

## In the News

### ARMY NEWS SERVICE (JUNE 16, 2006) ARMY BEGINS ASSESSMENT OF NEW LAND WARRIOR SYSTEM

**T**he Army is conducting an extensive operational assessment of the Land Warrior and Mounted Warrior Soldier Systems at Fort Lewis, Wash., this summer. Land Warrior, developed by Program Executive Office Soldier, Fort Belvoir, Va., combines computers, lasers, navigation modules, radios, and other technologically advanced equipment to improve soldiers' ability to communicate on the battlefield, their situational awareness, and, ultimately, their ability to fight effectively and survive. Mounted Warrior, designed for combat vehicle crewmen, includes communications and displays that will improve situational awareness on or off the vehicle.

The 4th Battalion, 9th Infantry Regiment, 4th Stryker Brigade Combat Team, 2nd Infantry Division, will conduct the assessment, which is being sponsored by the Army Infantry Center and Program Executive Office Sol-

dier, from May through September 2006. Col. Richard Hansen, project manager Soldier Warrior, explained the reason for the assessment: "In late 2004, the U.S. Army Infantry Center conducted a side-by-side comparison between Land Warrior-equipped soldiers and currently equipped soldiers at Fort Benning, Ga. This squad-level operational assessment demonstrated that Land Warrior capabilities do improve the combat effectiveness of soldiers and small units engaged in dismounted operations."

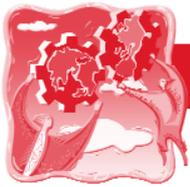
The battalion is being equipped with 440 Land Warrior systems and 147 Mounted Warrior Systems for the assessment. Equipping and training ran May 15 through June 16. Assessment exercises and activities will continue through September 2006. The assessment is expected to provide significant insights about Land Warrior and Mounted Warrior combat effectiveness, tactics, techniques, and procedures.

Hansen noted that many improvements are the result of feedback from soldiers: "Soldiers have been positive so far concerning benefits from Land Warrior capabilities and continue to provide us valuable feedback to improve the system for the Limited User Test this September."

For more information on the Land Warrior and Mounted Warrior Systems, visit <http://www.peosoldier.army.mil> or contact Debi Dawson, 703-704-2802.



Soldiers participate in Land Warrior Training.  
Image courtesy PEO Soldier.



### MARINE SQUADRON WRENCHES UP SPEED, EFFICIENCY (JULY 6, 2006)

Lance Cpl. Karim Delgado, USMC

**M**ARINE CORPS AIR STATION FUTENMA, OKINAWA, Japan—Marine Aviation Logistics Squadron 36 implemented a new process aimed at increasing the speed and efficiency of all logistics within the squadron.

The system, Enterprise AIRSpeed, integrates modern solutions for business practices used by major corporations such as Boeing, General Electric, and Microsoft, and applies them to a military environment.

The solutions are founded on the business theory that the sum of something's parts are of greater value than its whole, and continuous improvement should be demanded from every part of an organization.

The new system will reduce the amount of time and effort necessary to complete logistics projects, according to Staff Sgt. Billy Carter, a fixed-wing aircraft power plants mechanic with Marine Aviation Logistics Squadron 36. One example is how the squadron repairs an engine. Prior to the implementation of AIRSpeed, the Marines from the power plant section focused on repairing only the discrepancy noted by the ground crew who pulled the engine from the aircraft.

The problem created by this process of troubleshooting a single component is that it could lead to several costly repairs and engine checks before maintainers identified the exact defect, Carter said.

With the new process in place, they disassemble the entire engine and service or replace each part before rebuilding and returning the engine to the supply system. Though the overhaul may appear more time consuming and costly, it is more effective because Marines are able to fix the problem with the engine and repair other discrepancies that may not be immediately visible, he said. The squadron began using the AIRSpeed system June 5, after officers and staff noncommissioned officers came back to Marine Aviation Logistics Squadron 36 from state-side classes on the system.

The leaders passed on the knowledge to their noncommissioned officers in charge, who went back to their respective sections to get the junior enlisted Marines involved, according to Capt. John Digiovanni, the avionics officer of Marine Aviation Logistics Squadron 36. "It's those Marines who are the backbone of the shops," Di-



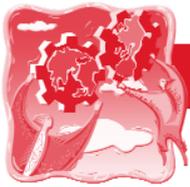
U.S. Marine Lance Cpls. Kenneth Sobecki (top) and Robert Schultz, both fixed-wing aircraft power plant mechanics, work on an engine part of the KC-130 Hercules aircraft at the Marine Aviation Logistics Squadron 36 airframe shop, June 28, 2006. Photograph by Lance Cpl. Bryan A. Peterson, USMC.

giovanni said. "They're the ones who use the current systems and equipment, so they'll be able to make the most difference in improving the way the squadron works as a whole."

The system will enhance mission success by standardizing practices throughout the squadron and eliminating unnecessary steps. This will also allow units with the squadron to transfer equipment quickly and efficiently, said Maj. Jack G. Abate, the Marine Aviation Logistics Squadron 36 aircraft maintenance officer.

"It's a disciplined methodology whose purpose is to keep us all on the same page," he said.

*Delgado is assigned to Marine Corps Base Camp Butler, Okinawa, Japan.*



### DEFENSE LOGISTICS AGENCY PRESS RELEASE (JULY 5, 2006) DLA-FEMA TEAM "EXERCISED, READY TO GO"

**F**ort Belvoir, Va.—Although the Defense Logistics Agency had a major positive impact in relief efforts after hurricanes Katrina and Rita in 2005, the agency achieved success with minimum notice beforehand, according to director Vice Adm. Keith W. Lippert. The DLA director says last year's fortunate outcome has resulted in a planned, streamlined, well-funded team ready to respond when called.

DLA's partnering with the Federal Emergency Management Agency was a highlight of the admiral's keynote address at the Defense Partnering and Alliances Conference June 26-28 in Arlington, Va. Bernadette L. Whitehead, program manager for performance-based logistics at DLA, also addressed the conference and talked about the agency's participation in performance-based logistics. The meeting's purpose was described as looking at how public and private sectors can work together to weed out inefficiencies in the supply chain.

Lippert latched onto that point, recalling how an off-the-cuff, complex working arrangement with FEMA, devised within days of Katrina's catastrophic landfall, still managed to deliver \$409 million worth of supplies to the devastated Gulf Coast.

He predicted that this year will be different. If DLA's success in 2005 hinged on good fortune, Lippert said, this year's support during what might be another busy hurricane season will succeed through the work of experts already in place, drawing from lessons learned after the last disastrous storms.

In the wake of Katrina and Rita, DLA delivered millions of Meals Ready to Eat, or MREs (the high-calorie meals designed for soldiers in combat operations) as well as lower calorie commercial ready-to-eat meals for FEMA. Unfortunately, Lippert recalled, that drew down DLA's MRE inventory "to a point I was not comfortable with" until after producers surged to restore supplies.

There were also issues with transport and in-transit "visibility" of supplies sent into the region. "When you ship a truck full of supplies," Lippert said, "you would like to know where that materiel is at all times."

The upshot of DLA's and FEMA's newfound dependence on each other was a series of meetings that have been held since November. Both agencies wanted to see how they could collectively work together.

Contrasting last year's convoluted effort with how the agencies have agreed to work together this year, Lippert first displayed a virtual "spaghetti" of lines and boxes depicting last year's DLA's approval chain for FEMA support. "I'll let you chew on that for a minute," the admiral said to the audience.

Then he showed the new DLA-FEMA working relationship, streamlined into a three-segment, interlinked supply chain, the emphasis placed on rapid, direct crisis response. Since May, Lippert added, DLA has sent people to FEMA as part of a full-time working group. The agencies' partnering agreement has also let DLA put materiel on the shelf earmarked for FEMA support. For its part, FEMA has provided almost \$95 million to DLA to prepare for the hurricane season.

The DLA director said the agency has also hired 75 people at Defense Supply Center San Joaquin, Calif., and Red River Defense Distribution Depot, Texas, to set up a moveable distribution depot to direct all materiel from DLA. "We've exercised this team," Lippert said. "They're in place and ready to go."

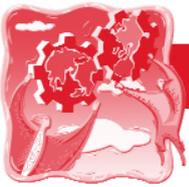
Beyond FEMA, the admiral also emphasized DLA's partnering with industry and the military services. He pointed to performance-based logistics milestones in the agency's work with Northrop Grumman, the Army's future combat system, and Kelly Aviation Center as DLA works with its industry partners. Meanwhile, he said, DLA has become much more engaged with its military customers, placing 102 customer service representatives side by side in the field with the warfighters. "Our goal is customer support and customer assessment to make sure we're doing better and better," Lippert said.

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### ARMY NEWS SERVICE (JULY 10, 2006) EQUIPMENT REUTILIZATION SAVES TAXPAYER DOLLARS

*Sgt. Waine D. Haley, USA*

**T**IKRIT, Iraq—Supply specialists at Contingency Operating Base Speicher can now supply their soldiers with needed equipment and save taxpayers money at the same time.



Soldiers turn in equipment they no longer need to the DRMO at Contingency Operating Base Speicher near Tikrit, Iraq.

Photograph courtesy DRMO, Contingency Operating Base Speicher.

The Defense Reutilization and Marketing Office opened for business last month near Tikrit.

The DRMO redistributes or disposes excess or damaged property and supplies no longer needed by military units. The inventory ranges from air conditioners and vehicles to clothing and computers.

The impact on units in and around COB Speicher is already showing.

“DRMO has been a great help throughout our deployment,” said Capt. Andy Baker, company commander for Headquarters and Headquarters Company, 3rd Special Troops Battalion, 3rd Brigade Combat Team, 101st Airborne Division.

“Since arriving in Iraq, my company has constantly received the newest and best equipment the Army has to offer, rendering obsolete many of the items that we received from the unit we took over from,” Baker said. “DRMO has helped ease the burden of accounting for

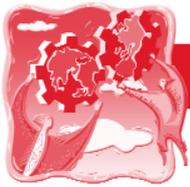
property that we don’t need and allowed us to turn it in a timely fashion.”

War and contingency operations generate considerable amounts of refuse, damaged property, and hazardous waste. Such items must be handled and disposed of properly. DRMO’s purpose is to make sure all efforts are made to reutilize or demilitarize militarily significant equipment.

The current DRMO team is made up of members from all Services as well as civilians.

“We established the working plans for running a DRMO yard and a fully functional facility at Speicher by working with the 101st Airborne Division,” said Air Force Reserve Capt. Raul Trevino. “The work had long tedious hours, over 100° weather, and hostile terrain ... but we got it done.”

*Haley writes for the 133rd Mobile Public Affairs Detachment.*



### MARINE CORPS NEWS (JULY 12, 2006) MARINES "EYE" UNMANNED AERIAL VEHICLE CAPABILITIES

**C**ENTRAL COMMAND THEATER OF OPERATION—Marines serving with Battalion Landing Team 1st Battalion, 8th Marine Regiment, 24th Marine Expeditionary Unit (Special Operations Capable), trained with the X-63 "Dragon-Eye" unmanned aerial vehicle June 11, as part of a training exercise in the Central Command theater of operation.

The bungee-cord-launched "Dragon-Eye" provides organic aerial reconnaissance and surveillance at the small-unit level, giving Marine units the opportunity to observe real-time enemy movements beyond their traditional capacity.

Whisper-quiet and weighing less than five pounds, the "Dragon-Eye" is able to navigate pre-assigned waypoints via a global positioning system while transmitting data—either still images or video—to a two-man control station.

Capable of low-light operation and with a wingspan of just 18 centimeters, the drone can sustain flight for approximately 60 minutes. And because of its relative low cost, it can be fielded to Marines in large numbers.

The effective deployment of the unmanned aerial vehicle is able to transform a small tactical unit into an all-seeing machine of war, while supplying aerial surveillance and intelligence that can keep patrols and convoys out of harm's way.

### AMERICAN FORCES PRESS SERVICE (JULY 19, 2006) ARMY MOVING TOWARD MORE JOINT, CAPABLE AIRCRAFT

*Donna Miles*

**W**ASHINGTON—The idea of the Services operating jointly with fewer aircraft platforms that share common features is the key to the modernization effort taking place throughout the military aviation community, the Army Aviation director said here yesterday.

Army Brig. Gen. Stephen D. Mundt called the trend toward jointness a key driver in aviation modernization programs. "It's critical we work together. It's a joint world," he said. "There is no way that this nation can afford for everybody to have their own specific capabilities and be redundant across the board."

But Mundt told Pentagon reporters he's concerned by budget cuts being eyed by Congress that threaten to set back the first major step toward that goal. These cuts could delay, by as long as two years, production of the Joint Cargo Aircraft and ultimately drive up the price, he said.

They could also affect another major Army aviation program: the Armored Reconnaissance Helicopter, he said. "It's like a self-licking ice cream cone. I don't know a better way to describe it," he said. "If you take money out of the program, you have to increase the schedule because you can't buy everything you want within the same timeframe. If you increase the schedule, you increase the cost ... because if you don't buy it today, it doesn't get cheaper tomorrow. The cost goes up."

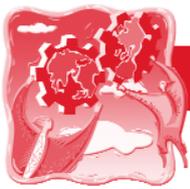
Initially, the RAH-66 Comanche helicopter was the centerpiece of the Army's modernization effort, but that project got scrapped in February 2004. Funds from the Comanche program got channeled into other aviation projects, including the Joint Cargo Aircraft.

The JCA, being developed jointly by the Army and Air Force, will replace multiple other fixed-wing platforms—the Army C-23 Sherpa, C-26 Metroliner and C-12 Huron, and for some smaller missions, the Air Force C-130 Hercules. The request for proposals for the new aircraft is currently on the streets, Mundt said, and the Army hopes to begin adding the first JCAs to its fleet in fiscal 2007.

Mundt said a memorandum of agreement signed last month by the two Services to pave the way ahead for the aircraft's development defies all who said it would never happen. "Against everybody who said the Army and Air Force will never sign an MOA to go to the same aircraft, we did it," he said. "It is a different world today. ... It is much easier for us to talk from a joint environment, joint concept, so that's exactly what ... Joint Cargo Aircraft does."

Capable of landing and taking off on a very short runway, the JCA will be critical to providing supplies to forward-deployed troops, Mundt said. With JCA, the Army could fly into 29 additional airfields in Iraq and another 10 airfields in Afghanistan.

"Which means soldiers, sailors, airmen, and Marines would not be on the roads driving," Mundt said. "We would not be flying the wings off the CH-47s that we're already under-resourced on."



The C-295 Joint Cargo Aircraft, to be used in the U.S. Army's Early User Survey evaluation for its JCA mission, is displayed July 18 at the Royal International Air Tattoo, RAF Fairford, United Kingdom. Photograph courtesy Raytheon/EADS CASA North America.

The JCA will absorb much of the stress being placed on the Army's CH-47 helicopter fleet, which has amassed almost 1.2 million flight hours since October 2001.

"That's a lot of hours, four to five times the number of hours we normally would accrue on any one of these platforms," Mundt said. "CH-47s have been serving us forever [and are an] exceptional platform. But we are literally flying the wings off them."

The JCA offers another benefit over the Sherpa; it can fly above 10,000 feet without supplemental oxygen, so it's able to be used for medical evacuation. The Army currently pays contractors to perform this service in Afghanistan.

Another major modernization program, the Armored Reconnaissance Helicopter, will replace the aging and overtaxed OH-58D Kiowa Warrior fleet, Mundt said. Each OH-58D currently flies about 70 hours a month vs. the 14 hours a month it was designed for, he said.

"The Armored Reconnaissance Helicopter is a much more powerful, much more capable [aircraft] with better sensors [and] platform for what we are trying to do," he said. It features a larger, enhanced engine, upgraded tail rotor, and improved glass cockpit.

The Army awarded a contract to Bell Helicopter Textron Inc., for delivery of 38 of the new ARH aircraft by fiscal 2008, with an additional 300 to be delivered by fiscal 2013.

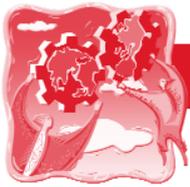
### ARMY NEWS SERVICE (JULY 20, 2006) **LEAN SIX SIGMA EASES FISCAL CONSTRAINT CHALLENGES**

*Beth Reece*

**W**ASHINGTON—As commanders throughout the Army look for ways to cut operating costs, business practices of Lean Six Sigma are reducing expenses and improving productivity throughout manufacturing, contracting, administrative services, and even recruiting.

"People will say, 'We're in the Army; we're not a business,'" said Col. Mike Petrash, deputy commander for the 96th Regional Readiness Command in Utah. "I would counter that and say every time we do a transaction, every time we promote a soldier, pay a soldier, supply a soldier, or move that soldier from point A to point B, that is a business transaction."

Lean Six Sigma is a combination of two business-improvement systems, Lean and Six Sigma. Lean refers to the reduction of waste, or the elimination of unneces-



sary steps to increase speed and productivity. Six Sigma is the reduction of variance to improve system performance. Together, they free up resources and help ensure quality equipment and services are quickly provided to soldiers.

Strides made through LSS practices may best be seen on manufacturing and repair floors such as at Red River Army Depot, Texas.

"We're getting tremendous payback because of Lean Six Sigma. We saved, last year alone, \$30 million on our Humvee line," said Army Col. Douglas J. Evans, depot commander. "It's not only in dollars but also in the number of vehicles that we can get to the soldiers who need them."

The facility can now turn out 32 mission-ready Humvees a day, compared to three a week in 2004.

LSS is also reforming administrative services and human resources.

"When our team took a look at awards processing, we found that on average it was taking 90 days from when we got a request for an award in, to when the award was published. By taking a look at our process and reducing our cycle time, we've been able to reduce that to 21 days," said Army Col. Lori M. Dupuis, chief of staff for the 96th Regional Readiness Command in Utah.

In charge of nearly 6,500 soldiers in 65 units throughout six states, the 96th RRC has used Lean Six Sigma to also reduce the deployment preparation time for a battle-rostered unit from 30 days down to just three.

"Using the Lean Six Sigma approach, we went directly from defining the process to improving it," said Petrash.

At the U.S. Army Recruiting Command, Lean Six Sigma has improved the LEADS system, through which recruiters receive prospective recruits and direct them through the enlistment process.

Of 32 steps taken to recruit new enlistees, subject matter experts from the Recruiting and Accessions Command determined that only 11 were value added. And by reducing the steps by 66 percent, USAREC officials also decreased by 40 percent the time it takes to get applicants through the process.

"We had the immediate return on the investment, which was to cut time and put people in the schools quicker. We were able to eliminate a lot of waste," said Army Chief Warrant Officer 4 Jack Bailey, chief of USAREC's Special Missions Recruiting Division.

"But it's the intangibles, the impact it had on the soldier in the field that was more customer-centric. The benefit was so much more than what we realized inside our four walls. It was just a huge success story," Bailey said.

Where Lean Six Sigma has been implemented, it's been successful, said Mike Kirby, deputy under secretary of the Army for business transformation.

"This is all in a backdrop of severe fiscal year constraints, so we have to do business differently," said Kirby.

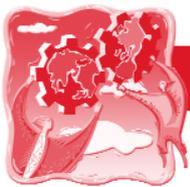
"Lean Six Sigma is a lot different from the programs we tried to implement before. It gives you a set of tools that even the most inexperienced person can use," said George E. Kunkle III, process optimization manager at Corpus Christi Army Depot, Texas. "Initial response to Lean Six Sigma may be resistance, but it only takes one event for people to see right away that this is the right direction."

At Kunke's depot, employees decreased the time it took to rebuild the UH-60 Blackhawk from 256 days to an average of 70.

"Lean was the vehicle that we needed," said Clarence L. Dean, chief of UH-60 Blackhawk Assembly Branch No. 2. "It helped us to really sit down and think about how we do our job."

During fiscal 2005, the Army Materiel Command saw \$110 million in savings and cost avoidance by implementing Lean Six Sigma practices. By removing waste and better controlling output, for example, Letterkenny Army Depot, Pa., reduced costs by \$11.9 million in Patriot air defense missile system recapitalization. And Pine Bluff Arsenal, Ark., reduced repair cycle time by 90 percent and increased its production of M-40 protective masks by 50 percent.

"We are turning things around faster for the warfighter," said Gen. Benjamin Griffin, commanding general of Army Materiel Command. "This is showing significant savings and improvement wherever it has been implemented."



But using Lean Six Sigma principles to redefine principles and improve speed, quality, and cost requires the collaboration of both management and employees.

“The workers have to be enfranchised, because they understand the processes. We have to solicit their input on how to make their processes more lean and more efficient,” said Kirby.

Marc Higgs, process improvement specialist at Red River Army Depot, used his experience and knowledge to influence how Lean Six Sigma practices would create improvements at the depot.

“Lean Six Sigma is good for the soldier, it’s good for the employee, it’s good for Red River Army Depot, it’s good for the Army,” he said.

### AIR FORCE PRINT NEWS (AUG. 1, 2006) ROVER ADDS EXTRA SET OF EYES TO SKY

Ann Patton

**U**.S. AIR FORCE ACADEMY, Colo.—A demonstration of the Remote Operated Video Enhanced Receiver during field training here on July 28 allowed basic cadets an opportunity to see how an extra set of eyes in the sky is a critical weapon in military arsenals.

“It’s important to take a new group of leaders and have them interface on the battlefield with real-time heroes and to see their courage, honor and initiative,” said Air Force Lt. Col. Gregory Harbin of the ROVER demonstration team, which included decorated combat operators.

The ROVER demo served as a mini-laboratory, exploring the possibility of integrating it into curricula for military academies and other military organizations throughout the service branches.

Air Force Lt. Col. Mike Wermuth, the academy’s director of geosciences, is enthusiastic about the demonstration and its possible curricula integration.

“I thought it was great, and I’m sure it will be better in the future, especially after presentations at West Point and ROTC units at Ft. Lewis,” he said, pointing out demo leaders plan to refine their presentations after each site visit.



A basic cadet holds the controller for an unmanned aerial vehicle used during a Remote Operated Video Enhanced Receiver demonstration July 28 at the U.S. Air Force Academy. The ROVER is basically a laptop with antennas that receive video captured by a UAV showing real-time, nearby dangers and allowing ground troops to make quick decisions regarding air strikes.

U.S. Air Force photograph by Dennis Rogers.

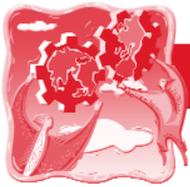
Wermuth said geospatial technology and intelligence is rapidly expanding. As a response to that trend, the academy has changed the title of geography major to a major in geospatial science.

The two-year-old ROVER system looks simple. A laptop with cables and wires attached receives video captured by an unmanned aerial vehicle. The video shows real-time, nearby dangers and helps ground troops make quick decisions regarding air strikes. Videos during the academy demonstration streamed from cameras aboard the small Raven UAV flying overhead.

“This is a demonstration of the kind of warfare we’re growing toward,” Air Force Secretary Michael Wynne said.

He visited the demo site in Jacks Valley July 28 and emphasized the importance of receiving cadet feedback on the technology’s development.

“It’s like talking on the telephone,” said Harbin, who is assigned to the 609th Combat Operations Squadron at Shaw Air Force Base, S.C. “We see what the pilots see.”



## In the News

Using Global Positioning System technology, ROVER shortens talk time describing targets and coordinating attacks, reducing it to seconds rather than minutes. Troops in the field can also receive video imagery from Predator aircraft, C-130s equipped with a Scathe View imaging system, or fighters carrying Sniper targeting pods.

ROVER is highly precise. It can direct strikes against insurgents within 75 meters of troops without endangering the troops.

“We can target people’s noses,” Harbin said.

He cited an incident where an identified insurgent was riding a donkey. The insurgent was killed but his donkey was not.

“Situational awareness is the key,” said Army Maj. David Bristol, the assistant product manager for the Raven UAV.

The system can operate for day and night videos, and it can map and save images. Images are captured at 30 frames per second.

The Raven UAV used during the academy demonstration looks more like an overgrown model airplane than a weapon. Its wingspan stretches to only five feet and its length is a mere 38 inches. Made of Kevlar, the drone is launched in minutes by hand and only requires a pilot to maneuver it and another person to monitor incoming information. It can be programmed for routes and target areas or be flown remotely by the operator.

The Raven has 45 to 60 minutes of flight time on one battery. Upon landing, it hovers, then drops to the ground where it breaks into pieces to await for reassembly. The drone can travel up to 34 miles per hour and is flown to search for improvised explosive devices and perform reconnaissance for patrols. It is virtually silent in the air.

At four and a half pounds, a ROVER can be transported in a rucksack. Retired Master Sgt. Kyle Stanbro, who served three tours in Iraq, remembers traveling with a ROVER by whatever means available.

“We moved on foot, horse, donkey, and vehicle,” he said. The technology directly aided in destroying 65 enemy vehicles in six and a half hours. “We would have done more but ran out of vehicles to target.”

As sophisticated as it is electronically, ROVER is user-friendly. Most users quickly become savvy in its operation.

Not only is ROVER saving ordnance, but more important, it is saving lives. While ground forces are on patrol, the Raven can see beyond buildings and spot terrorists running to engage a patrol.

“This is something that will simply save your life,” Harbin said.

In combat as well, ROVER can reduce collateral damage. Stanbro recalled an incident in Iraq where a local citizen reported suspicious activity on a soccer field. Images streamed into the ROVER were only those of children enjoying a pick-up soccer game.

“The system has also sparked security development for homeland disasters, borders, and garrisons,” Bristol said.

The technology aided in search and rescue efforts after Hurricane Katrina by capturing video images for responders to use in searches for survivors and assessing damage.

The ROVER also showed up at a Kerry Underwood concert at Redstone Arsenal in Alabama and was launched from the top of a building for security.

Harbin wants to see the ROVER technology integrated into course work and training “sooner than later.”

Military communications advanced from carrier pigeons in World War I to radio communication in World War II. Both became institutionalized in terms of communication.

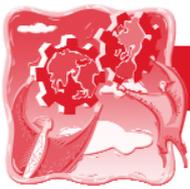
The colonel wants to see the same for video.

“These are 21st century warriors for sure,” he said of the academy class of 2010, who will work with this technology in the future.

*Patton is with U.S. Air Force Academy Public Affairs.*

### AIR FORCE PRINT NEWS (AUG. 2, 2006) WYNNE: WE ARE LOGISTICIANS OF INFORMATION

**W**ASHINGTON—As does its enemies, the Air Force considers cyberspace a warfighting domain. The Air Force has always been in the



Secretary of the Air Force Michael W. Wynne speaks to the newest group of brigadier general selectees and their spouses during the Senior Leadership Orientation Course in Washington, D.C., on July 31. The SLOC is held each year to help colonels selected for promotion transition into their role as a general officer. The weeklong course prepares future generals for issues they may encounter when they take on their new leadership role.

U.S. Air Force photograph by Tech. Sgt. Cohen A. Young, USAF.

business of flying and fighting in the air, and in past decades, has included space in that mission. This year the Air Force expanded its mission to include cyberspace—the domain of information—said Secretary of the Air Force Michael W. Wynne, during the Senior Leadership Orientation Course here July 31.

Both the secretary and Air Force Chief of Staff Gen. T. Michael Moseley addressed SLOC attendees.

“You always wonder what it is to be ‘net-centric,’” said Wynne. “I think it’s a warfighting domain. I see our en-

emies think it’s a warfighting domain. So let’s make it an Air Force domain.”

Air Force officials cemented cyberspace into its mission statement after realizing the Service was already heavily involved in the transport, packaging, and protection of valuable warfighting information.

“It turns out, we are the logisticians of information,” Wynne said. “We pick it up everywhere, we send it through space, we get it up there—like a pachinko machine—through our satellite network, and back down to the ground station. [We put it] into the hands of the commander, just in time, and we figured we have to defend it.”

The protection and maintenance of information systems involves defending the nodes of cyberspace to include the satellite dishes, satellites, routers, and the development and deployment of new satellite systems. The Air Force designs, deploys, and defends information systems for the joint warfighter and for itself, Wynne said.

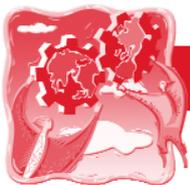
“We are net-centric, and we actually deliver and we depend upon cyberspace to get this done,” he said. “We put a lot of trust in the messages we receive and the targeting we get ... because we drop stuff from way up there, and we shoot from huge distances [away]. We need to trust the messaging traffic and imagery and geolocators when they come over our network.”

Taking on the domain of cyberspace will not pull resources from other missions, Wynne said, because the Air Force already has as many resources committed to cyberspace as it needs and will simply focus on the ones it has.

“I found out we have over 20,000 people working in cyberspace,” he said. “We are now ... trying to figure out how to organize, train, and equip [them]. We always did. But it was more of just a pickup game. Now it is becoming more organized.

“With the chief of staff’s support, we are moving in that direction,” he said. “We are doing a lot of scouting, feeling around, and forward looking. This is a domain the Air Force could now be dominating.”

The secretary also addressed potential concerns about cutting manpower, or force shaping, during wartime. He said force-shaping efforts will result in better-managed resources that can be redirected at other areas of con-



cern for the Air Force, including recapitalization of the aircraft fleet.

“We have got to figure out how to make sure the people who are here in 2015 to 2020 have the best equipment for the next fight,” Wynne said. “We need to offer this nation the maximum number of options so [it] can deter, defeat, and dissuade any enemy over the next period of time.”

Moseley discussed the Air Force’s efforts to posture itself for success in both the war on terrorism and in future wars, while trying to avoid mistakes it has made in the past.

The general told course attendees that the air forces of the past have failed because they did not understand their enemies, they were not interdependent with a joint team, they didn’t increase training and infrastructure to support their fights, and because they didn’t begin their fights with the right amount of aircraft, munitions, or support.

The priorities and initiatives of today’s Air Force, Moseley said, are designed to ensure the Service doesn’t repeat the past. The three priorities today are prosecuting the war on terrorism, developing and caring for airmen and their families, and recapitalizing and modernizing the air and space inventory.

The Air Force has 67 specific “executable initiatives” to help it achieve its priorities, Moseley said. Those initiatives include ensuring 100 percent of uniform-wearing airmen are in an aerospace expeditionary force bucket, enhancing combat skills training during basic military training, finalizing total force integration efforts, and expediting the acquisition process on programs like the KC-X, F-22, and the joint cargo aircraft.

**ARMY NEWS SERVICE (AUG. 8, 2006)**

### **DEPLOYED SOLDIERS TEST BODY VENTILATION SYSTEM**

**F**ORT BELVOIR, Va.—The Army’s Rapid Equipping Force (REF) delivered 500 body ventilation systems to heat-stressed soldiers in Iraq and Kuwait last month.

The portable, lightweight ventilation system will help reduce heat-related injuries, and will undergo one year of assessments by such soldiers as drivers, military police, and machine gunners. Another 1,700 vests will be shipped and issued to soldiers in similar units and duty positions in upcoming months.

“The BVS project is another example of how the Army culture is changing in order to provide warfighter solutions in a timely manner,” said Army Col. Gregory Tubbs, REF director. “It also provides another example of how much good can be accomplished when Army organizations like PEO Soldier and the Rapid Equipping Force team to help the warfighter.”

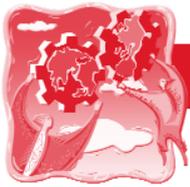
The BVS weighs less than five pounds and can be worn under body armor. Air circulates inside the vest to increase the soldier’s comfort and performance in hot-dry climates by significantly increasing the evaporation rate.

The BVS has two main components—a ventilation unit and an air distribution garment that looks like a vest. The VU, or blower, is a battery powered fan that can be attached in a variety of positions to meet the soldier’s



Army Sgt. Mark Waits, an M1114 gunner assigned to the 3rd Battalion, 29th Field Artillery Regiment, puts on his individual body armor with the Army’s new body ventilation system before leaving for a mission. The BVS is an advanced prototype cooling system that is being tested in Iraq and Kuwait for one year.

U.S. Army photograph.



need and comfort. The filtered blower system fits neatly into a pouch and is similar to a fanny pack.

"It definitely keeps me cool," said Army Sgt. Mark Waits, an M1114 gunner with the 3rd Battalion, 29th Field Artillery Regiment. "I don't feel as fatigued after a mission in the BVS."

The BVS operates approximately eight hours with commercial lithium rechargeable batteries, with a recharge time of four to five hours. Filters are the system's primary maintenance.

"When GlobalSecure approached us with their quick, simple, and reliable BVS design, I knew we could work with and count on the REF to get it to soldiers," said Army Col. Richard Hansen, director, Project Manager Soldier Warrior.

GlobalSecure was selected among other vendors for its overall quality and product design, service, timeliness, and price.

The Rapid Equipping Force is committed to working with industry and governmental partners such as Soldier Warrior to develop versatile equipment that protects soldiers and ensures their survivability and lethality.

"If the warfighters need it, then I won't rest until I explore every option to meet those needs," said Tubbs.

### **SUPPORTING THE WARFIGHTER WITH INNOVATIVE, COST-EFFECTIVE, GREENER TECHNOLOGIES**

*Gary Leitner*

**E**stablished in 1994, the Joint Group on Pollution Prevention (JG-PP) has been actively fostering cooperation between the DoD Services, the National Aeronautics and Space Administration (NASA), and original equipment manufacturers (OEMs) in an effort to leverage valuable resources and identify new channels for implementing promising innovative technologies in response to weapons/space systems environmental compliance issues.

Our partnership at the flag officer level involves the military services, NASA, Defense Logistics Agency (DLA), and Defense Contract Management Agency (DCMA) as needed. At the request of industry, it is chartered by the Joint Logistics Commanders (JLC) to reduce/eliminate

hazardous materials, avoid duplication of effort, minimize technical risks, and balance cross-Service acquisition and sustainment pollution prevention (P2) issues and concerns. Through DCMA, projects are brought to the JG-PP by the OEMs.

Our project partnerships include DoD platform and component OEMs such as The Boeing Company, Lockheed Martin, Raytheon, Hamilton-Sundstrand, Messier-Dowty, Héroux-Devtek, Eaton Aerospace, and many others. JG-PP projects frequently partner with other DoD chartered and ad hoc groups such as the Propulsion Environmental Working Group, Joint Committee on Aging Aircraft (JCAA), the Hard Chrome Alternatives Team, the Joint Cadmium Alternatives Team, and the Joint Service Solvent Substitution Team to ensure the necessary DoD weapon/space system and supplier communities buy-in. Past and current projects have targeted HazMat such as hexavalent chromium in both plating processes and coating systems, cadmium, and various hazardous solvents with successful implementation of qualified alternative materials. JG-PP, JCAA, and NASA recently completed Institute for Printed Circuits IPC, Association Connecting Electronics Industries, Class 3 testing, using Military Standard MIL-STD-810 requirements on three leading lead-free solders being substituted in worldwide electronic systems to aid in determining potential impacts to DoD systems.

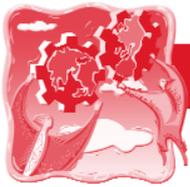
Our working group actively employs a complementary set of collaborative tools to accomplish our mission and goals: validation methodology; information/resource brokering; and project selection process.

#### **Validation Methodology**

We employ a multi-phase validation methodology to effectively match common environmental problems within Services/industries with joint solutions. Our coordination identifies common qualification requirements and cost sharing to qualify new, improved, environmentally acceptable technologies for joint-Service weapon and space system applications. The collaboration continues as part of the technology transfer process with ongoing involvement of project integrators to promote implementation at both the manufacturing, remanufacturing, and depot maintenance levels.

#### **Information/Resource Brokering**

Our information/resource brokering efforts include access to an electronic resource library that includes data on potential technologies, project information and goals, and contacts. Our Web site originated in 1997 as an out-



reach P2 resource for government and industry for past and current project initiatives. The Web resource maintains over 2.2 gigabytes of data and hosts over 80,000 worldwide Internet visitors annually. In addition, we maintain an electronic file resource with over 10 gigabytes of historical data to support ongoing group efforts.

### Project Selection Process

To enhance our project selection process, we formed a project selection committee composed of knowledgeable people from the participating agencies to assess new alternative processes and technologies efficiently and quickly. In 2006 we initiated three new projects:

#### Nonchromate Primers for Military Applications

We partnered with the Naval Air Systems Command Aircraft Equipment Reliability and Maintainability Improvement Program to demonstrate/validate promising nonchromate primers with improved corrosion protection formulation to military specification requirements. The project is intended to reduce worker exposure to hexavalent chromium.

#### Low Temperature Cure Powder Coatings

We partnered with the Environmental Security Technology Certification Program to demonstrate, validate, and implement a volatile organic compound/hazardous air pollutant-free low temperature cure powder coating on DoD weapon system components in a depot production environment. The demonstration will verify and validate the environmental, performance, and economic advantages of the proposed technology when compared to the baseline coatings. Powder coating technologies can reduce or eliminate risk and cost associated with the use of hazardous solvent-borne organic chromate coatings.

#### Corn Hybrid Polymer Coating Removal on Delicate Substrates

We coordinated joint service interests for this joint-Service initiative project to evaluate and demonstrate the effectiveness of corn hybrid polymers (CHP), as a potential process to remove coatings from radomes and other delicate substrates during maintenance, repair, and overhaul operations. CHP is an isolated polycrystalline byproduct material resulting from the commercial processing of corn. It offers an effective alternative to solvent treatment as a means to remove coatings from various composite substrates.

The committee is continuing to coordinate project efforts that will focus on propylene glycol antifreeze recy-

cling, a less toxic replacement for ethylene glycol antifreeze and tactical vehicle biodiesel applications to support government initiatives to reduce dependency on petroleum based fuels.

### The Payoff

By engaging in joint environmental technology improvement projects, stakeholders are able to leverage valuable resources through cost sharing and technical expertise that minimize technical risks and result in a more unified, cost-effective, and timely problem-solving approach. The result provides reduced weapons system life cycle costs by improving performance over existing technologies, reducing environmental costs, and reducing maintenance turnaround times.

Our effective collaborative efforts bring together the right people to support the warfighter with innovative, cost-effective, greener technologies in an effort to optimize military, economic, and ecological concerns.

Visit <<http://www.jgpp.com>> for additional information and a complete listing of all our JG-PP projects.

*Leitner is JG-PP Working Group chair at U.S. Marine Corps Logistics Command and can be contacted at [gary.leitner@usmc.mil](mailto:gary.leitner@usmc.mil).*

### DEPARTMENT OF DEFENSE NEWS

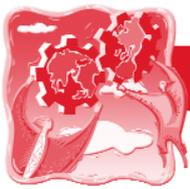
RELEASE (AUG. 10, 2006)

#### DOD RELEASES SELECTED ACQUISITION REPORTS

**T**he Department of Defense (DoD) has released details on major defense acquisition program cost, schedule, and performance changes since the December 2005 reporting period. This information is based on the Selected Acquisition Reports (SARs) submitted to the Congress for the June 2006 reporting period.

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

The total program cost estimates provided in the SARs include research and development, procurement, military construction, and acquisition-related operation and



## In the News

maintenance (except for pre-Milestone B programs, which are limited to development costs pursuant to 10 U.S.C. §2432). Total program costs reflect actual costs to date as well as future anticipated costs. All estimates include anticipated inflation allowances.

The current estimate of program acquisition costs for programs covered by SARs for the prior reporting period (December 2005) was \$1,584,718.7 million. After subtracting the costs for two final reports (Aerial Common Sensor (ACS) and Advanced SEAL Delivery System (ASDS)) and adding the costs for four new programs (Advanced Deployable System (ADS), Heavy Lift Replacement (HLR), LHA Replacement, and VH-71 Presidential Helicopter) from the December 2005 reporting period, the adjusted current estimate of program acquisition costs was \$1,612,682.5 million. For the June 2006 reporting period (shown below), there was a net cost decrease of \$76.7 million (-0.005 percent), due to revised cost estimates and support requirements for the MH-60R.

### CURRENT ESTIMATE (\$ IN MILLIONS)

<b>December 2005 (85 programs)</b>	<b>.....\$1,584,718.7</b>
Less final reports on two programs (ACS and ASDS)	.....-1,965.6
Plus four new programs (ADS, HLR, LHA Replacement and VH-71)	.....+29,929.4
<b>June 2006 Adjusted (87 programs)</b>	<b>.....\$1,612,682.5</b>

#### Changes Since Last Report:

Economic	.....\$ 0.0
Quantity	.....0.0
Schedule	.....0.0
Engineering	.....0.0
Estimating	.....-121.4
Other	.....0.0
Support	.....+44.7
Net Cost Change	.....\$ -76.7

Plus initial procurement cost estimates for DD(X) Destroyer (previous reports limited to development costs per 10 USC §2432)	.....+27,813.3
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**December 2005 (85 programs) .....\$1,584,718.7**

For the June 2006 reporting period, there were quarterly exception SARs submitted for five programs. The reasons for the submissions are provided below.

### Navy

**AESA (Active Electronically Scanned Array)**—The SAR was submitted to report program expenditures of more than 90 percent. Therefore, in accordance with 10 U.S.C. §2432, this is the final AESA SAR submission.

**MH-60R**—The SAR was submitted to rebaseline from a Development to a Production Estimate following a Full Rate Production decision (Milestone III) on March 31, 2006. Program costs decreased \$76.7 million (-0.7 percent) from \$11,396.0 million to \$11,319.3 million, due to revised cost estimates and support requirements.

**MH-60S**—The SAR was submitted to report a schedule slip of six months for the Airborne Mine Countermeasure (AMCM) Initial Operational Capability (IOC) from March 2007 to September 2007. Also, AMCM Interim Process Review IV slipped from April 2007 to July 2007.

### Air Force

**C-5 AMP (Avionics Modernization Program)**—This is the initial SAR submission since the program exceeded the Major Defense Acquisition Program (MDAP) reporting criteria.

**NAVSTAR GPS (Global Positioning System)**—The SAR was submitted to report schedule slips of six months or more. The M-code Receiver Card Ready for Production slipped from January 2009 to May 2011. Also, the 1st Block IIF Space Vehicle Available for Launch slipped from November 2006 to January 2009.

#### New SARs (As of June 30, 2006)

The Department of Defense has submitted an initial SAR for the Air Force's C-5 AMP (Avionics Modernization Program). This report does not represent cost growth. Baselines established on this program will be the point from which future changes will be measured. The current cost estimate is provided below:

### CURRENT ESTIMATE (\$ IN MILLIONS)

#### Program

C-5 AMP (Avionic Modernization Program)	.....\$ 859.3
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**Total .....\$ 859.3**