanced metals and processes.

Dutton also led his branch to solve numerous time-critical materials engineering issues of substantial importance to the Air Force. He led his team to quickly identify and resolve improperly manufactured titanium bulkheads in the F-22 structure, allowing the program to continue production. His team also made significant contributions to the F-22 by solving a production-halting, Laser Shock Processing-induced cracking issue on F119 fan blades, as well as a solution to a Minuteman III rocket component failure that won his team the 2007 Scowcroft Award for Intercontinental Ballistic Missile Acquisition and Sustainment.

*Cooper is with the Air Force Research Laboratory's materials and manufacturing directorate at Wright-Patterson AFB, Ohio.*

AMERICAN FORCES PRESS SERVICE  
(OCT. 21, 2008)

### **Gates Honors Career Civilian Employees for Service, Dedication**

WASHINGTON—Defense Secretary Robert M. Gates honored career civilian employees from throughout the depart-

ment on Oct. 21, crediting them with providing extraordinary support to warfighters and their families while improving efficiency and saving taxpayer dollars.

Gates presented seven employees the Distinguished Civilian Service Award, the highest department honor recognizing exceptional contributions by a civil servant. He also presented the David O. Cooke Excellence in Public Administration Award that recognizes a nonmanagerial department employee who exhibits potential as a future federal executive.

"It has been an honor to work with the people in this department—professionals whose overriding priority is the defense of our nation," Gates told the honorees.

He noted the broad range of pursuits in which the group has excelled: providing housing for troops, fielding new weapons systems while ensuring support for troops in the field, teaching safety training to foreign partners, helping to stand up U.S. Africa Command, negotiating treaties with allies, and training new leaders.

Gates told the honorees their decision to dedicate themselves to public service "is to the betterment of our 2.7 million men and women serving in the active and Reserve armed forces and to our leaders here."

Michael L. Rhodes, acting director for the DoD Office of Administration and Management and host of the awards ceremony, said the award recipients reflect the tremendous dedication public servants demonstrate every day.

The winners were selected through an extensive review process that culminated in 25 nominations, Rhodes said. Ultimately, those chosen for honors "have truly set themselves apart and proved themselves worthy," he said.

Honorees awarded were:

- Stephen A. Fleet, director of Missile Defense Agency's Warfighter Support Center, who was recognized for excellence in leading the center through rapid changes while providing vital support to the warfighter community;
- Steven M. Huybrechts, a director in the DoD Networks and Information Integration Office, for championing the strategy that provided precision targeting, secure unmanned aerial vehicle operations while denying these capabilities to the enemy;
- Frank D. Kenlon, a director in the DoD Acquisition, Technology and Logistics Office, for his roles as the lead negotiator on the Joint Strike Fighter memorandum

of understanding and in drafting and negotiating the U.S.-United Kingdom and U.S.-Australia Defense Trade Cooperation Treaties.

- Claudia S. Knott, the Defense Logistics Agency's acquisition management director, for leading programs that transformed the agency's business practices while improving customer service in its global logistics mission.
- Barbara Estock Mays, deputy intelligence enterprise manager for the Defense Intelligence Agency, for applying innovative approaches to transfer responsibilities and design an intelligence enterprise for the new U.S. Africa Command.
- John K. Russell, tactical safety specialist for Marine Corps Base Hawaii's Base Safety Center, for developing the Marine Corps' forward-deployed ground safety program during Operation Iraqi Freedom II that provided a model for follow-on operations there.
- Edmund G. Zelnio, an engineer in the Air Force Research Laboratory's Sensor Automatic Target Recognition Technology Division, for contributions leading to the successful deployment of new sensor and sensor exploitation technologies in numerous weapons systems.

Gates also presented Umit A. Spencer the David O. Cooke Excellence in Public Administration Award. Spencer, housing maintenance contract monitor with the 354<sup>th</sup> Civil Engineering Squadron at Eielson Air Force Base, Alaska, was honored for excellence in improving and maintaining 1,474 military family housing units, 48 playgrounds, and five athletic courts.

AIR FORCE MATERIEL COMMAND NEWS RELEASE  
(OCT. 8, 2008)

### **AFMC Civilians Among Presidential Rank Award Winners**

*Air Force Materiel Command Public Affairs*

WRIGHT-PATTERSON AIR FORCE BASE, Ohio—President George W. Bush announced recipients of the prestigious Presidential Rank Awards for 2008 on Oct. 6, and the list includes nine civilians currently or recently assigned to Air Force Materiel Command.

There are two categories of rank awards: distinguished and meritorious. Award winners are chosen through a rigorous selection process. They are nominated by their agency heads, evaluated by boards comprised of private citizens, and approved by the President. The evaluation criteria focus on leadership and results.

Specific categories and recipients are:

### 2008 Distinguished Senior Professionals

Dr. Donald B. Paul, chief scientist, air vehicles directorate, Air Force Research Laboratory, Wright-Patterson AFB.

### 2008 Distinguished Executives

- Barbara A. Westgate, a member of the Senior Executive Service. Currently, she is assistant deputy chief of staff for strategic plans and programs, Headquarters U.S. Air Force, Washington, D.C. From July 2005 to September 2008, Westgate served as executive director for AFMC at Wright-Patterson AFB.
- Patricia J. Zarodkiewicz, a member of the Senior Executive Service. Currently, she is deputy for budget, Office of the Assistant Secretary of the Air Force for Financial Management and Comptroller, Headquarters U.S. Air Force. From June 2002 to June 2005, she served as deputy director of financial management at Headquarters AFMC at Wright-Patterson AFB. From July 2005 to September 2005, she served as director of financial management at Headquarters AFMC.

### 2008 Meritorious Senior Professionals

- Dr. Alok Das, a member of the scientific and professional cadre of senior executives. He is the senior scientist for design innovation for AFRL at Wright-Patterson AFB.
- Barry L. Farmer, chief scientist for AFRL's materials and manufacturing directorate, at Wright-Patterson AFB.

### 2008 Meritorious Executives

- David C. Bond, a member of the Senior Executive Service. Currently, he is executive director, Air Force Flight Test Center at Edwards AFB, Calif. He was selected for reassignment as director, engineering and technical management, Headquarters AFMC. He assumed that position in late October 2008.
- Patsy J. Reeves, a member of the Senior Executive Service. She is the director of contracting for the Aeronautical Systems Center at Wright-Patterson AFB.
- Joe Sciabica, a member of the Senior Executive Service. He is executive director for AFRL at Wright-Patterson AFB.
- Dr. Larry B. Simpson, a member of the Senior Executive Service. He is director, 308<sup>th</sup> Armament Systems Wing at Eglin AFB, Fla.

Each year, the President selects an elite group of career members of the Senior Executive Service, Senior-Level, and Scientific and Professional corps for their exceptional leadership, accomplishments, and service over an extended period of time.

Michael Hager, acting director of the U.S. Office of Personnel Management, which administers the Presidential Rank Award program, said the winners represent the cream of the crop within the federal executive ranks.

"Their professional dedication and commitment to excellence is helping to advance President Bush's agenda for enhancing federal government performance and creating a more effective civil service," Hager said.

The honor carries with it a cash award for recipients. In addition, each winner receives a signed certificate from the President and a lapel pin.

ARMY NEWS SERVICE (OCT. 14, 2008)

### Commands Garner Shingo, Process-Improvement Awards

*C. Todd Lopez*

WASHINGTON—The Army Materiel Command claimed six Shingo Prizes in 2008, and other commands received a variety of process-improvement awards at the Pentagon Oct. 10.

During the awards ceremony at the Pentagon Hall of Heroes, six organizations within AMC were honored with the Shingo Prize for Excellence in Manufacturing, sometimes referred to as the "Nobel Prize of manufacturing." The Shingo Prize has been awarded each year since 1988 by the Jon M. Huntsman School of Business at Utah State University. The AMC organizations were recognized for their implementation of Lean and Six Sigma principles.

Gen. Benjamin S. Griffin, AMC commander, said developing better Lean processes has been a journey for AMC that has resulted in both savings for the Army and better service to AMC's customers.

"We know there are significant savings due to Lean—tremendous dollar savings. We can quantify that," he said. "But at the end of the day, it's meant to [provide] better support to our customers in the field. That's what this is all about."

Griffin said improvements in AMC's manufacturing processes through implementation of Lean and Six Sigma processes have made doing business with the Army more enticing to private sector companies.

"When I first came to the command, there were two major corporations that looked at me and said, 'General, if you were more efficient we would do business with you. You are not efficient so we won't do business with you in your

depots and arsenals," he said. "Today both those companies do business with us."

During the ceremony, the Army also handed out its own awards for implementation of Lean and Six Sigma process improvement. That the Army is now handing out such awards is evidence the Service has made headway in institutionalizing Lean and Six Sigma practices, said Lt. Gen. Robert E. Durbin, special assistant to the chief of staff of the Army for enterprise management.

"We are at a critical juncture in our Army's LSS deployment," he said. "The important step of institutionalizing Lean/Six Sigma to achieve the enterprise-level deployment maturity requires building internal self-sustainment capability. Recognizing the successful efforts of these process-improvement practitioners today demonstrates we are well on our way in achieving that internal institutional self-sustainment capability."

The awards presented at the ceremony include:

### **2008 Lean Six Sigma Non-Gated Project Team Award**

- Anniston Army Depot
- Office of the Assistant Chief of Staff, Installation Management

### **2008 Lean Six Sigma Define, Measure, Analyze, Improve, and Control/Design for Lean Six Sigma Project Team Award**

- U.S. Army Garrison-Alaska
- Communications Electronics Command, Life Cycle Management Command
- Office of the Assistant Chief of Staff, Installation Management
- U.S. Army Europe

### **Organizational Deployment Award**

Office of the Surgeon General, U.S. Army Medical Command

### **2008 Shingo Prize Silver Medallion Recipients**

Red River Army Depot-Heavy Expanded Mobility Tactical Truck Production Team, Texarkana, Texas

### **2008 Shingo Prize Bronze Medallion Recipients**

- Letterkenny Army Depot-Biological Integrated Detection System, Chambersburg, Pa.
- Red River Army Depot-PATRIOT Missile Team, Texarkana, Texas
- Red River Army Depot-Tactical Trailer Team, Texarkana, Texas

- Tobyhanna Army Depot, AN/ASM-189 Maintenance Electronic Shop Van, Tobyhanna, Pa.
- Tobyhanna Army Depot-AN/TYQ-23 Command and Control System, Tobyhanna, Pa.

Both Lean and Six Sigma are business process improvement tools developed chiefly in the private sector to focus on increasing value to customers, saving time and money, reducing waste, and improving product quality. A process can be made Lean by re-engineering it to eliminate steps that add no value to the end product, officials said. They said Six Sigma deals primarily with eliminating defects and errors in manufacturing.

ARMY NEWS SERVICE (OCT. 23, 2008)

### **President Honors Top Military Surface Deployment and Distribution Civilian**

*SDDC Command Affairs*

SCOTT AIR FORCE BASE, Ill.—Patricia M. Young, an Air Force Senior Executive serving as deputy to the commander, Military Surface Deployment and Distribution Command, has been named a Meritorious Executive in the Presidential Rank Awards for 2008. President George W. Bush announced recipients of the prestigious awards October 6.

Each year since the establishment of the Senior Executive Service in 1978, the President has conferred the ranks of Distinguished Executive and Meritorious Executive on a select group of career members of the SES who have provided exceptional service to the American people over an extended period of time.

The Meritorious Executive rank is awarded to leaders for sustained accomplishments. Only 5 percent of SES career members may receive this award, a silver pin, and a framed certificate signed by the President.

Her dedication during a time of transition for SDDC and its employees was instrumental in Young's recognition by the President.

"I am deeply honored and humbled by this recognition," Young said. "The accomplishments of the past few years would not have been possible without the confidence of my leadership and the hard work of our military and civilian workforce."

As deputy to the SDDC commander, Young is responsible for facilitating continuous improvement and innovation in the development of distribution policies, plans, and programs supporting their global mission. These responsibilities

impact joint service force deployment and logistics operations.

Young entered federal service in 1985 through the Palace Acquire Career Program with the Air Force Materiel Command, Wright-Patterson AFB, Ohio. Before being assigned to SDDC, Young was assigned to U.S. Transportation Command from 1993-2005. She joined SDDC as deputy to the commander in 2005.

SDDC provides global surface deployment and distribution services to meet the nation's objectives. SDDC deploys and sustains more than 90 percent of the DoD equipment and supplies by leveraging the capability of commercial industry and other military services.

For more information on the Presidential Rank Award, visit the Office of Personnel Management Web site at <[www.opm.gov/ses/performance/presrankawards.asp](http://www.opm.gov/ses/performance/presrankawards.asp)>.

DEFENSE LOGISTICS AGENCY NEWS RELEASE (OCT. 22, 2008)

### **Defense Secretary Presents Top Civilian Award to DLA Acquisition Chief**

*Kathleen T. Rhem*

Scottie Knott, the Defense Logistics Agency's director of acquisition management, received the Defense Department's highest civilian award in a Pentagon ceremony Oct. 21.

Defense Secretary Robert M. Gates presented Knott with the Department of Defense Distinguished Civilian Service Award.

"It has been an honor to work with the people in this department—professionals whose overriding priority is the defense of our nation," Gates told Knott and six other awardees.

Gates conceded that it's not always fashionable in Washington to honor federal government employees, and that some politicians have been elected by criticizing the people they seek to lead.

"During my career, however, I have dealt with governments all over the world and have found that the United States has the most dedicated, most honest, and most capable public servants of any," he said.

The secretary praised dedicated career employees, who he said provide stability through leadership changes. "You are the foundation that allows the Defense Department, the largest and most complex organization on the planet, to operate smoothly and efficiently," he said.

"Public service can often seem to be a thankless job," he said, adding that he counsels young people to accept the challenges because, "in truth, the satisfactions far outnumber the difficulties."

Gates told today's honorees their decision to dedicate themselves to public service "is to the betterment of our 2.7 million men and women serving in the active and Reserve armed forces and to our leaders."

DLA Director Army Lt. Gen. Robert Dail nominated Knott for the award for her "absolutely exceptional accomplishments" throughout her career, he said in a note to DLA leaders.

"Scottie has been in the forefront of acquisition excellence in DLA and the Department of Defense through her contributions to our Enterprise Business System ... extending the DLA enterprise through [depot-level reparable] procurement, strategic supplier alliances, strategic materiel sourcing, electronic commerce, procurement integrity, and countless other successful initiatives," Dail wrote.

Knott has been DLA's director of acquisition management since February 2007. She also has held several other high-level positions within the agency.

"Her selection for this prestigious award confirms what we all know—Scottie Knott is a great leader of exceptional character and accomplishments," Dail wrote.

According to the citation that accompanies the award, Knott "is a dynamic force within DoD and has immeasurably contributed to advances in acquisition management, logistics, and electronic commerce."

"She is a passionate advocate for change and has been instrumental in driving the department to embrace innovative logistics solutions to better support DoD customers," the citation continues.

The Department of Defense Distinguished Civilian Service Award recognizes individuals whose careers reflect exceptional devotion to duty and extremely significant contributions of broad scope to the efficiency, economy, or other improvement in the operations of DoD.

*Donna Miles of American Forces Press Service contributed to this release.*

NAVY NEWSSTAND (OCT. 23, 2008)

### **Navy Recognizes Outstanding Energy Programs**

*Naval Facilities Engineering Command Headquarters Public Affairs*

WASHINGTON—The Department of the Navy recognized six Navy and Marine Corps organizations Oct. 22 that have made notable progress toward DoN and federal goals to reduce energy and water consumption at its annual Secretary of the Navy Awards ceremony at the U.S. Navy Memorial in Washington.

“Energy challenges are everywhere. That’s why the Department of the Navy has a multi-layered approach to energy efficiency, energy security, and energy independence,” said B.J. Penn, assistant secretary of the Navy for installations and environment, and guest speaker.

“I’m personally excited about the opportunities ahead for embracing energy and water efficiency ... and increased use of renewable energy, and making it mainstream in our operations,” he said.

The six commands awarded the SECNAV 2008 Energy and Water Management Award for innovative energy management, successful use of energy, superior awareness, and energy conservation principles during FY 2007 included:

- Naval Base Ventura County (Pt. Mugu, Calif.)—Navy Large Shore Category. Naval Base Ventura County achieved a 14 percent reduction from their fiscal year (FY) 2003 energy baseline. Their projects included HVAC and control system upgrades, daylighting, hangar and warehouse lighting upgrades, and compressor replacements. They also made numerous improvements in water efficiency through water reclamation, smart landscaping, reduced irrigation, xeriscaping, and the installation of low-flow spray nozzles at galleys. They implemented \$13 million in energy and water efficiency measures that save \$1.7 million per year in utility costs.
- Naval Base Point Loma (San Diego)—Navy Small Shore Category. Naval Base Point Loma has achieved a 25 percent reduction from their FY 2003 baseline. The base combined a strong energy awareness program with projects such as installing a 57.8 kilowatt photovoltaic system and replacing a 20-year-old boiler with micro-turbines and smaller high efficiency boilers. A focus on locating and repairing water leaks is saving more than 20 million gallons of water. A \$1 million investment in energy and water initiatives is saving nearly \$500,000 annually in utility costs.
- Naval Sea Systems Command’s (NAVSEA) Puget Sound Naval Shipyard and Intermediate Maintenance Facility (Bremerton, Wash.)—Industrial Category. NAVSEA Puget Sound Naval Shipyard and Intermediate Maintenance Facility achieved a 13 percent reduction from their FY 2003 baseline. Their projects included installing rapid access cargo doors and replacing single pass water-cooled chillers that support waterfront temporary services. They performed upgrades to exterior lighting, lighting in temporary offices, and in the berthing barges that house ship’s force when a ship is in overhaul. A project to convert steam-driven forge hammers to compressed air will significantly reduce the energy required to maintain the temperature of the hammers when not in use. Air movers that exhaust welding smoke from ships in overhaul will be converted from compressed air to electric in most applications. A total investment of nearly \$9 million in energy and water-saving initiatives is reducing utility costs by \$1.7 million per year.
- Marine Corps Air Ground Combat Center (MCAGCC) Twentynine Palms (Twentynine Palms, Calif.)—Marine Corps Category. MCAGCC 29 Palms has achieved a 22 percent reduction from their FY 2003 baseline. The combat center supported a well-rounded program including a capital investment of \$5 million for energy improvements. Focus was on converting several buildings from evaporative cooling to chilled water systems with full Energy Management and Control System (EMCS) packages and extending EMCS to additional buildings. Other projects included upgrading 15 inoperable solar water heating systems, installing lighting and photocell controls, and upgrading the EMCS controls for a large chiller. The combined utility cost savings from these initiatives is more than \$1 million annually.
- USS Bonhomme Richard (LHD 6)—Large Ship Category. Bonhomme Richard saved more than 37,446 barrels of fuel in FY 2007 compared to the LHD 1 class average fuel usage. The \$3.6 million in fuel savings is attributed to a strong command commitment to energy conservation and senior leadership participation in Naval Sea Systems Command’s energy conservation seminars and workshops. As an example of command commitment, the commanding officer and executive officer conducted weekly tours through all engineering spaces aboard, assessing methods to improve energy usage. The presence of senior leadership on the deck plates motivated junior personnel to participate in energy awareness and aggressive fuel management practices.

- USS Nitze (DDG 94)—Small Ship Category. Nitze saved more than 20,500 barrels of fuel in FY 2007 compared to the DDG 51 class average fuel usage, a savings of nearly \$2 million. A strong commitment from senior leadership was key to their success, demonstrated by extensive all-hands attendance at energy conservation training classes and strict adherence to implementing energy efficiency checklists. While underway, Nitze operates in Fuel Efficient Pitch Mode and consistently exhibits 10 percent fuel savings on average. Nitze routinely monitors equipment to ensure that redundant ship's systems are left off until they are needed.

The Department of the Navy Energy Program is on target to achieve the federal goals of the Energy Policy Act of 2005 and Executive Order 13423 for efficient use of energy and water resources and the increased use of renewable energy sources. The program avoids millions of dollars in annual commodity costs through innovation, investment in energy efficient technologies, and increased community awareness and participation.

To achieve its current success, DoN has relied on a comprehensive energy program, with centralized resources and program management operating in partnership with regional and installation level resources and implementation. As a result of energy program initiatives worldwide, DoN is avoiding \$400 million annually in energy costs, adjusted for inflation, compared to expenditures in 1985.

*For more news from Naval Facilities Engineering Command, visit <[www.navy.mil/local/navfachq/](http://www.navy.mil/local/navfachq/)>.*

### **NEED A REFRESHER ON DOD BEST PRACTICES?**

The DoD Acquisition Best Practices Clearinghouse is now live at <<https://bpch.dau.mil>>. Many government organizations have attempted to develop systems to capture best practices or lessons learned, but have fallen short of success because guidance based on experience is missing, and the gap between "what is a best practice?" and "how do I implement it?" often isn't addressed. The Defense Acquisition University has partnered with elements of the office of the secretary of defense to carefully design and implement the DoD Acquisition BPCh to provide an integrated set of processes and resources enabling users to share experiences and identify practices through evidence of practice effectiveness in environments like their own. Using this evidence-based approach, users can quickly browse, filter, and search stored evidence in a contextual manner that leads them to lessons and practices relevant to their particular program or issues. Note: Best practices are cross-referenced to career fields (job functions) for easy reference.

### **Message from the Deputy Under Secretary of Defense (Acquisition & Technology)**

I am happy to highlight the Defense Acquisition University (DAU) and their excellent work in the creation and launch of ACQuipedia, a Web-enabled acquisition encyclopedia, providing the latest information on topics central to defense acquisition. Visitors to this site <<https://acc.dau.mil/acquipediams>> will find access to relevant articles, presentations, and charts uploaded by multiple contributors. The site is designed for use by members of the defense acquisition workforce both in the classroom and on the job, and I expect it will offer immeasurable benefits.

—Dr. James Finley

<https://acc.dau.mil/acquipediams>

DEFENSE LOGISTICS AGENCY NEWS RELEASE (OCT. 24, 2008)

### **New Organization To Help Combatant Commanders Manage Acquisition**

*Jonathan Stack*

A new organization housed by the Defense Logistics Agency will provide acquisition support for joint operations involving the Defense Department and other government agencies.

The Joint Contingency Acquisition Support Office officially stood up with a ribbon-cutting ceremony Oct. 20.

"In 2007, Congress directed that DoD implement a programmatic approach to fix problems which exist in contingency contracting and contingency acquisition management," said Tim Freihofer, the office's director. "The JCASO is one of the elements prescribed to implement and carry out that mission."

The JCASO will oversee expeditionary contracting conducted during combat, post-conflict, and contingency operations.

"If you go out to the combatant command logistics directorates, you find that they don't have the expertise available to them to manage the level, size, and scope of contracted support and services that are currently in their plans," Freihofer said. "In order to both train and provide that acquisition expertise, the decision was made to stand up JCASO as opposed to providing the five combatant commanders [their own] acquisition staff."

By and large, he explained, it's more economical to make this 28-member unit available when needed than to maintain a staff element in each of the regional commands.

DoD officials were considering three organizations to host the JCASO: U.S. Joint Forces Command, the Defense Contracting Management Agency, and DLA.

"After looking at all the pros and cons, DLA was the best choice," Freihofer said.

DLA was selected because the agency currently supports all the combatant commands and geographical areas, and already has a mission of sustainment and support. The agency also has acquisition management expertise.

"The whole package of the things that would be required to successfully stand up and field this capability for the combatant commanders is resident in DLA," Freihofer said.

The JCASO's staff will include 17 military members and 11 civilians.

"The staff will provide functional expertise required as well as two deployable teams of five personnel each," Freihofer said.

The teams are organized and split so they will provide dedicated support to the combatant commands. They will plan, train, exercise, and fight with their respective COCOMs.

"This organizational approach provides the COCOM acquisition staff continuity and the bench strength to support high-intensity operations when required," he said.

The U.S. Government depends on contractors now more than ever before, Freihofer said.

Around 200,000 contractors are employed by the U.S. Government. Local nationals hired overseas increase that number significantly.

"If contractors are in a joint operating area, the commander is responsible and must oversee their work in theater," Freihofer said. "In the past, much more was done with our military troops; there were not near as many contractors involved."

Now the JCASO will oversee and manage that, Freihofer said.

DLA Director Army Lt. Gen. Robert Dail lauded the new organization during a briefing Oct. 22. He explained to DLA employees that the JCASO will provide a contract management synchronizing capability from DLA overseas to the regional combatant commanders and provide contract management oversight, synchronization, transition planning, and strategy.

"That's contract excellence," Dail said.

AIR FORCE MATERIEL COMMAND NEWS RELEASE (OCT. 27, 2008)

### **Air Force Team Works to Lower IED Threat**

*Chuck Paone*

HANSCOM AIR FORCE BASE, Mass.—An Electronic Systems Center office at Hanscom AFB is working to minimize the threat of suicide bombings at the entry points of controlled access zones in Iraq and Afghanistan.

The team has been working since late September to rapidly evaluate technologies designed to detect what are known

as person-borne improvised explosive devices, or PBIEDs. The team, which serves as the Air Force Counter-IED Office, brought four contractors to Hanscom during the last week of September and five more during the week of Oct. 20 to 24.

Each one was given a four-hour block to run its technologies through a precise testing protocol that required them to set up some distance away from a "target" zone. Inside the zone, a series of test subjects wearing loose-fitting robes over their clothes, meant to replicate those routinely worn in Afghanistan, entered one by one. Each walked forward and then retreated past a string of orange cones, allowing the detectors to examine them front and back.

Some of the walkers were carrying concealed, simulated IEDs, which had been carefully designed to mimic the types most commonly found in theater. Others were clean. It was up to the technology operator to determine which was which, and to pinpoint the location of a potential device when one was found.

"The most critical thing is that they're able to do it at stand-off range," said Ed Mason, chief of the Counter-IED Office at ESC. "If we have to be right up with the person in order to detect the device, that's obviously a huge problem."

Therefore, during the tests, checkpoint detectors operated at such a range, using a variety of technologies including infrared and X-ray backscatter to examine those who entered the zone.

In actual operation, if detectors target someone they suspect of carrying a PBIED, they would isolate them and have them lift up or remove their outer clothing for a visual or camera-aided inspection, still at a safe distance, said Jim McMath, an engineer with the IEDD Program Office.

The Department of Defense, through its Joint IED Defeat Office, known as JIEDDO, is looking to bring these capabilities into theater as quickly as possible.

"They came to us in late August and asked if we could start testing some of these technologies within five weeks, and by late September we had the first tests up and running," Mason said. "They knew we had the program management, acquisition and testing skill, and experience to make it happen."

After each round of testing—tests are expected to take place quarterly from here on—the ESC team prepares a report. The report provides a statistical analysis of the Probability of

Detection rate and the False Alarm Rate of each technology. Beyond that, the report factors in other variables, such as size, weight, and ease of setup.

"We also determine how hard or simple it is to operate," Mason said. "If it takes a PhD to operate the equipment, we take that into consideration in the report. Likewise, if any Joe Schmoe can run it, we note that."

Once JIEDDO receives and analyzes the Air Force report, it determines which technologies to continue pursuing and will likely provide funds for further technical development. JIEDDO will also ask the ESC team to conduct more rigorous capabilities and limitation testing, which would be done in a sophisticated test environment, such as those available at White Sands Missile Range, N.M., and Eglin Air Force Base, Fla.

Ultimately, the ESC team, at JIEDDO's direction, will put the companies with the most promising technologies on contract for an operational assessment in theater, where users can try it out in real-world action. If it works well, the final step is to get it into production and out to operators en masse.

Some people have asked why the Air Force is involved in efforts to defeat IEDs, which are a ground threat.

"The Defense Department is interested in pursuing good ideas, no matter where they come from, and they'll turn to whichever Service has the ability to test them out and get them fielded," Mason said.

In many cases, counter-IED efforts are achieved jointly. A current example involves the ongoing acquisition of 600 advanced metal detectors, which will be used to reduce threats during the January elections in Iraq. The ESC team conducted the market research to determine what was needed—things such as the ability to zone in on the location of an object on a body and stabilizers that enable outdoor use, regardless of wind or other weather conditions. They also conducted the market research into which vendors could supply what's needed quickly. The Army's Natick (Mass.) Soldiers Center, located about 10 miles from Hanscom AFB, handled the actual procurement of the detectors and all associated equipment.

"This was a great example of the Services working together to find the best and fastest solution," Mason said.

*Paone writes for 66<sup>th</sup> Air Base Wing Public Affairs.*