



In the News

BUSINESS TRANSFORMATION AGENCY LEVERAGES DOD ACQUISITION DECISION MAKING **TESTING THE ENTERPRISE RISK ASSESS- MENT MODEL**

Paul K. Ketrick

Envision gaining deeper insight into the risks associated with major automated information systems within the business mission area without asking program managers to create new artifacts. Imagine program managers and senior Department of Defense leadership working together to create usable, actionable risk mitigation plans that identify ownership and accountability from the program level up to the Office of the Secretary of Defense. Finally, picture an assessment model that looks across seven distinct risk areas (including people, processes, and external impacts) at a reduced cost and shortened schedule—again, without any additional oversight. That is the vision of the future for major business systems acquisition proposed by the developers of the Enterprise Risk Assessment Model (ERAM).

In January 2006, the Defense Business Systems Management Committee approved test cases for a concept that modernizes the way DoD manages the acquisition of major business information systems. Part of the 2007 National Defense Authorization Act, ERAM represents a major opportunity for the Business Transformation Agency to enhance the effectiveness of DoD business systems. As the BTA pursues its mission to transform defense business operations by rapidly delivering not just systems, but also capabilities, to the warfighter (for example, the ability to track personnel skill sets and match them to appropriate assignments, or the ability to efficiently value and track DoD property), ERAM can help identify risks and potential pitfalls early in the business system development process to better ensure success.

Ken Krieg, under secretary of defense (acquisition, technology and logistics), laid out a plan in April 2006 for “gaming” the ERAM concept through a set of initial test case systems: the Defense Integrated Military Human Resources System; the General Fund Enterprise Business System; and the Integrated Data Environment/Global Transportation Network Convergence. According to Krieg, “ERAM test cases provide unique opportunities to institutionalize change by applying recently proposed bold ideas and concepts that can establish credible models

and set the stage for real change, in real time.” The BTA charged the Investment Management (IM) directorate with testing the ERAM concept. At the conclusion of each successive test case, the BTA will reassess the effectiveness of the process. (Test cases were implemented May-September 2006)

The question we have been asked is, “What is the genesis of ERAM, and how is it different from past recommendations?”

In January 2006, the Defense Acquisition Performance Assessment Project, an external assessment, provided an independent review of and recommendations for the acquisition process. Similar recommendations in the past hadn’t really been able to produce lasting change. The ERAM initial test cases present an opportunity to create solutions and set examples for credible and enduring change management. ERAM is a model that helps program managers determine the root cause of problems and issues within their programs and to define a process that helps in gaining a deeper understanding of issues and risks.

Krieg has talked about our need to “distinguish between ‘Big A’ and ‘little a’ acquisition.” ERAM ties into his vision of a capabilities-focused acquisition decision-making process. The differences between what we decide to buy at the strategic level (Big A) and how we develop, test, produce, and sustain the programs (little a) allow us to deliver capabilities to the warfighter. The ERAM concept gives decision makers increased visibility into their programs by providing insight without creating another layer of oversight, and it gives us situational awareness of both the Big A and little a in acquisition. The BTA has a strategic approach to investment management and to developing and testing ERAM. The overarching goal of the BTA is the rapid delivery of capabilities and informed decision making.

Within that framework, the IM team is focused on a variety of issues, including integrated and aligned requirements definition, integrated DoD decision support systems, and efficient investment review—all of which allow us to keep our eye on that overarching goal. Tom Modly and Paul Brinkley (co-directors of the BTA) agreed that IM, among other strategic activities, should spend the next 12 months developing, testing, and institutionalizing proven concepts to improve acquisition management process outcomes. ERAM ties directly into that strategy.

It is important to note that conceptually, ERAM is no different from the Department of Defense Directive (DoDD) 5000 process. However, the assessment itself is a content-rich, energy-focused approach. It uses existing artifacts and documents that allow us to leverage current acquisition decision-making processes. ERAM adheres to



ERAM



RISK MITIGATION PLAN



- Usable
- Actionable

Enterprise Risk Assessment Model (ERAM) Risk Areas

the principles in DoDD 5000.1 and satisfies the critical requirements in DoDI 5000.2. ERAM is designed to be fast and flexible, enabling business systems to take advantage of emerging technology to deliver business capabilities faster. We expect the initial test cases to give us enough information to continue developing the model.

What is entailed in a typical ERAM assessment? Once a program is selected for assessment, a risk assessment team (composed of executive-level leadership and matrixed resources across the DoD enterprise) spends time carefully reviewing existing program documents to determine the specific context of the one-on-one interviews that serve as the basis for the assessment. The assessment team then spends several days onsite conducting thorough interviews with primary and secondary program personnel. In conjunction with appropriate program staff, the assessment team reviews materials, asks questions, develops conclusions, and develops an actionable risk mitigation plan for the program. A draft of the assessment is reviewed with the program manager, and a final risk mitigation plan is released. In the initial test phase, the ERAM process is set up to be executed in 60 – 90 days, from start to finish.

Senior DoD leadership does not have visibility into critical risk across business systems. ERAM is designed to help us identify systemic issues, gaps in policy, and concerns within internal and external communities. With this model, the goal is to respond to emerging technology, make better decisions about how we manage our investments, and deliver business capabilities faster.

For more information about ERAM, visit <http://www.dod.mil/bta/ERAM/index.html>.

Ketrick is director, Investment Management Directorate, Business Transformation Agency.

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ARMY NEWS SERVICE (APRIL 20, 2006) **ARMY ADVANCES ALTERNATIVE ENERGY TECHNOLOGIES**

DETROIT, Mich.—The Army is at the forefront of alternative energy advancements that will improve the capability of America's military forces.

Working alongside industry and academia research leaders, these technology developments will not only support our armed forces, but have unlimited commercial applications.

The Army Tank Automotive Research, Development, and Engineering Center (TARDEC), with its National Automotive Center (NAC), is working with industry and academia partners nationwide to research cutting-edge technologies in hybrid, hydrogen, and fuel cell vehicle developments.

"The research base in Michigan allows us (TARDEC) to collaborate with our automotive and academic partners to develop alternative energy solutions that are transferable to both the military and industry," said Dr. Richard E. McClelland, TARDEC director.

Ranging from solar panel power for the individual soldier to hydrogen, fuel cell, and battery power solutions for military and commercial vehicles, the NAC sits as the gatekeeper for technology transfers between military, industry, and academia.

Army partnerships in motion include:

- State-of-the-art Hydrogen Hybrid Demonstrator Vehicle—Quantum Technologies Inc., using a Ford Hybrid Escape platform, is working to pair hybrid electric vehicles with a hydrogen delivery and storage system that can potentially offer a cost effective alternative to fuel cell power
- Dana Corporation's parallel and series Intelligent Hydraulic Drive technology for the Army's Family of Medium Tactical Vehicles and the HMMWV
- The Hydraulic Hybrid, Advanced Materials, and Multi-fuel Engine Research program with Eaton Corporation's Hydraulic Launch Assist system
- United Solar Ovonic's UNI-PAC solar panel, which can be worn by soldiers and adapted to recharge a field generator or vehicle.

Headquartered at the Detroit Arsenal, Warren, Mich., TARDEC is the nation's laboratory for advanced military automotive technologies. TARDEC's mission is to research,

Inter-Agency Learning Opportunity

Energy: A Conversation about our National Addiction

The Office of Force Transformation and the Under Secretary of Defense for Acquisition, Technology and Logistics, are jointly sponsoring a series of dialogues in the Washington, D.C. area on national security energy issues. Entitled "Energy: A Conversation about our National Addiction," the meetings are bringing high-level

attention to the emerging energy debate by providing a forum to engage senior leaders, academics, and researchers both inside and outside of government. A schedule of events is posted at the Naval Postgraduate School Web site at <<http://www.nps.edu/cebrowski/conversation.html>>.

DoD Mini Poster.



develop, engineer, leverage, and integrate advanced technology into ground systems and support equipment throughout the life cycle. Its technical staff leads research in ground vehicle survivability, mobility, intelligent systems, and maneuver support and sustainment.

TARDEC's National Automotive Center is the Army's official link to working with commercial and academic partners to create vehicles that give the Army the mobility, survivability, and agility it needs to operate efficiently and effectively in today's new threat environment.

For the military, the NAC's partnership approach makes it possible to improve vehicle performance, safety, and endurance while also reducing design, manufacturing, operations, and maintenance costs.

For commercial partners, the application of jointly developed technologies has similar impacts—safer cars and trucks, more advanced technology available to the consumer, and lower costs because of the broader market base.

Information provided by the U.S. Army Tank Automotive Research Development and Engineering Center.



DEPARTMENT OF DEFENSE NEWS RELEASE (APRIL 21, 2006) **DOD CREATES DEFENSE SPECTRUM ORGANIZATION**

The assistant secretary of defense for networks and information integration and DoD chief information officer John G. Grimes has directed the director of the Defense Information Systems Agency (DISA) to establish the Defense Spectrum Organization as a center of excellence for radio frequency spectrum analysis, planning, and support.

This new organization represents the next critical step in the Department of Defense's transformation of the management of radio frequency spectrum assets and processes.

This strategic realignment reflects DoD's ongoing effort to transform spectrum management in line with the President's Spectrum Policy Reform Initiative, which is developing a spectrum policy for the 21st century. The new office will merge and realign DISA's existing Defense Spectrum Office and Joint Spectrum Center.

"The Defense Spectrum Organization will significantly advance the department's efforts to make spectrum management information available to the warfighter anywhere, anytime," said Grimes.

This effort aims to transform the department's legacy spectrum management processes and capabilities to support an emerging net-centric environment in which radio frequency-based resources play an integral role.

Defense transformation hinges on the recognition that information is our greatest source of power. Information can be leveraged to allow decision makers at all levels to be more effective, make better decisions faster, and act sooner. Ensuring timely and trusted information is available where it is needed, when it is needed, and to those who need

it most is at the heart of the capability needed to conduct network-centric operations.

For more information on OSD Network and Information Integration's spectrum-related activities, visit <http://www.defenselink.mil/nii/>.

ARMY NEWS SERVICE (APRIL 24, 2006) **CAB CHINOOKS SUSTAIN THE FORCE**

Sgt. 1st Class Reginald Rogers, USA

CAMP TAJI, Iraq—To soldiers on the front lines in Iraq, the delivery of supplies is critical to sustaining a force spread over 17,000 square miles.

The 4th Infantry Division's Combat Aviation Brigade CH-47 Chinook helicopters have become a major factor in ensuring repair parts, mail, and other much-needed materiel reach their intended destinations.

To date, CAB aircraft have delivered more than 7.7 million pounds of cargo and more than 60,800 passengers to locations throughout Iraq since taking over Multi-National Division—Baghdad's aviation mission four months ago. Of these passengers, more than 40,000 have traveled aboard the brigade's CH-47 Chinooks.

Army Chief Warrant Officer 2 Brent Byington, a Chinook helicopter pilot in Company B, 2nd Battalion, 4th Aviation Regiment, runs through preflight procedures before lifting off on an April 17 mission from Camp Taji, Iraq.

Photograph by Spc. Creighton Holub, USA.





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The Chinooks are assigned to Company B, 2nd Battalion, 4th Aviation Regiment, and have been solely responsible for bringing a heavy-lift capability to the fight. Because the Chinook pilots have flown more than 2,000 hours and delivered more than 3,800 tons of materiel, coalition forces have been able to keep more than 1,400 trucks off the roadways. This action has also kept an estimated 3,541 soldiers out of harm's way.

"I'm really proud because of the number of people we keep off the road. It's as important as any other mission," explained Army Chief Warrant Officer 2 Brent Byington, pilot, 2-4 Avn. Regt.

Byington said he realizes the importance of their mission, but added that loading the pallets, which can weigh as much as 7,000 pounds, is a difficult aspect of his job.

According to Sgt. Marc Lamontagne, crew chief, 2-4 Avn. Regt., the various missions include delivery of supplies and, on many occasions, travel to various forward operating bases throughout Iraq.

"The majority of our pallets were mail," he said, about one of the missions the crew flew April 17. "Some were aircraft parts with a lot of tires. We went to Baghdad International Airport, FOB Falcon, and then to FOB Rusty."

Byington said flying at night can be more difficult than daylight missions because it requires a lot more attention to detail and stamina.

"While piloting during the day, we judge our speed by looking at the ground," he said. "[During night missions] there is a lot more maneuvering your head around while wearing night vision goggles. It's a lot more fatiguing."

Byington said flying has its advantages—but like most deployed soldiers, he said he regrets one aspect about not being on the ground.

"I miss that I'm not actually getting to see [the culture] of Iraq," he said.

Rogers writes for the Combat Aviation Brigade, 4th Infantry Division, Public Affairs Office.

ARMY NEWS SERVICE (APRIL 26, 2006) **ACTIVE PROTECTIVE SYSTEM FOR ARMY FUTURE FORCE**

Sgt. Ken Hall, USA

WASHINGTON—The U.S. Army remains committed to equipping soldiers with the best protection technology can provide, according to Army Maj. Gen. Charles A. Cartwright, program manager for the Future Combat Systems.

As evidence of this goal, the Army's effort to develop better protection for their mounted soldiers moved forward in March as the Raytheon Company was contracted to develop the Active Protective System for the Army's Future Combat Systems program.

Designed as an augmentation to current vehicle armor, the APS is an explosive ballistic countermeasure capability that will dramatically increase vehicle survivability against the spectrum of aerial ballistic threats. The APS is an operationalization of "hit avoidance" technologies that sense incoming threats and employ countermeasures to physically intercept, defeat, or deflect them, increasing the survivability of light-to-medium-weight vehicles.

"This is a significant step forward in the FCS program, which remains on coast and on schedule," says Cartwright. He expects the APS sub-system components to begin current force integration and qualification by the end of 2008.

The estimated \$70 million contract will require the APS technology to work with all other relevant systems within FCS. Real-world lessons learned from the global war on terrorism are being integrated into the development of FCS, a soldier-centric, network-enabled program.

Army Chief of Staff Gen. Peter Schoomaker says that FCS is the Army's key modernization program, and is both the surest and fastest way to provide soldiers additional tools to address the global missions they have been assigned.

"With FCS, the Army takes advantage of the best-of-industry technologies as soon as they are developed and puts them into the hands of soldiers in the field," he said. "This latest approach will get capabilities to our soldiers sooner, strengthening the current force, while laying groundwork for the force of the future."

Information for this story provided by Maj. Desiree Wineland, U.S. Army Office of the Chief of Public Affairs.



NAVY NEWSSTAND (APRIL 27, 2006) **NAVY TO BASE FIRST FOUR LITTORAL COMBAT SHIPS IN SAN DIEGO**

The Navy announced today that the first four Littoral Combat Ships (LCSs) will be homeported at Naval Station San Diego, Calif.

Key in the success of implementing these new concepts is the ability to collocate these ships to achieve readiness alignment and economy of scale. This collocation is especially important for the first ships in the class as waterfront facilities, infrastructure, training, and maintenance efficiencies are developed. San Diego was chosen as the initial homeport because of the Navy's increased emphasis on the Pacific theater based on the Quadrennial Defense Review.

"Homeporting the first four ships in San Diego will enable us to establish synergy between the ships and with local commands," said Vice Adm. Terry Etnyre, commander, Naval Surface Forces, based in Coronado, Calif. "With the Undersea Warfare Command here in San Diego and the Mine Warfare Command moving here soon, the undersea warfare and mine warfare mission packages will have direct coordination and representation locally."

LCS will carry some core capabilities, such as self-defense and command and control; but its true warfighting capability will come from its innovative and tailored mission modules. These ships will be configured for one mission package at a time, consisting of modules, manned aircraft, unmanned vehicles, off-board sensors, and mission-manning detachments. This will operate within open-systems architecture giving it the capability to reconfigure mission modules and ship systems to tailor it for specific warfighting missions.

The Littoral Combat Ships are the first Navy vessels to separate capability from hull form and provide a robust, affordable, mission-focused warship designed to provide assured access for our joint forces. LCS will have the size, speed, endurance, and connectivity to deploy as a member of carrier strike groups, expeditionary strike groups, or surface strike groups.

The innovative concepts in LCS do not end with its modularity. LCS will operate with a quarter of the crew normally assigned to ships this size through a combination of technology and process improvements for maintenance, logistics, training, and administration.

The keel for the first Littoral Combat Ship, to be named *USS Freedom* (LCS 1), was laid on June 3, 2005, and the second, to be named *USS Independence* (LCS 2), on Jan. 19, 2006.

ARMY NEWS SERVICE (APRIL 28, 2006) **NEW TECHNOLOGY PROTECTS GI'S, SEAPORTS AGAINST NBC**

Sgt. Crystal Rothermel, USA

CAMP ARIFJAN, KUWAIT—Servicemembers at Kuwait's crucial seaports can focus more on their missions and less on the worries of chemical or biological attacks with the arrival of new NBC warning technology.

The Kuwait Naval Base is the newest recipient of Contamination Avoidance equipment, part of a Department of Defense-sponsored program to increase warning, awareness, and protection at seaports in the event of contamination.

"If you can detect it, you can avoid it," said Lt. Col. Pete Winston, safety officer in charge of the 143d Transportation Command. "If you avoid it you won't get contaminated."

The CASPOD [*Contamination Avoidance of Sea Ports of Debarkation*] package at Kuwait Naval Base includes chemical detectors, sensors, computer systems, and training. The nearby port of As Shuaybah is also equipped with CASPOD equipment. Together, the ports are the first CASPOD sites in a combat zone.

The technology arrived after years of testing, monitoring, and concerns, after a General Accounting Office investigation found shortfalls in decontamination equipment and warning systems at critical points. The CASPOD equipment underwent further tests, demonstrations, and improvements. Finally, the package was proposed to U.S. Central Command in 2001.

Today, CASPOD is more versatile than it was in its early stages. "CASPOD is not just for nuclear, biological, and chemical warfare," said Chris Vontomaszewski, CASPOD technician for SPOD and KNB. "It is for command, control, emergency response, and NBC."

The future of the CASPOD looks even brighter. The system will be simplified and "the ultimate goal is information sharing at a new level," said Vontomaszewski.



Soldiers from the 143d Transportation Command, Army Lt. Col. Pete Winston (right), safety officer in charge, and Army Sgt. 1st Class Michael McGraw (center) work with technician Chris Vontomaszewski (left) to add solar panels to the new contamination avoidance equipment at a Kuwaiti port recently. The CASPOD is part of a Department of Defense-sponsored and funded program to increase warning, awareness, and protection at seaports in the event of contamination.

Photograph by Sgt. Crystal Rothermel, USA.

Ideally, commanders will have the ability to see data from all ports on a single screen.

Vontomaszewski added that until then, servicemembers living and working in Kuwaiti ports enjoy a safer environment without the danger of a chemical or biological attack. The CASPOD is a proactive step towards protecting lives and property—now and in the future.

“The longevity and future development is important because worldwide political winds do change,” he said.

“The presence of CASPOD at seaports is a daunting reminder that, in such an event, the equipment is ready to detect any chemical or biological attack.”

“In just a matter of days, international matters can change,” says Winston. “We are here to defend and protect our forces and people.”

He added that future forces may see newer versions of CASPOD—and that the present installation is a stepping stone.

“I understand that some poor chemical officer down the road may have to defend this port,” he said. “This will help him.”

Rothermel writes for the 143rd Transportation Command, Camp Arifjan, Kuwait.



AIR FORCE PRINT NEWS (APRIL 28, 2006) **CROWS GETS AIRMEN OUT OF THE TURRET**

Staff Sgt. Kristina Barrett, USAF

KIRKUK AIR BASE, Iraq—A new weapon system in the Air Force arsenal takes airmen out of the gun turret and into the safety of a fully up-armored Humvee.

The 506th Expeditionary Security Forces Squadron operates the only Common Remote Operated Weapon Station, or CROWS, in the Air Force inventory. As one of three security forces squadrons in Iraq with an outside-the-wire combat patrol mission, CROWS offers an additional capability for the unit.

The CROWS sensor unit includes a daylight video camera, a thermal imager for night operations, and a laser rangefinder. It is furnished with a fully integrated fire control system that provides ballistic correction.

CROWS is a stabilized gunner-operated weapon system, which allows the gunner to engage targets from inside a moving vehicle. It mounts to the M1116 up-armored High Mobility Multipurpose Wheeled Vehicle, commonly known as a Humvee. It provides the ability to remotely aim and fire a variety of weapons. The mount is capable of continuous 360-degree azimuth rotation and a minus 20- to 60-degree elevation movement.

“CROWS increases our situational awareness and allows us to see things we might never have known were there, especially at night,” said 1st Lt. David Bolin, security forces flight leader. “It’s an asset on the types of mission we do here.”

Airmen have taken CROWS-equipped vehicles on more than 25 combat missions. The range of the system exceeds that of the human eye so it has the ability to aid the gunner in looking for threats that may not be immediately visible. It also allows the fire team to find things they may not have known were there. One such mission



Senior Airmen Jeffrey Oats and Keshia Snedeker assemble a machine gun attached to the Common Remote Operated Weapon Station, or CROWS, on a Humvee at Kirkuk Air Base, Iraq, on April 25, 2006. The CROWS system takes airmen out of the gun turret and allows a variety of weapons to be remotely operated from inside the vehicle. Airmen Oats and Snedeker are assigned to the 506th Expeditionary Security Forces Squadron and are deployed from Moody Air Force Base, Ga.

Photograph by Staff Sgt. Kristina Barrett, USAF.



resulted in the seizure of a large weapons cache.

“On one mission, we were scanning the countryside looking for threats and spotted a bunker a substantial distance away,” said Senior Airman Jeffrey Oats, security forces gunner. “When we approached the area, we came upon a cache of more than 100 pieces of unexploded ordnance.”

Although the system has been used by the Army since early 2005, CROWS is still being tested by the Air Force, which is determining the role it could play in future operations. The 506th ESFS mission outside the base perimeter offers the chance to see CROWS in action. “We are continually evaluating it and passing information back to U.S. Central Command Air Forces,” Bolin said. “The system has many capabilities, on and off base.”

The CROWS control module, which mounts inside the vehicle, is the gunner interface, allowing operation from within the vehicle’s ballistic protection. Its main components include a display unit, switch panel unit and a joystick-type hand controller. The system provides full remote control of the weapon system via on-screen menus presented on the display.

“I believe this weapon system to be very useful for the military,” Oats said. “It increases our ability to observe and locate the enemy and eliminates the threat of sniper fire for the turret gunners.”

Barrett is with the 506th Air Expeditionary Group Public Affairs.

ARMY NEWS SERVICE (MAY 4, 2006) **CRUSHER UNMANNED GROUND COMBAT VEHICLE UNVEILED**

ARLINGTON, Va.—The Defense Advanced Research Projects Agency (DARPA) and U.S. Army unveiled the Crusher unmanned ground combat vehicle last week in a ceremony hosted by the Carnegie Mellon University’s National Robotics Engineering Center in Pittsburgh, Pa.

The Crusher vehicle is a follow-on and upgrade to the Spinner vehicle that was developed in a prior DARPA/Army program. Crusher is a six-wheeled, all-



The Crusher unmanned ground combat vehicle was unveiled in April 2006 by the Defense Advanced Research Projects Agency.

Photograph courtesy Defense Advanced Research Projects Agency.

wheel drive, hybrid electric, skid-steered, unmanned ground vehicle.

The vehicle weighs 14,000 pounds fully fueled, and is designed to carry a 3,000-pound payload. At this 17,000 pound total weight, two Crusher vehicles can be carried by a single C-130H aircraft at substantial range. If desired, Crusher can carry up to 8,000 pounds of payload and armor without compromising its mobility.

Crusher represents a new class of unmanned ground combat vehicles (UGCVs) developed under the DARPA/Army UGCV-Perception for Off-Road Robots Integration (UPI) program. Crusher is a highly mobile vehicle designed from the outset to be unmanned. It is being equipped with state-of-the-art perception capabilities, and will be used to validate the key technologies necessary for an unmanned ground vehicle to perform military missions autonomously. Crusher will be equipped with representative sensing and weapons payloads for planned field experiments.

DARPA director Tony Tether noted, “With the combination of a robust, highly mobile vehicle design and an innovative autonomous control system, Crusher defines the state-of-the-art in autonomous unmanned ground vehicles systems. DARPA is pleased to be working with the Army to bring this new capability to fruition.”



“The technologies embodied in the Crusher vehicles provide a glimpse into the future of autonomous ground platforms. The Crusher and its predecessor, the Spinner, demonstrate the realm of the possible with regard to a combination of autonomous behaviors, hybrid electric propulsion, and robust vehicle design,” added Deputy Assistant Secretary of the Army (Research and Technology) Dr. Thomas Killion. “All of this combines to give the soldier greatly enhanced standoff capabilities with minimum impact on workload.”

“The Future Combat Systems (Brigade Combat Team) program has been working with DARPA’s UPI program for some time now, leveraging their advancements in robotics field testing, perception algorithm development, autonomy, and, more recently, in understanding wheeled system design characteristics for mobility and remote control latency and bandwidth effects on mobility performance,” explained Army Maj. Gen. Charles Cartwright, program manager, Future Combat Systems (Brigade Combat Team).

“The FCS (BCT), lead systems integrator, and platform providers have all witnessed and participated in dialog with DARPA and Carnegie Mellon University’s National Robotics Engineering Center related to Spinner and now Crusher experimentation. This interaction has been of great benefit to the FCS program, and we look forward to continued interaction and transition of technologies from this new vehicle system to our FCS UGV systems,” he said.

The two new Crusher vehicles are a major improvement in unmanned ground vehicle capability, according to Larry Jackel, DARPA UPI program manager.

“The original Spinner UGCV is an excellent platform, but in shakeout experiments, the new Crushers have already outperformed Spinner in all aspects,” Jackel said. “Combined with its autonomous control system, the Crusher defines the state-of-the-art in autonomous unmanned ground vehicles systems.”

The UPI program will conduct rigorous field experiments of the two Crusher vehicles and their perception and payload systems, with experiments planned at Fort Carson, Colo., this summer. The program will culminate in 2007 with Army users operating Crusher vehicles during representative missions in natural terrain.

The UPI effort will merge all Crusher functions (mission planning, perception monitoring, vehicle monitoring, and payload operation) into an operator workstation interface and determine interaction requirements via experimentation.

UPI is a joint program between DARPA and the Office of the Assistant Secretary of the Army for Acquisition, Logistics and Technology, managed by DARPA’s Tactical Technology Office. The Army’s Program Manager Future Combat System (Brigade Combat Team) closely follows the program.

Carnegie Mellon University’s National Robotics Engineering Center is the prime contractor for Crusher. Key subsystems and components are provided by CTC Technologies (vehicle hull chassis structure), Timoney Technology (suspension systems), Saft America (lithium-ion battery pack), and UQM Technologies (electric drive motors).

Information provided by the Defense Advanced Research Projects Agency.

AIR FORCE PRINT NEWS (MAY 11, 2006) SMART OPERATIONS 21 OFFICE FORMED AT PENTAGON

Staff Sgt. C. Todd Lopez, USAF

WASHINGTON—In February, Air Force leaders created a new program office at the Pentagon that will take the lead in optimizing the way the Air Force conducts its mission.

The Air Force Smart Operations 21 office, created in response to an initiative by Secretary of the Air Force Michael W. Wynne, will look at process improvement across the Service.

The new office provides top-level guidance for implementing AFSO21 initiatives. These initiatives will enhance a mindset in the Air Force that is already geared toward innovation, said Brig. Gen. S. Taco Gilbert III, director of the Air Force Smart Operations 21 office.

“The Air Force has always fostered a culture of innovation,” Gilbert said. “We are trying to take that culture of innovation to the next level, where we look at all the processes involved in what we do. We look at not doing more with less, but at being smarter about the way we are doing business—eliminating work that is unnecessary. We have tried to capture lessons learned from in-



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dustry and government agencies involved in process improvement.”

Senior leaders designed the program specifically for the Air Force, and it is based on similar industry process improvement practices like Lean, Six Sigma, and Theory of Constraints.

“Air Force Smart Operations 21 is a term coined by Air Force senior leadership to represent not only a program to institutionalize continuous process improvement, but also to describe a new way of thinking about the Air Force,” Gilbert said. “We want to be smart about the things we do for the future.”

Process improvement involves looking at the way something is done, from beginning to end, and determining how it can be done better. By outlining a process, people can then look for redundancies and “non-value added work” to eliminate.

Non-value added work is that which adds nothing to a process. Examples could be forms that are filled out unnecessarily, or excessive travel to get replacement parts when it would be more practical to house those replacement parts at a work center, Gilbert explained.

Even after teams apply initiatives to a process and improve it, there is still more work to do, Gilbert said. Every process can continue to be improved and more waste can always be found. Continual process improvement is the nature of AFSSO21.

“This isn’t about a one-time pass and you’re done,” he said. “It’s a continual process. After you go through once, you then examine the same process again and again. Generally, you find every process will require review four or five times and each time you find more to eliminate or that can be streamlined.”

Gilbert said Air Force leaders have identified 10 main processes divided into three areas: governing, core, and enabling. The processes are: planning and executing strategic initiatives, managing processes and programs, developing and sustaining warfighting capability, deploying personnel and materials, conducting kinetic and related operations, conducting non-kinetic and related operations, caring for people, providing information support systems, caring for infrastructure, and managing financial resources.

Each of the processes has several sub-processes. In actuality, there could be thousands or tens of thousands of actual processes used in the Air Force to accomplish specific parts of the overall mission. Each one, no matter how small or large, can be improved, Gilbert said.

“Every process we have needs to be improved,” he said. “Even in world-class organizations, you find that 60 to 70 percent of the activity in a particular process is waste—activity that doesn’t add value to the overall output.”

The Air Force logistics community has been applying AFSSO21-type improvements to its own processes for years now, long before the Air Force decided to initiate AFSSO21. That community found great success in applying Lean practices to processes like depot maintenance and engine repair, Gilbert said.

For instance, in KC-135 Stratotanker depot maintenance, Air Force Materiel Command returned an additional 100 aircraft to the operational fleet by applying AFSSO21 practices. With C-5 Galaxy aircraft, they reduced overhaul time from 339 days to just 171 days.

At U.S. Air Forces Europe, the commander chartered a team to look at consolidated telephone operations. The command employed 77 telephone operators, including some working under a \$600,000 contract at Incirlik Air Base, Turkey. The team looked at the full range of processes associated with telephone operations and found ways to consolidate and streamline them.

The result was to eliminate inefficiencies through consolidation, reduce the manpower requirement to 65 operators, and eliminate the need for the Incirlik contract, Gilbert said. The process improvements will not only produce \$2.4 million in savings over the next seven years, they will also generate better standardization and services across the command.

While such an improvement proves an immediate benefit to the command’s telephone operations, a larger benefit is realized when considering where those savings can be applied, Gilbert said.

“The real benefit from changing those processes is seen when you look at what it means for USAFE operations in general,” he said. “If we can cut down on the contract and operations costs in a variety of these areas, we’re talking about real savings that will translate into increased combat capability for the future.”



By using AFSO21 initiatives, process times can be reduced, so work can be done more quickly. And by reducing waste in processes, resources like money, time, and people can be freed up to do other work, Gilbert said.

The AFSO21 office is in the process of creating the guidance for implementing continual process improvement across the Service. In addition, at each major command and Air Staff function there is a colonel or brigadier general designated to support AFSO21 operations and initiatives.

The office will also help develop training for those who need it, as well as create ways to ensure the AFSO21 mindset is encouraged throughout the entire Air Force, he said.

Gilbert said that while formal implementation of AFSO21 practices across the Air Force have just begun, he doesn't believe it will be short-lived or ineffective as other process improvement programs have been in the past.

"We have found that even skeptics, after they have participated in an AFSO21 event, come away convinced there is real possibility here, that there was a return on investment, and that they had an impact," he said. "AFSO21 is about a mindset for the 21st century. This is not a short-term program—it is a program to fundamentally change the culture of the Air Force for the long haul."

ARMY NEWS SERVICE (JUNE 5, 2006) **NEW COMMAND TO IMPROVE LOGISTICS MANAGEMENT**

Michelle McCaskill

ROCK ISLAND ARSENAL, Ill.—In order to streamline end-to-end logistics in support of the Army's modular force, the Army recently approved the establishment of a new subordinate command under the Army Materiel Command.

The change transforms AMC's Army Field Support Command at Rock Island Arsenal, Ill., to the Army Sustainment Command. The AFSC has already begun its transition to the ASC, with a ceremonial activation set for this fall.

"The Army is transforming and so is the Army Materiel Command," said Greg Kee, AMC deputy chief of staff, G-5, strategic plans and policy. "The Army has transformed to a brigade-centric Army, and AMC is realign-

ing its organizational structures to support the Army modular force from the brigade to the national level," he said.

The transition expands AFSC's current mission by adding reset synchronization, distribution, and materiel management functions, and integrating logistics support with joint and strategic partners. Already existing missions include managing the Army's pre-positioned stocks, the Logistics Civilian Augmentation Program, and field support. ASC will increase its staff by several hundred soldiers while also realigning a number of civilians with the command's global operations.

"Standing-up the ASC is a step in the right direction to improve logistical support to the warfighter for several reasons," said Lt. Gen. William Mortensen, AMC deputy commanding general. "ASC enables us to be more responsive and provides a single interface point to the soldier in the field for acquisition, logistics, and technology.

"Converting AFSC to ASC will link the industrial Army to the expeditionary Army, and help provide greater logistical integration and support to deploying forces as well as redeploying and training forces," he said. Kee acknowledged that change brings challenges, but AMC is prepared to face them head-on. "We are working with operational commanders to ensure that there is no gap in logistics capability to the warfighter as we transform."

McCaskill writes for the Army Materiel Command Public and Congressional Affairs Office.

JOINT INFORMATION BUREAU (JUNE 8, 2006)

JLOTS '06 DEMONSTRATES HUGE JOINT MILITARY CAPABILITY

FORT STORY, Va.—About 1,800 active and Reserve military personnel from all four military services will pull their expertise together in the upcoming Joint Logistics Over-The-Shore (JLOTS) 2006 exercise here June 11-21.

JLOTS is a critical capability that allows the military to move forces and supplies without the benefit of a port. Cargo is discharged from ships anchored in a harbor onto smaller vessels or barges for movement to shore. JLOTS '06 is a multi-Service cargo distribution exercise incorporating the Off-Shore Petroleum Discharge System (OPDS), an all-weather facility for bulk transfer of petroleum, oils, and lubricants directly from an offshore tanker to a beach termination unit.



JLOTS 06 will exercise the Department of Defense's ability to deploy, discharge, and conduct reception, staging, and deployment of unit equipment and sustainment in a scenario that requires ships to offload while still offshore. The events are designed to improve military readiness, increase interoperability among participating agencies, and test new concepts. About 120 active, Reserve, and civilian personnel from the Military Surface Deployment and Distribution Command (SDDC) will provide overall command and control for the exercise as the Joint Task Force commander.

"Our goal is to train and ready an expeditionary joint force with this exercise in support of military deployments, sustainment, and disaster relief operations," said Army Col. Robert Oliveras, commander of SDDC's 597th Transportation Group and Joint Task Force commander for JLOTS. "Combining events within JLOTS '06 means gaining efficiencies and synergies while minimizing the environmental and operational impact on Fort Story," he added.

About 150 containers and 30 pieces of rolling stock will be moved ashore as part of the exercise. Most recently, the U.S. military conducted similar operations to increase discharge capability in support of Operation Iraqi Freedom and to deliver humanitarian supplies following the December tsunami in Indonesia. In this case, containers from USNS Red Cloud (a large, medium-speed, roll-on/roll-off ship) will be discharged onto Navy barges using ship-based cranes. Navy tugs will push the barges to shore where the containers will be lifted by crane onto trucks for onward movement.

The command will also be documenting cargo and testing new ways to employ Radio Frequency Identification, the primary method used by the Department of Defense to track cargo with in-transit visibility. In addition, the command is looking for implications as it develops a rapid-deployment surface distribution force in coordination with the United States Transportation Command.

ARMY NEWS RELEASE (JUNE 19, 2006) FUTURE COMBAT SYSTEM APPROVED FOR FIRST SPIN OUT

The Department of Defense approved June 6 the Army's acquisition approach for the first of the Future Combat System (FCS) Brigade Combat Team (BCT) technologies that will be spun out to troops to begin testing and evaluation as early as 2008. Under

Secretary of Defense for Acquisition, Technology and Logistics Ken Krieg also approved the criteria that will be met before the capabilities go into production. The decision, which was the result of the FCS (BCT) program review initiated in May 2006, requires the Army to prepare for an interim program review in late 2008.

The FCS (BCT) program manager, Maj. Gen. Charles Cartwright, welcomed the decision. "This approval is the latest in a long series of benchmarks that confirms this program is on target with cost and schedule, and is performing to plan," he said. Cartwright added, "This is an important step on the way toward implementing the Army's long overdue comprehensive modernization program and we're looking forward to getting these technologies into our soldiers' hands as soon as they're ready."

Spin Out One is composed of several systems designed to improve lethality and survivability for soldiers in the near future. These include:

- Non-Line-of-Sight-Launch System (NLOS-LS) will provide soldiers with precise artillery fire power while requiring fewer personnel and decreased logistical support than conventional systems.
- Unmanned Ground Sensors (UGS)-variants, both Urban and Tactical, will detect combatants in buildings, on foot, and in vehicles. The Tactical UGS will provide the added capability beyond detection of classifying Tactical vehicles.
- The Intelligent Munitions Systems (IMS) provides a tactical network of sensors and lethal/non-lethal effects to deploy, enable, and disable a smart field of munitions, which are more lethal to enemy combatants, provide increased mobility to friendly forces, and pose less risk to non-combatants than legacy munitions.

These systems are among the first that will be tested by the Evaluation Brigade Combat Team, whose mission is to support FCS evaluation and training. The EBCT will be established at Fort Bliss, Texas, in June 2007, and will conduct testing and evaluation at Fort Bliss and White Sands Missile Range. To find out more about FCS and the EBCT go to <http://www.army.mil/fcs/>.