In the News

ARMY NEWS SERVICE (APRIL 5, 2005)

ARMY ANNOUNCES BUSINESS RESTRUCTURING OF THE FCS PROGRAM

After two months of review, Secretary of the Army Dr. Francis J. Harvey today announced a restructuring of the business aspects of the Future Combat Systems program. The changes are comprehensive and include contractual, programmatic, and managerial improvements.

The improvements will formally link the FCS program to the Army Modular Force Initiative through a Future Combat Force Strategy that establishes a framework for the continuous progression of the current modular force into the future one. The Future Combat Force Strategy provides for the spiraling of FCS-based technologies into the current modular force; integration of current combat lessons in areas of doctrine, organization, equipment, and other key elements, and into the force; and eventual incorporation of advanced manned combat platforms developed in the FCS program.

Harvey directed that the current FCS Other Transaction Agreement (OTA) with the lead system integrator (The Boeing Co./SAIC) be changed from an OTA to a Federal Acquisition Regulation-based contract that would include the Truth in Negotiations Act, the Procurement Integrity Act, Cost Accountability Standards, and an Organizational Conflicts of Interest clause.

"The OTA was appropriate for the earlier phases of FCS, but with the implementation of the Army Modular Force Initiative and last summer's programmatic restructuring of the FCS program, we need a contractual arrangement that best ensures FCS is properly positioned in the Modular Force and that its technologies are spiraled in as soon as possible," Harvey said.

To ensure the management approach is fully aligned with Chief of Staff Gen. Peter Schoomaker's policy decision last year to programmatically restructure FCS, Harvey also directed the establishment of the Army Modular Force Integration Office to ensure that technologies are spiraled into the current force as soon as they are ready, and integration and coordination of the program with co-evolution of joint warfighting doctrine and the Army's emerging global communication and information infrastructure. The Acting Under Secretary of the Army, Raymond Dubois, and the Army Vice Chief of Staff, General Richard Cody, will oversee this office.

Harvey and Schoomaker will conduct an in-depth review of the program a minimum of three times a year. Harvey, in close consultation with Schoomaker, will also serve as the Army lead for all major changes to the program.

As an additional oversight measure, the Army Audit Agency, the Army Science Board, and an outside panel of advisors will conduct periodic independent cost, schedule, and technical viability assessments.

AMERICAN FORCES PRESS SERVICE (APRIL 25, 2005)

ARMY GENERAL: AIR FORCE HELPED LOGISTICS SUCCESS IN IRAQ

Gerry J. Gilmore

WASHINGTON (AFPN)—The U.S. military's task to supply troops serving in Iraq during the past year "was one of the most complex and challenging missions in our history," a senior Army general said April 20.

Yet logisticians "proved successful in supporting a force of (about) 165,000 soldiers, airmen, Marines, and civilians serving in a country the size of California," Army Lt. Gen. Thomas F. Metz said. He recently returned stateside after a year as commander of Multinational Corps Iraq and is the commander of the Army's 3rd Corps at Fort Hood, Texas.

The general said supply specialists in Iraq "distributed an average of 1.2 million gallons of fuel, 55,000 cases of bottled water, 13,000 cases of Meals, Ready to Eat, 60 short tons of ammunition, and 200 pallets of repair parts" each day to U.S. forces during his tour.

Yet, Metz said, he recalled a time early in his tour when the logistics pipeline in Iraq did not operate so smoothly. In April 2004, insurgents staged attacks throughout Iraq and targeted U.S. supply centers and truck convoy routes, he said.

Supply specialists reacted quickly and shifted "from a centralized distribution system to decentralized regional hubs," Metz said. This change increased supply-system flexibility and "helped us to better assess civilian convoy routes on the battlefield and avoid risk when possible through the highest threat areas," he said.

Another lesson was that military logisticians on convoy duty in Iraq "must have the training, confidence, and weapons skills to conduct supply missions," he said.

Metz also highlighted "the Air Force's contribution to the safety and success of our resupply efforts" in Iraq. The

implementation of aerial supply routes in some high-threat regions "helped keep (about) 40 additional trucks off the road per day" and kept "at least 80 soldiers" out of harm's way on a daily basis, he said.

The use of aerial resupply also helped deliver parts and other items from the United States "directly to remote locations like Quyarrah West and al Taqaddum," Metz said.

Daily patrol requirements and engagements with the enemy in Iraq caused "massive logistics requirements during the deployment," he said. Yet, supply centers in the United States, Germany, and Kuwait "did a tremendous job in supporting the corps," he said.

Metz said he "was pleased and proud of the monumental logistics operations and accomplishments during our deployment."

ARMY NEWS SERVICE (APRIL 26, 2005)
NEW TECHNOLOGY HELPS CLEAR AWAY UNEXPLODED ORDNANCE

Mary Bodine

FORT A.P. HILL, Va.—New technology now being used at Fort A.P. Hill, Va., promises to revolutionize unexploded ordnance removal and even generate revenue from recycling the material.

The Lightweight Ordnance and Armaments Demilitarization System, or LOADS, is a mobile machine designed to crush or cut inert ordnance and make it acceptable for salvage or recycling, said John J. Stine, director of Demilitarization Services Division, UXB International, Inc. —the company that designed LOADS.

LOADS is being used on Fort A.P. Hill to remove about two tons of inert ordnance—some dated from the 1940s—for a range upgrade project, said Gregory Quimby, project manager, AMEC Earth and Environmental, Inc., the company responsible for the range design, construction, and its environmental remediation. The range is being converted from an anti-armor range to a multipurpose machine gun range. UXO clearance on the range was necessary for new construction, he added.

"We took the construction footprint for the range modifications and conducted a surface clearance," Quimby said. "If the UXO was live, we flagged it for detonation, which will be done with explosives; if it was nonhazardous UXO, we collected it and consolidated it in a central location for LOADS processing."

John Kierepka, a contractor with UXB International, Inc., shows Hank Hanrahan, Fort A.P. Hill's director of Plans, Training, Mobilization and Security, how effectively LOADS breaks a 40-mm round, making it acceptable for recycling. U.S. Army photograph by Mary Bodine.

AMEC also used electromagnetic scanning and geophysical surveys to clear 10 acres of UXOs buried less than two feet in the ground, Quimby added. About 30 acres of surface land were cleared for the project.

Once the ordnance is processed through LOADS, it will be collected, smelted, and recycled, Stine said. Revenue generated from recycling is credited to the client's account, resulting in a cost-savings for the military, he added.

Traditional methods of UXO removal were burying or burning munitions on the range, Stine said.

"We knew there had to be a better way of removing UXOs from training areas," he added. "From blank paper to operation, it only took 18 months to build LOADS. We began testing it in late 2002 and started using it immediately after that. There have been four modifications on the system, expanding the types and sizes of munitions it can handle."

On the Fort A.P. Hill project, LOADS will cut or crush 40-mm grenades, 60-mm mortars, 81-mm mortars, 3.5-inch rockets, and other munitions remnants, Quimby said.

"This technology will enhance the way ranges are cleared in the future," he said. "Because it is mobile, we will be able to clear more ranges, more safely. Although the machine is not designed to process live ordnance—everything has to be inert—by passing it through the machine, you can be sure that it is rendered safe. If there is a live round, the machine can certainly absorb the impact better than the human body."

The LOADS system has revolutionized UXO clearance and eventually will replace the "bury or burn" method altogether, Stine said.

Bodine serves with Fort A.P. Hill Public Affairs. Fort A.P. Hill is a 76,000-acre installation specializing in training and maneuver, and live-fire operations.

AIR FORCE SPACE COMMAND NEWS SERVICE (APRIL 27, 2005)

SPACE, AIR WARFARE CENTERS INTEGRATE CAPABILITIES

Lt. Gen. W. M. Fraser III, USAF

PETERSON AIR FORCE BASE, Colo.—The Air Force is integrating some forces to better manage air, space, and information operations combat capabilities to support missions worldwide, Air Force officials announced April 26.

Elements of Air Force Space Command's Space Warfare Center at Schriever Air Force Base, Colo., will integrate with the Air Warfare Center at Nellis AFB, Nev., to become the U.S. Air Force Warfare Center. Air Force officials also are looking at what information warfare capabilities might fit into the integration. Located at Nellis, the new center will fall under Air Combat Command's control.

Details of the transformation will be coordinated by officials from both commands who said they hope the integration will be completed by Oct. 1. No physical movement of units or closing down of facilities is currently planned.

"Integrating elements of the [centers] consolidates key Air Force warfighting assets into one organization, which will create a warfighting synergy that increases combat effectiveness and peacetime efficiencies," said Gen. Lance W. Lord, AFSPC commander. "This integration will better meet operational requirements for air, space, and information operations, ensuring the Air Force continues to provide quality stewardship for America's warfighting assets."

As the consolidation progresses, there will be no interruption to air, space, and information operations support to the joint warfighter, General Lord said.

"This integration is another step we're taking to ensure the Air Force has the right mix of air, space, and (information operations) capabilities for training and supporting our combat forces," said Lt. Gen. William M. Fraser III, ACC vice commander. "Doing this now will make us even more ready to meet current and future challenges."

ARMY NEWS SERVICE (APRIL 26, 2005)

HARVEY EXAMINES AVIATION TRANSFORMATION, NEW CRC

Staff Sgt. Carmen L Burgess, USA

FORT RUCKER, Ala.—Secretary of the Army Francis Harvey praised units at Fort Rucker, Ala., for improving training and introducing initiatives to keep soldiers safe while performing their duties.

Harvey visited the installation April 26, receiving briefings on Army aviation transformation and the strides being made by the Combat Readiness Center to keep soldiers informed and safe.

Army Aviation

"We are a huge contributor to the battlefield," Brig. Gen. E.J. Sinclair, Fort Rucker commanding general, told Harvey. With flight paths covering an area the size of South Carolina, Fort Rucker has trained more than 58,000 U.S. and 460 foreign aviators on what has become the busiest airfield worldwide.

Sinclair went on to tell the secretary how Army transformation and changing battlefield scenarios have

prompted adaptations in gunnery tactics, proficiency requirements, and maneuvering flight. He said that there have been many warfighting initiatives introduced within the last year that have resulted in positive feedback from the field.

"All the stuff we buy, all the equipment we field—[our success] really comes down to the soldier," Sinclair said. "There are so many great stories and great soldiers in our units."

The secretary echoed that sentiment during a speech he gave that evening at the National Defense Industrial Association seminar in Atlanta as he highlighted the resilience of soldiers like Blackhawk pilot Maj. Tammy Duckworth. Although she was seriously wounded while flying in Iraq and ended up losing both of her legs, she safely landed her disabled aircraft, saving the lives of her crew.

The secretary told the audience that Duckworth wants to continue serving as a pilot and had told him that "no Iraqi with a [rocket-propelled grenade] is going to dictate how I live my life."

"Though the [U.S.] Army is very busy, it is still the best in the world, and it is primarily the best because of the courageous men and women who proudly wear the uniform of the American soldier," Harvey told the audience.

After touring Rucker's Seneff Aviation Warfighting Simulation Center and aviation combined arms tactical trainer, where he fired a missile from the cockpit of a simulated Apache, the secretary voiced his approval of the technologies used to familiarize new pilots with equipment before they fly real aircraft.

"I'm very impressed with the training and hours that aviation soldiers put in," he said.

Combat Readiness

Before leaving the installation, Harvey met with staff members at the Combat Readiness Center, formerly known as the U.S. Army Safety Center, where he received updates on improvements being made to enhance soldier safety.

Brig. Gen. Joseph Smith, CRC director, told the secretary that regardless of how the Army loses a soldier, whether in combat or by accident, CRC staff want to know why and how. He said their mission is to reduce the number of casualties across the Army.

While at the SENEFF Aviation Warfighting Simulation Center at Fort Rucker, Ala., April 26, Secretary of the Army Francis Harvey fires a Hellfire missile from the mock cockpit of an Apache helicopter.
U.S. Army photograph by Staff Sgt. Carmen Burgess, USA.

The center is focused on soldier safety through investigations and predictive analysis of losses, so the Army can better manage risk and improve combat readiness. CRC has developed a Web site, complete with risk assessment tools and modern safety messages, to drive the message home to soldiers.

"We understand this technology is the future," said Smith. "We're about messaging, tools, and education."

The secretary told employees at the center that he appreciated their efforts in taking care of soldiers.

"I think what you're doing is very important," he said. "The safety and well-being of our soldiers is my No. 1 concern."

ARMY NEWS SERVICE (APRIL 29, 2005)
ARMY TO PURCHASE NEW LIGHTWEIGHT HOWITZERS

Martin Kane

PICATINNY ARSENAL, N.J.—A joint-service program office at Picatinny Arsenal has completed development and is managing the purchase of 589 new lightweight 155mm howitzers for the Army and Marine Corps.

An $843-million, four-year contract has been awarded to BAE Systems of Barrow-in-Furness in the United Kingdom, to manufacture the weapons and 94 digital fire-

Soldiers fire the new M777A1 lightweight howitzer during operational testing. U.S. Army photograph.

control retrofit kits, according to Jim Shields, deputy program manager for the lightweight 155mm howitzer program.

Shields said that the howitzer is known as the M-777A1 howitzer in the Services' inventories.

"The M-777A1 will replace all of the corps' current M-198 towed howitzers and will be the artillery system for the Army's Stryker Brigade Combat Teams," he said.

As the first ground combat system to make extensive use of titanium in its major structures to trim weight, the M777A1 is 7,000 pounds lighter than the weapon it replaces.

The weight reduction improves transportability and mobility without impacting range or accuracy, Shields said, adding that the system is compatible with the entire family of 155mm ammunition.

The new howitzer is transportable by the Marine Corps' MV-22 tilt-rotor aircraft, and two can fit on the C-130.

Currently, BAE Systems is manufacturing 94 howitzers under a low-rate initial production contract, Shields said.

The first 94 weapon systems will be equipped with an optical fire control system that will be upgraded to incorporate digital fire control under the full production contract, he said.

All 495 full-production units will be manufactured with digital fire control systems also known as towed artillery digitization or TAD.

The 3rd Battalion, 11th Marine Regiment, located at Twentynine Palms, Calif., will be the first unit fully equipped with the weapon.

Shields said that BAE Systems facility in Hattiesburg, Miss., is assembling the howitzer.

"Approximately 80 percent of the howitzer's components are built in the U.S.," Shields said. "We utilize a supply chain that spreads across 10 states, the U.K., Canada, and Italy."

The Army's Watervliet Arsenal in New York manufactures the cannon assembly, he said.

The howitzer system underwent a successful joint-service operational test during October 2004 at Twentynine Palms, Shields said. During the four-week test, nearly 12,000 artillery rounds were fired by four M777A1s.

The system demonstrated high reliability, met or exceeded all its operational requirements, and a team of independent evaluators determined the M777A1 was both operationally suitable and effective.

The M777A1 will be capable of firing the Army's Excalibur precision-guided projectile that is also under development at Picatinny Arsenal.

Excalibur will be fired out to a range of 40 kilometers from the M777A1, and because of its Global Positioning System and inertial navigation guidance, will deliver precision-strike capability (less than 10 meters Circular Error of Probability) at all ranges.

Excalibur is scheduled to be fielded in late 2006 when the Army starts taking delivery of its first M777A1s.

Kane works for the U.S. Army's Armament Research, Development and Engineering Center (ARDEC) Public Affairs.

AMERICAN FORCES PRESS SERVICE (MAY 2, 2005)

DIGITAL ADVANCES PRODUCE IMPROVED UNMANNED AERIAL VEHICLES

Gerry J. Gilmore

WASHINGTON, May 2, 2005—One day on a gray-painted aircraft carrier tossed by turbulent seas, a grizzled Navy commander awaits the arrival of a new pilot.

A teeny knock pings from the outside of the officer's watertight steel door.

"Come in," the commander growls. The door swings open and a squat, cylindrical object negotiates itself over the threshold and then trundles into the officer's quarters.

In a metallic voice the robot cheerfully announces: "R2-D2 reporting for duty, sir!"

Although R2-D2 of Star Wars fame is imaginary, Defense Advanced Research Projects Agency researcher John S. Bay predicts that fully automated unmanned aerial vehicles will be commonplace in the not-so-distant future, as human warfighters rely more and more on flying R2-D2s.

Bay said Defense Secretary Donald H. Rumsfeld and Air Force Chief of Staff Gen. John P. Jumper "have both set high goals for automation in UAVs."

An electrical engineer by training, Bay has for the past four years worked on a special DoD-endorsed project—the Software Enabled Control program—that marries cutting-edge computer technology with robotics to produce improved fixed- and rotary-winged unmanned aerial vehicles.

"The goal of the program is to improve the level of automation for air vehicles," to include unmanned and manned systems, Bay explained. This, he said, involves the implementation of "innovative control systems" that take advantage of recent breakthroughs in computer software.

SEC technology has already been applied to pilot "a UAV from the backseat of an F-15," Bay said. Lessons learned, he noted, will likely be used one day to produce "aerial robots" that like R2-D2 of Star Wars fame, would act as "an automated wingman" for human pilots.

Bay said the new technology underwent a series of experiments in August 2004 at Fort Benning, Ga., using a Yamaha-sourced radio-controlled miniature helicopter, the type flown as a crop duster in Japan.

The Fort Benning trials were fully successful, Bay said, noting the 150-pound helicopter completed all of the experiments without crashing. The flying capabilities of the little helicopter were improved by installing updated computing equipment and sensors, Bay said, as part of efforts to make it behave more appropriately for military missions.

Those tasks, he noted, could include low-altitude reconnaissance work in urban environments, landing in confined or geographically challenged areas, rapid landings and takeoffs, "nap-of-the-earth" concealed flying tactics, and more.

"The control systems that we are building expand the flight envelope for the vehicle," Bay observed, noting SEC technology allows unmanned aerial vehicles "to fly closer to the ground at higher speeds with more aggressive maneuvers."

Although a human operator stood by as a fail-safe during the Fort Benning tests, the SEC-enhanced helicopter performed pre-programmed flights all by itself.

"It was totally automatic," Bay explained, noting, "We gave it a starting point and an ending point and told it to avoid things in between." Other SEC testing, he said, includes the use of a full-sized automated helicopter.

Bay explained that most military UAVs in use today are operated at higher altitudes "where there's nothing to run into." SEC-enhanced UAVs, he pointed out, can fly around buildings and other vehicles.

Onboard sensors assist SEC-enhanced UAVs in avoiding buildings and helping with bad landings in difficult terrain, Bay noted.

Application of software-enabled control technology, Bay said, will enable UAVs to conduct different types of reconnaissance tasks. It's also feasible, he added, that future UAVs may be used to pick up and deliver supplies or perform combat search-and-rescue missions to "pull a downed or injured pilot out of harm's way."

DARPA is the Defense Department's premier research and development agency. It manages and directs selected DoD research and development projects that may produce dramatic advances for traditional military roles and missions.

AMERICAN FORCES PRESS SERVICE (MAY 17, 2005)

DOD PREPARES BIOMETRIC ID SYSTEM FOR U.S. BASES IN IRAQ

Gerry J. Gilmore

WASHINGTON (AFPN)—The Defense Department is fine-tuning a $75 million biometric identification system designed to improve force protection at U.S. military bases in Iraq, said officials involved with the project.

At a recent demonstration, DoD officials said the state-of-the-art system will use biographical data, facial photographs, fingerprints, and iris scans collected from Iraqis and other non-U.S. citizens who want to work on U.S. bases in Iraq to develop ID cards that cannot be counterfeited.

Biometrics are measurable physical or behavioral characteristics that can be used to identify people.

Work on the new biometrics-based system began in late January when Paul Wolfowitz, then-deputy secretary of defense, pushed for an improved base-access system to provide better protection for U.S. troops in Iraq.

The need for a better way to screen people coming onto U.S. bases in Iraq was illustrated by the Dec. 21, 2004, bombing of a military dining facility in Mosul. That blast killed 22 people, including 14 U.S. soldiers, and wounded at least 50. It was first thought the dining facility had been hit by a rocket attack.

Further investigation of the Mosul bombing pointed to the likelihood that a suicide bomber had infiltrated the base—one non-U.S. person killed could not be identified—and set off the explosion.

"This is a force-protection initiative," said a DoD official at the system demonstration. He said the new ID cards contain embedded information that cannot be altered.

"This badge will be able to uniquely identify that person as the right person. You can't counterfeit it; you can't tamper with it."

Base employees who are issued new biometric ID cards will be required to pass through security-control points where the badges will be electronically checked, he said.

During the demonstration project, managers showed how fingerprints and iris scans are gathered and the data put into computers, how ID cards are printed, and how new ID cards are checked and verified by stationary and mobile scanners.

Employee information gathered at enrollment points will be forwarded to self-contained control stations. The control stations feature independent power, heating, and air-conditioning systems—all a necessity in an austere, forward-deployed environment like Iraq. The control stations will process the enrollment data to produce the biometrically enabled ID card.

"DoD is trying to develop an identification capability so that we can identify unknowns [and] terrorists," said Steve Hooks, a former FBI special agent and biometric project consultant. "These individuals applying for an ID card will have background checks based on those conducted for U.S. military personnel and DoD civil servants."

The biometric ID system has been developed to protect servicemembers and save lives, said Army Maj. Gen. Conrad Ponder, the chief integration officer for the Army's chief information office.

"We're developing a significant new capability for force protection," he said. "This prototype is a solid first step,

and we'll continue improving the systems as we get closer to fielding [the system]."

Project managers are now working closely with U.S. Central Command officials who attended the briefing to resolve any remaining issues. The new system will be implemented in Iraq as soon as possible, officials said.

AMERICAN FORCES PRESS SERVICE (MAY 19, 2005)

DOD EXAMINES HIGH OPERATIONAL TEMPO'S EFFECT ON EQUIPMENT

Jim Garamone

WASHINGTON (AFPN)—Equipment that servicemembers are using in Iraq and Afghanistan is getting years' worth of use in just one year on the ground, and the Defense Department is taking steps to ensure the tanks, Bradleys, Strykers, Humvees, helicopters, and unmanned aerial vehicles stay in a high state of readiness.

No one is going into combat in substandard equipment, a DoD report concluded.

The report—"Ground Force Equipment Repair, Replacement, and Recapitalization Requirements Resulting from Sustained Combat Operations"—went to Congress recently.

Department officials were concerned about the effect prolonged combat would have on equipment even before Congress asked for the issue to be examined.

"Equipment is being used at a much higher rate than it is in peacetime—two to eight times higher, depending on the piece of equipment you are talking about," said Mark Franklin Cancian, director of the land forces division of DoD's office of program analysis and evaluation. "As a result, it needs a lot more maintenance."

In addition, problems caused by the high operational tempo are further aggravated by the harsh environmental conditions. Equipment operating in Iraq and Afghanistan faces problems from dust, dirt, and heat, Cancian said. Other equipment, especially trucks and Humvees, are running with added armor, which taxes the engines, springs, and brakes.

The Abrams tank is a perfect example of the extent of the problem. In peacetime, Abrams tanks drive about 65 miles a month. In Iraq, soldiers are driving them about 325 miles each month.

Other pieces of equipment have similar statistics. Humvees are being driven more than twice as far each month as in peacetime. Armored security vehicles are being driven about eight times as much, and Bradley fighting vehicles about five times their peacetime aver-

Four M-1 Abrams tanks are in various stages of upgrade on the reassembly line at Anniston Army Depot Combat Vehicle Facility. The The Abrams tank is a perfect example of a high operational tempo's effect on equipment maintenance and repair. In peacetime, Abrams tanks drive about 65 miles a month. In Iraq, soldiers are driving them about 325 miles each month.

U.S. Army photograph.

age. Helicopters are being flown about twice as much as in peacetime.

"The question we asked was, 'What's the long-term effect of combat operations on our equipment?'" Cancian said.

DoD used the results of the study to help inform officials for the fiscal 2005 supplemental budget request. That request funds all the work that can be accomplished this fiscal year to repair or replace equipment. Portions of the $82 billion request fund depot maintenance and procurement actions

Cancian said a lot of maintenance is done in theater. Most equipment does not have to be shipped back to the states for major overhauls. When equipment does get shipped back, some maintenance is done in the units and some in depots. The depots have "all the funding and capacity to do the work," he said.

There are some equipment washouts, and there is procurement money in the supplemental to cover pieces of equipment that are not economical to fix. These washouts are mostly trucks. Combat losses also need to be replaced, Cancian said.

Most procurements can be handled by current production lines, Cancian said. But some, such as the OH-58D Kiowa Warrior observation helicopter, have been discontinued. The Army will accept some risk in using this helicopter until a replacement comes online in fiscal 2007 or 2008.

"The risk isn't that we can't fight a war," he said. "It means units may have to rotate more quickly than they otherwise would."

ARMY NEWS SERVICE (MAY 19, 2005)
DETECTION DEVICE TO REVOLUTIONIZE BIOLOGICAL WARFARE

Elaine Wilson

FORT SAM HOUSTON, Texas—The Joint Biological Agent Identification and Diagnostic System (JBAIDS), a 40-pound device small enough to slip into a rucksack, is designed to vastly increase the speed and accuracy of biological warfare agent detection.

"JBAIDS will fill a vital role in providing accurate, rapid identification capability for detecting a threat or an attack," said Donna Boston, JBAIDS program manager.

U.S. Army Spc. Paul Miller, from the 9th Area Medical Laboratory at Aberdeen Proving Ground, Md., loads the Joint Biological Agent Identification and Diagnostic System analyzer carousel with samples. It takes 40 minutes to process a sample once the extraction process of a suspect biological warfare agent specimen is complete.

U.S. Army photograph by Jerry Stillwagon.

Prior to JBAIDS, it took the military two to four days back in a microbiology laboratory to accurately identify the presence of a biological warfare agent. JBAIDS can do it on the spot in 40 minutes.

"With rapid identification of a threat, we can be armed with information to fight bioterrorism," Boston said. "It offers so many advantages. The quicker we can identify an agent, the quicker a doctor can make an accurate diagnosis and commanders can start taking action."

The Joint Program Executive Office for Chemical and Biological Defense, a joint service office in Falls Church, Va., found the technology in 2002 while seeking a quicker way to detect biological warfare agents in the wake of Sept. 11, 2001, and later anthrax scares.

Idaho Technology, Inc., from Salt Lake City, Utah, stepped forward with JBAIDS, the latest in biological warfare technology.

The device looks deceptively simple, just a laptop connected to an analyzer.

Lab technicians load suspect samples into a carousel within the analyzer where they're "cooked and cooled" repeatedly so strands of DNA break apart and replicate to make copies of themselves.

Each time heating and cooling occur, more DNA copies are formed, which takes something from undetectable to identifiable.

The device can simultaneously identify up to 10 different biological warfare agents in a given sample, including smallpox, anthrax, plague, and encephalitis.

"If something is there that threatens the health of our military force, you will be able to detect it much sooner," said Maj. Harry Whitlock II, Army Medical Department Center and School combat developer. "This is the 'new' gold standard. Other rapid diagnostic methods, like handheld assays, don't have nearly the same sensitivity."

JBAIDS' sensitivity, or ability to accurately identify specimens containing an agent, is averaging at least 85 percent per test, and its specificity, or accuracy in pinpointing the percentage of specimens without an agent, has averaged at least 90 percent.

The result is a higher confidence in the accuracy of information for military leaders. "Everyone in the scientific community is excited because JBAIDS allows detection of a very minute level, and commanders are excited because the troops will be better protected," said Whitlock.

JBAIDS' size enables the device to travel with servicemembers into war, eliminating the need to send samples to a laboratory stateside, which delays diagnosis and treatment of affected people. DoD began a joint-service testing of the device in 2003 to ensure the civilian-made system could be as effective in war as in a stateside lab.

"JBAIDS has been through a long series of developmental tests," Boston said. "Government labs went through thousands of samples of biological warfare organisms. The data are still being evaluated, but the system and test assay kits have performed very well so far."

The latest was a two-week operational test at Brooks City-Base, which wrapped up March 18, 2005. Air Force, Army, Navy, and Marine Corps lab technicians and program developers traveled to San Antonio to make sure the device met DoD specifications.

The Air Force Operational Test and Evaluation Center, based at Kirtland Air Force Base, N.M., took the lead on the exercise, while the Army Medical Department provided ongoing training and technical assistance.

Army Chemical Corps personnel collected irradiated or "dead" samples from the field and delivered them to lab technicians from the Army's 1st and 9th Area Medical Laboratories from Aberdeen Proving Ground, Md.

The technicians set up shop in portable "ISO-shelters," which can be packed up and shipped worldwide, then extracted a test sample for analysis from environmental, food, and clinical specimens such as blood and sputum.

"This was the first major joint-service test (for this equipment)," Boston said. "It took more than a year of constant planning to get to this point. We're working as fast as we can to get this technology out there quickly."

After validation by a joint-service Data Authentication Group, the operational test results will be forwarded to the Joint Program Executive Office for Chemical and Biological Defense for a final green light. If approved, JBAIDS will enter full-rate production in September, and the DoD will distribute 450 systems throughout the services over the next three years.

In the meantime, Idaho Technology will seek Food and Drug Administration approval, something that will help launch JBAIDS into civilian and military fixed and deployable medical facilities as a diagnostic tool and into DoD veterinary food labs for testing of food and water supplies.

The modifiable JBAIDS will continue to evolve over the next several years. The next step is the addition of toxin detection this summer, and later, development and testing of a handheld version, Boston said.

"JBAIDS is a reliable, well-tested technology that will have a huge impact on military and civilian sectors," Boston said. "It's sad to think we live in a world where bio-threats are a reality, but it's better to be prepared and have answers; JBAIDS will ensure we have the right ones."

Wilson is with the Fort Sam Houston Public Information Office.

AIR MOBILITY COMMAND NEWS SERVICE (MAY 24, 2005)

OFFICIALS UNVEIL NEW GENERATION COMMAND AND CONTROL SYSTEM

1st Lt. Leslie Brown, USAF

SCOTT AIR FORCE BASE, Ill. (AFPN)—A new generation command and control system was unveiled recently when Air Mobility Command officials began fielding a new system that provides unit-level and force-level mission planning, scheduling, and tracking of all mobility airlift and air refueling missions.

The global decision support system will allow AMC officials to more effectively fulfill the global mobility mission by integrating about 40 systems into one modernized, fully integrated global AMC command and control system.

"[It] is the most complex and comprehensive [command and control] system fielded in the Air Force," said Col. Earl Matthews, AMC director of communications and information.

It combines unit- and force-level planning tools into a single system.

"Operating on unclassified and classified networks, [the system] will be AMC's one-stop-shop [command and control] system, providing unprecedented visibility of aircrews, cargo aircraft, and ongoing missions regardless of their location," Matthews said.

The implementation will continue AMC's operational evolution to a technology-centric environment. The new system features a powerful set of decision-making tools, enterprise data and information fusion technologies, as well as integrated information displays that allow users to monitor and manage global mobility missions, officials said.

It will provide a common and consistent operational command and control framework across the mobility air forces.

Also, the new system incorporates a crew management application that allows mobility air forces commanders to plan and schedule aircrew training, operational missions, and other ground events in a standardized application. It also will introduce many new capabilities including a global-sequence-of-events function that provides a common platform to share visibility on the generation, execution, and recovery of aircraft missions.

Currently, all of the systems are managed separately, which has become uneconomical to sustain, and with current advances in technology, AMC leaders said, it is the proper time to integrate these systems.

Airmen here will provide classroom and hands-on training that will take about two to three weeks per location. The system is used at Scott and at McChord Air Force Base, Wash., and is currently under way at Dover AFB, Del. Installation is scheduled to continue throughout the command through August 2006.

Brown is with Air Mobility Command Public Affairs.

ARMY NEWS SERVICE (JUNE 2, 2005)

EXPERTS SAY TRAINING TRANSFORMATION PREPARES ARMY TO WORK IN JOINT ENVIRONMENT

Jennifer J. Albert

WASHINGTON—Soldiers will continue to train with members of other services as the Army works to transform its training and to improve its ability to work in a joint environment, Pentagon training experts said this week.

"Training transformation is about making sure that we are focused on training the way we actually fight," said Dr. Paul W. Mayberry, deputy under secretary of defense for readiness. "That is, as a joint team with the other Services, as part of a joint multinational force, with interagencies such as the Departments of Justice and Homeland Security and intergovernmental agencies such as county and local police."

He said one of the Department of Defense's transformation goals is ultimately to create a more joint force to meet the needs of the combatant commander, and that transforming DoD training is a key element to achieving that goal.

As Operation Iraqi Freedom and Operation Enduring Freedom continue, the demands are that we have an armed force that is flexible and adaptable, said Mayberry. The Army's 2004 Posture Statement said one of the Army's goals for transformation is to provide relevant and ready land power for combat commanders in a joint force.

Mayberry said training transformation is a means by which the Army can accomplish that objective.

In the News

"Maintaining a ready current force today and achieving a transformed future force tomorrow requires a shift in the way units train for joint operations," according to the posture statement. "Our Army's Training Transformation Initiative, which supports the June 2004 Defense Department Training Transformation Implementation Plan, provides dynamic, capabilities-based training and mission rehearsal in a joint context."

Three capabilities form the foundation for training transformation: Joint Knowledge Development and Distribution Capability, Joint National Training Capability, and Joint Assessment and Enabling Capability, Mayberry said. Combatant commanders, through these capabilities, will receive better prepared forces that will be more aligned with their joint needs.

Mayberry said the JKDDC is designed to be a library of training courses available through various online outlets that can be taken "just-in-time" or when a soldier is assigned to a unit in which the training is required.

JKDDC is developing courses that originated through the JKDDC working group, Mayberry said. More than 35 organizations, including Army, are represented on the working group. The courses will better prepare individuals for assignment to the combatant command staffs.

Future joint force leaders must strive to reach new joint education and training standards by continually improving individual knowledge, skills, and abilities to achieve desired effects in decisive operations, according to the Department Of Defense Training Transformation Implementation Plan.

For example, cultural and language training is being implemented into current Army deployment workups, said Mayberry. The incorporation of foreign speakers is being done to be able to present answers to tactical-level problems to the individuals.

The Army, through its force rebalancing efforts, has begun taking individuals with field artillery backgrounds and sending them to Fort Dix, N.J., for military police training, said Mayberry. There is not a great deal of demand for field artillery currently, so those individuals are being cross-trained to fill the need for military police.

"This will meet the drive of individuals managing their own careers and focusing on self development," said Mayberry. "It will also get individuals cross-trained in other areas to broaden the base for which they deploy."

The Joint National Training Capability will provide the ability for all the Services to participate in real-time, simulated training, said Mayberry.

"The idea is to make Service-specific events more joint in character," said Mayberry. "We can't have everyone in one place at one time. This will give them the means to plug into the event from their home station."

Mayberry said the JNTC will give command staffs and units a live, virtual (person in a simulator) and constructive (computer-generated) environment that will eventually be available globally. Active and reserve component members from all Services will be able to train in this realistic venue.

Eventually it will incorporate a larger training audience that includes coalition partners and federal, state, local, and nongovernmental agencies, also noted Mayberry.

The last facet, Joint Assessment and Enabling Capability, focuses on the process of anticipating and evaluating the development of the training transformation.

This process includes the use of performance assessment tools, techniques, policies, and metrics in support of national security requirements, according to the DoD transformation plan. It will give leaders the guidance necessary to achieve transparency between training and operations and ultimately make the force more adaptable.

The Army's posture statement indicates the objective is to increase the ability to think and act jointly, and to provide soldiers with the latest and most relevant techniques, procedures, and equipment that will make them successful on the battlefield.

Training transformation improves joint force readiness by enabling personnel to think in terms of the joint concepts and build upon Service education and training, said Mayberry. "As the Army goes through its modularity, its modernization and fielding of its future combat systems, training transformation must really be ahead of that to be sure these training enablers are in place," said Mayberry. "We must support future concepts from a joint perspective and not just from a single-Service perspective."

For more information on Army transformation, visit <http://www.army.mil>;for information about the Department of Defense training transformation, visit <http://www.t2net.org>.

NAVAL SEA SYSTEMS COMMAND (JUNE 3, 2005)

KEEL LAID FOR FIRST LITTORAL COMBAT SHIP, *USS FREEDOM*

MARINETTE, Wis. (NNS)—The keel was laid and authenticated for the Navy's first Littoral Combat Ship (LCS) June 2 at Marinette Marine here. The 378-foot LCS will be the first U.S. ship to carry this class designation.

"LCS represents the cutting edge of a new Navy, the likes of which we have never seen before," said Chief of Naval Operations Adm. Vern Clark during his remarks at the ceremony. "It is a great personal privilege to confirm this keel on such a brave and bold future for our Navy," the CNO said.

The future *USS Freedom* (LCS 1) acknowledges the enduring foundation of the nation and honors American communities from coast to coast that bear the name Freedom. States having towns named Freedom range from New York to California, and include Indiana, Maine, New Hampshire, Oklahoma, Pennsylvania, Wisconsin, and Wyoming.

"It strikes me that since freedom is what we are all about as a nation, this is a perfect name for LCS 1," said Clark.

Serving as ship's sponsor is Birgit Smith, the widow of Army Sgt. 1st Class Paul Ray Smith, who died in Operation Iraqi Freedom and was posthumously awarded the Congressional Medal of Honor. Smith and the CNO authenticated the keel by having their initials welded to the hull by veteran welder Jim Renner.

Freedom, the first of two dramatically different LCS seaframes being produced, will be optimized for littoral or coastal missions, focusing on high-speed maneuverability, agility, and sprint speed. Designed to operate quickly in a shallow-water environment, the LCS is capable of speeds up to 45 knots and can operate in water less than 20 feet deep.

The LCS class will act as a platform for launch and recovery of manned and unmanned vehicles. Its modular design will support interchangeable mission packages, allowing the ship to be reconfigured for antisubmarine warfare, mine warfare, or surface warfare missions on an as-needed basis. LCS will be able to swap out mission packages pierside in a matter of hours, adapting as the tactical situation demands. These ships will also feature advanced networking capability to share tactical information with other Navy aircraft, ships, submarines, and joint units.

Marinette, Wisc. (June 2, 2005)—Chief of Naval Operations Adm. Vern Clark, left, and Birgit Smith, right—ship's sponsor of the first Littoral Combat Ship, Freedom—watch as a welder permanently etches Smith's initials on a plaque that will be permanently attached to the ship. Smith is the widow of the late U.S. Army Sgt. Paul Ray Smith, who was killed in action in Iraq and was recently awarded a posthumous Medal of Honor. LCS is a new class of ship designed to be a fast, agile, and networked warship. U.S. Navy photograph by Chief Photographer's Mate Johnny Bivera.

"This idea —this ship—revolutionizes the capability of our nation and our Navy," said Clark.

In May 2004, the Department of the Navy awarded both Lockheed Martin and General Dynamics–Bath Iron Works, Bath, Maine, separate contract options for final system design with options for detail design and construction of up to two LCS ships. In December, the Navy awarded Lockheed Martin Corp., Maritime Systems & Sensors, Moorestown, N.J., a contract for detail design and construction of the first LCS. Lockheed Martin's teammates include Gibbs & Cox, Arlington, Va.; Marinette Marine, Marinette, Wis.; and Bollinger Shipyards, Lockport, La. Production at Marinette is expected to culminate in late 2006 when the ship is scheduled to be delivered to the Navy.

Editor's note: For more information on the Littoral Combat Ship, visit the LCS Web site at <http://peoships.crane.navy.mil/lcs/>. For related news, visit the Naval Sea Systems Command Navy NewsStand page at <http://www.news.navy.mil/local/navsea/>.

ARMY NEWS SERVICE (JUNE 20, 2005)
CROWS KEEPS GUNNERS OUT OF HARM'S WAY

Sgt. Daniel W Bailey, USA

BALAD, Iraq—Soldiers of Forward Operating Base O'Ryan, Troop K, Task Force 1-128, have instituted new measures to ensure the safety of their gunners from enemy combatants during vehicle-led patrols. The Common Remotely Operated Weapon Station, a remotely operated weapon mounted on top of a vehicle and controlled from a command center within it, has become a safer means for soldiers to patrol main and alternate supply routes, providing security and searching for improvised explosive devices (IEDs)

"The primary purpose of the CROWS is to get the gunner out of the turret, where he is exposed to enemy fire and fragmentation, and get him down inside the vehicle for protection," said Sgt. 1st Class Sam Cottrell, CROWS Fielding Center noncommissioned officer in charge. In a CROWS-equipped vehicle, the gunner now sits safely inside the armored vehicle, looks at a computer screen, and controls the weapon with the use of a joystick. "In addition, CROWS gives the gunner a powerful color day camera, a Generation 2 forward-looking infrared camera, and a laser range finder," Cottrell said.

All the gunner has to do now is tell the computer where to fire the weapon and the computer does the rest. "Once a target's been identified, the computer builds a ballistic solution, taking into account distance, elevation, and the type of weapon, and puts the rounds on the target," said Kendall Hargis, CROWS operator, Troop K, 3rd Battalion, 278th Armored Cavalry Regiment.

The M-2 .50-caliber machine gun, M-240B medium machine gun, MK-19 automatic grenade launcher and the M-249 squad automatic weapon can all be mounted on the CROWS.

Centrally fielded and serviced from Logistical Support Area Anaconda, the CROWS were rolled out to units in Iraq in April 2005. Several hundred will be fielded in the next year and a half, according to Cottrell. Troop K received the 10th unit in Iraq, sent four gunners through the two-week certification course, and now uses the CROWS daily during combat patrols of the MSRs and ASRs.

"The CROWS system is an excellent tool," said Sgt. 1st Class Craig Bailey, Company C, 1st Battalion, 128th Infantry Regiment. "The advantages are obviously its optics, zoom, and thermal capabilities. It's able to see things a lot farther in advance. It's excellent to have a thermal system mounted right on the vehicle to use at night or in daytime."

"The CROWs is great for the MSR patrols because with the FLIR [forward-looking infrared] it sees things that are out of place," Hargis said, "even spotting IEDs in the road prior to coming up to them. But I think the most rewarding thing I can do is catch some of these guys laying the IEDs."

Task Force 1-128 is composed of Headquarters and Headquarters Company and Company A, 1st Battalion, 128th Infantry Regiment, from the Wisconsin Army National Guard; and Troop K, 3rd Battalion, 278th Armored Cavalry Regiment, from the Tennessee Army National Guard.