NOVEMBER–DECEMBER 2011

ARMY SUSTAINMENT

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Theater Postal Support

The 43d Sustainment Brigade in Afghanistan
Anticipatory Logistics in the 1st Sustainment Brigade
How RFID and Smartphones Will Revolutionize Sustainment

PB 700–11–06 Headquarters, Department of the Army
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Report Documentation Page

Form Approved
OMB No. 0704-0188

Public reporting burden for the collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to a penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

1. REPORT DATE **DEC 2011**	2. REPORT TYPE	3. DATES COVERED **00-11-2011 to 00-12-2011**
4. TITLE AND SUBTITLE **Army Sustainment. Volume 43, Issue 6. November-December 2011**		5a. CONTRACT NUMBER
		5b. GRANT NUMBER
		5c. PROGRAM ELEMENT NUMBER
6. AUTHOR(S)		5d. PROJECT NUMBER
		5e. TASK NUMBER
		5f. WORK UNIT NUMBER
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) **Army Logistics University,Army Sustainment,2401 Quarters Road,Fort Lee,VA,23801?1705**		8. PERFORMING ORGANIZATION REPORT NUMBER
9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)		10. SPONSOR/MONITOR'S ACRONYM(S)
		11. SPONSOR/MONITOR'S REPORT NUMBER(S)
12. DISTRIBUTION/AVAILABILITY STATEMENT **Approved for public release; distribution unlimited**		
13. SUPPLEMENTARY NOTES		
14. ABSTRACT		
15. SUBJECT TERMS		

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT **unclassified**	b. ABSTRACT **unclassified**	c. THIS PAGE **unclassified**	**Same as Report (SAR)**	**64**	

Standard Form 298 (Rev. 8-98)
Prescribed by ANSI Std Z39-18

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Cover: Since the Revolutionary War, receiving mail from home has lifted the morale of U.S. Soldiers in the field. Even in this era of email and social media, Soldiers still look forward to receiving letters and packages. Postal operations can be an overlooked aspect of sustainment that supports deployed personnel. The articles beginning on pages **26**, **30**, and **37** describe postal support provided by the 43d Sustainment Brigade in Afghanistan and the 1st Sustainment Brigade in Kuwait, including the role of the human resources operations branch and the establishment of satellite Army post offices. In the cover photo, a Soldier with the 328th Human Resources Company, 43d Sustainment Brigade, helps a Sailor sort mail at the Kandahar Airfield post office for delivery to military personnel in Afghanistan.

ARMY SUSTAINMENT

PB 700–11–06
VOLUME 43, ISSUE 6
NOVEMBER–DECEMBER 2011
www.alu.army.mil/alog
leeealog@conus.army.mil

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Army Sustainment (ISSN 2153–5973) is a bimonthly professional bulletin published by the Army Logistics University, 2401 Quarters Road, Fort Lee, Virginia 23801–1705. Periodicals postage is paid at Petersburg, VA 23804–9998, and at additional mailing offices.

Mission: *Army Sustainment* is the Department of the Army's official professional bulletin on sustainment. Its mission is to publish timely, authoritative information on Army and Defense sustainment plans, programs, policies, operations, procedures, and doctrine for the benefit of all sustainment personnel. Its purpose is to provide a forum for the exchange of information and expression of original, creative, innovative thought on sustainment functions.

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Distribution: Units may obtain copies through the initial distribution system (DA Form 12 series). Private domestic subscriptions are available at $30.00 per year by writing to the Superintendent of Documents, P.O. Box 371954, Pittsburgh, PA 15250–7954, or by visiting http://bookstore.gpo.gov on the Web. For credit card orders, call (866) 512–1800. Subscribers should submit address changes directly to *Army Sustainment* (see address below). *Army Sustainment* also is available on the World Wide Web at http://www.alu.army.mil/alog.

Postmaster: Send address changes to: EDITOR ARMY SUSTAINMENT/ALU/2401 QUARTERS RD/FT LEE VA 23801–1705.

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R–CAATs: Learning From Experience

BY MAJOR GENERAL JAMES L. HODGE

In the January–February 2008 issue of *Army Logistician*, then Major General Mitchell H. Stevenson, the commander of the Army Combined Arms Support Command (CASCOM), discussed the 2-year-old Reverse Collection and Analysis Team (R–CAAT) program and some of the key observations obtained through the program from sustainment commanders and their staffs. After conducting 50 R–CAAT sessions in the nearly 6 years since the program was implemented, I felt it was worth reflecting on the R–CAAT program's benefits and how, as the Department of Defense continues the drawdown of forces in Iraq and Afghanistan, R–CAATs can continue to benefit sustainment organizations and leaders.

The R–CAAT program brings operational commanders and generating force organizations together to share observations, insights and lessons learned (OILs) so that the CASCOM community can then translate those OILs into needed changes in doctrine, organization, training, materiel, leader development, personnel, and facilities (DOTMLPF). This process serves the dual purpose of meeting the regulatory requirement for brigade-sized or larger units to submit an after-action review following their participation in any operation or major training exercise or rotation and provides additional opportunity for dialog and discussion that is not always possible if a collection team travels to a unit's location.

These first 50 R–CAAT sessions included recently deployed theater support commands, expeditionary sustainment commands, sustainment brigades, transportation brigades, an explosive ordnance disposal task force, brigade support battalions, combat sustainment support battalions, and movement control battalions with experiences in Iraq, Afghanistan, and Kuwait. They also included organizations such as Multi-National Force–Iraq and the Combined Forces Land Component Command.

Just recently, CASCOM hosted R–CAAT special sessions covering base realignment and closure, combat training center rotations, and a 1-year review of the Global Combat Support System–Army to ensure that observations and lessons learned were captured and provided to others preparing to engage in similar operations.

The R–CAAT program has provided two main contributions to the sustainment community at large. First, the R–CAATs provide a continual operational sustainment feedback flow into CASCOM's DOTMLPF process, reducing the flash-to-bang time for implementing necessary adjustments in the generating force. Second, the leader engagement and dialog that occurs as part of the process continues to educate the CASCOM staff on the current sustainment operational environment, contributing greatly to expediting change. These forums have resulted in changes to more than 250 tactics, techniques, and procedures and handbooks, in collective training adjustments, and in more than 90 major doctrine rewrites and 20 *Army Sustainment* articles.

The development of central receiving and shipping point doctrine, the identification of shortfalls in convoy protection platform training, and the requirements for contracting officer's representatives in theater are three critical insights and lessons learned that are directly attributed to those provided by units through the R–CAAT program. CASCOM, in collaboration with other strategic partners, has also developed a comprehensive Center for Army Lessons Learned Handbook titled "Responsible Drawdown and Reset Special Study." The handbook, currently awaiting publication, provides tactics, techniques, and procedures that can be used today and in the future to assist commanders at all levels with planning and execution of the responsible drawdown of forces.

Finally, one recurring concern that I have heard identified by field commanders at all levels and during multiple R–CAATs was the "overmodularization" of the sustainment force. This has led the Army Forces Command to reconsider how sustainment units are "bundled" to increase continuity and decrease turmoil in the deployment process.

Lessons learned through R–CAATs are not always focused on ways to improve doctrine and processes; they also can reinforce current doctrine or pending shifts in the focus of training. Two key examples of

Continued on page 22

The First Team: Achieving Anticipatory Logistics

BY MAJOR GENERAL KENNETH S. DOWD

As director of logistics at the U.S. Central Command, the author helped to craft logistics plans for operations in Iraq and Afghanistan. Now, as commander of the 1st Theater Sustainment Command, he is in a position to execute those plans. In this article, he shares his perspective as he moved from strategic planner to operational commander.

While serving as the director of logistics for the U.S. Central Command (CENTCOM), I learned that nothing is easy about sustaining the logistics mission in the CENTCOM area of responsibility. Insurgent violence, political instability, and complex ethnic and religious issues all continue to challenge even the best of plans. Time has not lessened the criticality or complexity of this mission. If anything, the tasks ahead present even more challenges, with the primary concern being security. I knew then that our mission was historic and that great opportunities would present themselves to logisticians eager to hone their craft.

As the commander of the 1st Sustainment Command (Theater) (TSC), it has been my unique opportunity to execute the plans I helped craft and to witness at first hand the dedication and innovations that our "team of teams" achieves daily at Fort Bragg, North Carolina, and in Kuwait, Iraq, and Afghanistan.

In this article, I will illustrate how the 1st TSC maintains a finger on the pulse and a steady eye on the potential "foxes in the vineyard" in an uncertain environment throughout the CENTCOM theater and how mutual collaboration of the "Log Nation" has achieved anticipatory logistics.

A driver loads a nonoperational high-mobility multipurpose wheeled vehicle from Iraq onto the MV* Liberty *at the Port of Shuaiba, Kuwait. The* Liberty *will carry 6,000 tons of military cargo to the United States. Port operations are essential to the 1st TSC's efficient drawdown of equipment from Iraq. *(Photo by Natalie Cole, 1st TSC PAO)*

Integration and Communication

As logisticians, we seek to anticipate the sustainment needs and requirements of operational commanders before they do. In my experience, effective, integrated partnerships remain the best way to synergize operations across an expansive, complex area composed of multiple stakeholders.

The First Team achieves this integration through continuous strategic communication at all levels to clearly disseminate the necessary vision and way ahead. Whether in personal one-on-one discussions through professional products or during collaborative forums, we establish and sustain

continuous communication with our counterparts, commanders, and other strategic partners to ensure that we identify needs, assess capabilities, and exploit innovations.

Everyone in the First Team remains collaboratively engaged to achieve this level of comprehensive anticipation of our customers' needs, whether that customer is a commander running convoy escort teams, a staff member requiring more information, or a family member struggling to resolve a home-station issue. As our field continues to expand and evolve and as our force continues to age and new professionals enter the professional pool, I believe it is imperative to share in real-time lessons learned through professional outreach with future commanders and staffs.

The 1st TSC's Support of CENTCOM

In June 2007, CENTCOM's main effort remained Operation Iraqi Freedom. The command had over 5 years of experience in rotating forces in and out of Iraq and in sustaining those forces with a well-oiled logistics network based in Kuwait. Planning was underway for the surge and the subsequent Iraqi drawdown. Operation Enduring Freedom still remained an economy-of-force effort, with most of the forces and sustainment reaching Afghanistan via the land route through Pakistan.

Today, the First Team simultaneously supports Operations New Dawn and Enduring Freedom and the CENTCOM mission to promote partnerships among nations, respond to crises, and deter or defeat state- and nonstate-sponsored aggression.

With its headquarters based at Fort Bragg, the 1st TSC is in close proximity to Third Army, which is now headquartered at Shaw Air Force Base, South Carolina. At Fort Bragg, we enjoy positive relations with the Army Forces Command, the U.S. Army Reserve, the XVIII Airborne Corps, and the 82d Airborne Division. Through both proximity and experience as the sole theater sustainment command in the CENTCOM area of operations, the 1st TSC plays a vital role in this historic phase of our Nation's engagement strategy.

Since assuming command of the 1st TSC in July 2010, I have been in awe of the First Team's dedication, expertise, and effective integration of National Guard, Reserve, and joint logistics professionals. Modularity and geographical dispersion across a complicated battlespace have never deterred this command from having the foresight to plan effectively or being innovative in making nontraditional and traditional applications of sound logistics and sustainment.

This small headquarters of less than 500 personnel has facilitated and managed the responsible drawdown of forces in Iraq while building up forces in Afghanistan and supporting subsequent surges; the development of the Northern Distribution Network in Afghanistan; the rapid fielding of new equipment such as the mine-resistant ambush-protected vehicle; and the critical management of contracts and contractors across a diverse and challenging theater. The extended First Team includes a task organization of several units and over 20,000 individuals, including civilians.

The First Team truly functions as a modular, multicomponent, joint command. Together, our Soldiers, Sailors, Airmen, and Coastguardsmen, both Active and Reserve, and our civilians remain engaged throughout all the countries in the CENTCOM area of responsibility to provide seamless and continuous sustainment, ensuring that the warfighters have what they need at the right place and at the right time. The experience of the First Team, culled from mutual, extended time in the theater (having maintained a forward presence there since 2007), is routinely shared during inbound units' predeployment training to guarantee their rapid integration and seamless transition.

CENTCOM's Area of Responsibility

The 1st TSC shares its expertise routinely with partners and allies, building relations in Afghanistan, Bahrain, Egypt, Iran, Iraq, Jordan, Kazakhstan, Kuwait, Kyrgyzstan, Lebanon, Oman, Pakistan, Qatar, Saudi Arabia, Syria, Tajikistan, Turkmenistan, the United Arab Emirates, Uzbekistan, and Yemen.

Our battlefield remains complex, supporting operations that span 6 million square miles and encompass 20 countries, 4 time zones, more than 570 million people, 49 ethnic groups, 60 languages, and 27 religions. This area holds 58 percent of the world's oil and 46 percent of the world's natural gas. In this huge and complex region, key leaders must circulate to stay connected to their commanders and customers.

The 1st TSC's Structure

The command team spends about 75 percent of its time forward in Kuwait, Iraq, or Afghanistan. Over one-third of the staff remains deployed at all times. The other two-thirds of the team are either getting ready to deploy or are conducting training for those units preparing to deploy, providing the most up-to-date information for operating in the theater. Our deputy commanders come from the U.S. Reserve community and remain with us for 12 months, providing indispensible continuity.

The 1st TSC commands or oversees several subordinate units, personnel and financial management centers, and customs and fuel groups and maintains administrative control of Task Force Sinai. This creates the need for standing operating procedures to manage the constant turnover throughout the organization and to institute effective, rapid integration processes for these units, whether they are Active, National Guard, or Reserve.

The organization's operational control of critical sustainment is further achieved by partnering with strategic agencies, such as the Army Materiel Command and the Defense Logistics Agency, and by fully integrating subordinate units, such as our sustainment brigade, to facilitate, track, and manage millions of dollars in equipment, fuel, supplies, repair parts, warehouses, and contracts and thousands of personnel daily for Third Army.

Our sustainment brigade provides dedicated line-haul of U.S. equipment and supplies from Kuwait into and out of Iraq and provides airdrop support into Afghanistan. The security force brigade provides dedicated force protection, camp command cells, and convoy escorts to the sustainment brigade. The transportation brigade, under tactical control from the Military Surface Deployment and Distribution Command, coordinates vessel support and ensures customs procedures meet the standard of the local port authorities.

Our regional support group manages wash racks and tracks property and personnel movements at the gateway in and out of theater. The financial management center handles central funding, accounting, and banking services while setting policy and internal controls for financial operations. Our personnel directorate provides integrated and synchronized human resources support while conducting casualty and postal operations.

The Last Year

Sustaining the enduring logistics mission has provided the First Team with unparalleled expertise and positioned the command to amply execute our Nation's strategy.

Over the past year, the First Team created a separate theater gateway at Camp Virginia, Kuwait, which hosted the historic 4th Stryker Brigade, 2d Infantry Division, self-retrograde in August 2010. Aggressive renovations have been completed to enhance that austere locale with scanners and displays, thus expediting tired troops' travel home. These improvements proved much more than motivational during the personnel surges this past Christmas.

Further innovations, such as the mobile redistribution property accountability teams (RPAT) and Operation Move Iron, paved the way for the successful drawdown of 130,000 troops to 50,000 and the movement of equipment for the transition to Operation New Dawn.

With the surge of 33,000 personnel in Afghanistan,

Two Soldiers lay out weapons for customs inspection at Camp Arifjan, Kuwait. They work for Operation Move Iron, which helps Soldiers redeploying from Iraq and Afghanistan as individuals or in small groups get home faster by signing for and shipping weapons. The 1st TSC initiated the operation to ensure that all Soldiers clear customs in Kuwait and get home as quickly as possible. *(Photo by Natalie Cole, 1st TSC PAO)*

An Airman looks on as bundles of JP8 fuel fall to the ground during an airdrop above Afghanistan. While most fuel is delivered by tanker trucks, some of the most remote forward operating bases receive fuel by airdrop. Airdrop missions are one way the 1st TSC supports the warfighter through "anticipatory logistics." *(Photo by SGT David Reardon, 1st Sustainment Brigade PAO)*

mail and rest and recuperation (R&R) travel increased dramatically. First Team units worked to allocate additional aircraft to assist with the increase in R&R traffic, and postal teams were pushed forward to handle the surge in holiday mail downrange. Both were unprecedented efforts by the First Team.

The 1st TSC's continuous assessment of operational needs ensured priority availability of critical equipment, supplies, repair parts, contracts, and containers; this process was enabled and enhanced through RPAT yards in Iraq. That template for success is again being implemented in Afghanistan for the "Surge Recovery" directed by the President.

The First Team's positive door-to-door control of assets afforded the U.S. Government flexibility for responding to the unexpected humanitarian requirements of the 2010 floods in Pakistan and ensured 100-percent rapid fielding of lifesaving mine-resistant ambush-protected vehicles. This knowledge of asset management is reapplied as we continue to field new equipment and systems in support of the Army's modernization efforts.

Current Operations

As we enter this perilous stage of our transition in Iraq, the 1st TSC continues a proactive and aggressive stance by using continuous assessment and threat reduction techniques and procedures to safeguard the force. Force protection for our Soldiers remains a top priority. Our intelligence teams stay fully integrated to ensure timely and thorough ongoing threat analysis. We mitigate our forces' risks through effective rapid fielding of improved protective systems and equipment and aggressive force protection training.

Our convoy escort teams have the best up-armored vehicles in the Army inventory, with technologies to counter the improvised explosive device threat. We aggressively pursued the rapid integration of the Caiman Plus fleet into the convoy escort and security teams, which is saving countless lives. Personal equipment, area surveillance, and predeployment training assistance are a few of the other methods we employ to protect the force.

Establishing viable relations with key leaders enables 1st TSC leaders, working with international partners, to stay engaged to effectively facilitate and safeguard troops and equipment. The First Team staff routinely assists in the predeployment training of all inbound units to ensure current threat situational awareness, countermeasures, and mitigation techniques are known and that troops are proficient before their units' assumption of mission or transition of authority.

Throughout the year, we use social media and attendance at Yellow Ribbon Program events to maintain the flow of information to our families, at Fort Bragg and throughout the United States, in concert with our National Guard and Reserve partners. We remain engaged with our home-station communities through participation in scholastic events, sponsorships, and visits. All subordinate units sustain aggressive command information programs, which the First Team supports and facilitates. The social media venues provide families a preview of what often will be reported in the press, ensuring that we keep our families, as the first community, informed first.

Without a doubt, the 1st TSC and its subordinate units have been "getting after it" to ensure that all service members have what they need before they need it, or as we like to put it, providing "anticipatory logistics." Whether providing Soldiers with equipment, supplies, ammunition, or plane rides home to see their families, the First Team acts with one mind, one heart, and one purpose. We will never lose sight of the purpose, motivation, and end state of those whom we support. Every day that we are deployed is dedicated to the warriors in the field. As the arrow pointing to the 10:30 position on our patch symbolizes, the 1st TSC will always accomplish the mission before the 11th hour. Hooah!

Major General Kenneth S. Dowd is the commander of the 1st Sustainment Command (Theater). He previously served as the assistant deputy chief of staff for logistics at U.S. Army Europe; the executive officer to the Army G–4 and the director of logistics, engineering, and security assistance at the U.S. Pacific Command; and the director of logistics at the U.S. Central Command, where he directed all logistics and engineering planning and operations in support of Operations Enduring Freedom and Iraqi Freedom.

16th Sustainment Brigade Theater Support

by Chief Warrant Officer 4 Dane A. Patterson

The 16th Sustainment Brigade made itself available to support units throughout U.S. Army Europe and U.S. Army Africa after returning from its deployment to Iraq. Providing this support benefited both the receiving units and the sustainment brigade.

After returning from Operation Iraqi Freedom in 2009, the 16th Sustainment Brigade found innovative ways of integrating itself into the U.S. Army Europe (USAREUR) logistics footprint. The brigade's support operations maintenance branch coordinated multiple external missions to support the USAREUR and U.S. Army Africa commanders' missions.

Preset

One of the most noticeable recurring support missions is preset. Preset enhances a unit's equipment readiness posture through the inspection, service, repair, and code-out of equipment before a unit's deployment to a combat zone. The brigade's preset support missions provide a vital service to the warfighter.

The original idea behind the preset support missions was to inspect and repair crew-served weapons for USAREUR-based brigade combat teams. The 16th Sustainment Brigade has provided deployment preset support to the 2d Stryker Calvary Regiment (SCR), the 54th Engineer Battalion, and the 170th Infantry Brigade Combat Team (IBCT). The preset missions evolved from servicing crew-served weapons exclusively to servicing individual weapons and communications and electronics equipment as well.

The most recent preset support missions included inspection and repair of crew-served and individual weapons and communications and electronics equipment. In addition to conducting preset support for deploying units, the Soldiers of the 317th Maintenance Company provided reset support to USAREUR units redeploying from various areas of responsibility. The 317th Maintenance Company also supported the 21st Theater Support Command's left-behind equipment program by installing Single Channel Ground and Airborne Radio System (SINCGARS) installation kits into vehicles inducted into the program. A contracted civilian maintenance team typically did this mission.

2d SCR Preset Support Mission

The 2d SCR preset support mission was the first preset support mission conducted after the 16th Sus-

An armament repairer with the 317th Maintenance Company, 16th Sustainment Brigade, performs maintenance on an M9 semiautomatic pistol during the 170th IBCT preset support mission in Baumholder, Germany. *(Photo by CW2 Neuman Mason, 317th Maintenance Company)*

tainment Brigade returned from Operation Iraqi Freedom. The brigade provided a 13-Soldier armament repair team to provide support onsite at Rose Barracks in Vilseck, Germany. During the course of the mission, the armament team repaired and inspected 682 crew-served weapons for the 2d SCR.

The armament team began by identifying and requisitioning the initial class IX (repair parts) push package needed to support the 2d SCR. The armament team spent 2,600 man-hours inspecting and repairing deficiencies during the preset mission, which optimized the unit's operational readiness. Overseas contingency operations funds were used to fund the push package for this mission. The armament team conducted a comprehensive after-action review at the end of the mission to help improve future preset support operations.

54th Engineer Battalion Preset Support Mission

The 16th Sustainment Brigade conducted another preset mission in 2010 to support the 54th Engineer Battalion as the battalion prepared for its Operation Enduring Freedom deployment. The unit requested the preset support for its weapons and requested communications and electronics support for its night-vision devices and communications equipment.

Overseas contingency operations funding covered the cost of the class IX used to support the preset mission for the unit. Over the course of the preset mission, the communications and electronics team spent 328 man-hours completing inspections and repairs on 656 pieces of equipment. The armament team spent 1,268 man-hours inspecting and repairing 663 weapons for 5 units within the 54th Engineer Battalion.

170th IBCT Preset Support Mission

In preparation for an upcoming deployment to Operation Enduring Freedom (OEF), the 170th IBCT asked the 16th Sustainment Brigade to provide armament

Armament repairers assigned to the 317th Maintenance Company perform inspections and maintenance on weapons during the 170th IBCT preset support mission. *(Photo by CW2 Neuman Mason, 317th Maintenance Company)*

and communications and electronics preset support. The 170th IBCT preset mission was conducted in two phases. During the first phase, the teams provided preset support for the 3d Battalion, 4th Infantry Regiment. During the second phase, the team provided preset support operations for the rest of the 170th IBCT, which would deploy later. All 170th IBCT preset support was conducted at the unit's location at Smith Barracks in Baumholder, Germany.

During the first phase, the communications and electronics team spent 465 man-hours repairing and inspecting 932 pieces of equipment, and the armament team spent 2,347 man-hours inspecting and repairing 1,368 weapons. Overall, the teams spent $102,000 on class IX during this phase.

The second phase was to conduct preset maintenance for the rest of the brigade. Over the course of this phase, 422 weapons and 833 night-vision devices and pieces of communications and electronics equipment were inspected and repaired. Cumulatively, the Soldiers of the 16th Sustainment Brigade spent 1,004 man-hours inspecting and repairing weapons and communications and electronics equipment, which improved the 170th IBCT's readiness posture in preparation for the unit's imminent deployment to OEF.

12th Combat Aviation Brigade Reset Support

The 317th Maintenance Company performed armament and communications and electronics reset support for the 12th Combat Aviation Brigade. Reset involves the restoration of a unit's equipment to a level of combat capability commensurate with a unit's future missions. The maintenance team reset 363 pieces of equipment ranging from crew-served weapons to night-vision devices and communications and electronics equipment. The Soldiers completed work usually done by the Army Materiel Command's small-arms repair and evaluation and communications and electronics evaluation and repair teams.

SINCGARS Installation Kit Support

In addition to the preset support mission, the 16th Sustainment Brigade's Soldiers have been actively engaged in providing support for USAREUR. One of the most notable support missions was a tasking from the 21st Theater Sustainment Command to install SINCGARS installation kits in vehicles that were scheduled to be returned to the owning unit from the USAREUR left-behind equipment program. Civilian contract personnel had performed this task in the past. The brigade saved more than $323,000 by using its Soldiers to conduct the installations in lieu of the civilian contract personnel. During the mission, the Soldiers installed 80 SINCGARs installation kits.

Combined Joint Task Force Horn of Africa

The 16th Sustainment Brigade provided personnel to support units in the U.S. Africa Command area of responsibility. The brigade sent four personnel to Africa to conduct weapons gauging, review supply support activity materiel management, and forecast future sustainment requirements in support of Combined Joint Task Force Horn of Africa. The Soldiers deployed to Camp Lemonier, Djibouti, in February 2011 in support of the 16th Sustainment Brigade's full-spectrum operations mission-essential task list.

The 16th Sustainment Brigade provided sustainment in numerous geographical areas to support training operations. The brigade's support to units in USAREUR and U.S. Army Africa demonstrated its capabilities. Conducting these missions not only supported the units the brigade was working with but also helped its Soldiers to hone their skills.

Chief Warrant Officer 4 Dane A. Patterson is the senior automotive warrant officer for the Support Operations Maintenance Branch, 16th Sustainment Brigade, in Bamberg, Germany. He holds an associate's degree in general studies from the University of Maryland, an associate's degree in electromechanical technology from Excelsior College, a B.S. degree in management studies from the University of Maryland, and an M.A. degree in human resources management from Webster University. He is a graduate of the Warrant Officer Candidate, Basic, Advanced, and Staff Courses.

MILSTRIP Requisitioning at an Army Maintenance Activity

BY CAPTAIN ANDREW C. WHITLEY

In my experience as a maintenance platoon leader, maintenance control officer, and brigade maintenance officer, repair parts shortages and incorrectly ordered repair parts are the main reasons that Army maintenance activities exceed the total logistics response time–maintenance as outlined in Army Regulation 750–1, Army Materiel Maintenance Policy. Parts shortages can exist on a strategic level because of the rapid fielding of a new weapons platform (such as the mine-resistant ambush-protected vehicle) or on an operational level because of bottlenecks at transportation hubs along the lines of communication.

Such systemic parts shortages are often beyond the tactical-level maintenance leader's ability to solve and must be mitigated through controlled substitution, cannibalization when appropriate, and improvisation. In contrast, incorrectly ordered parts are a tactical-level problem that every maintenance leader can solve by understanding how to requisition parts accurately through the Army supply system.

Creation of MILSTRIP

The Army supply system uses the Department of Defense (DOD) Military Standard Requisitioning and Issue Procedures (MILSTRIP) to order many classes of supply, including class II (clothing and individual equipment) and class IX (repair parts). MILSTRIP became the DOD standard in July 1962, replacing 16 different DOD requisitioning systems then in use. MILSTRIP standardized forms, box markings, label markings, codes, and priorities across DOD, helping to eliminate waste, promote efficiency, speed up supply actions, and reduce administrative costs.

Robert McNamara, Secretary of Defense from 1961 to 1968, championed the introduction of MILSTRIP as part of his efforts to use modern management techniques to create efficiencies within DOD. Other reforms undertaken by McNamara included the creation of the Defense Supply Agency (later renamed the Defense Logistics Agency) to manage items used by multiple services and the establishment of the Army Materiel Command. DOD actions during the McNamara era laid the foundations of the supply system used today.

How MILSTRIP Works

MILSTRIP is first and foremost a code that communicates critical information between maintenance and supply activities about what supplies are required and where the supplies need to go. When MILSTRIP was first introduced in 1962, Soldiers used 80-position punch cards to transmit information. While the punch cards are no longer in use, the 80-position code system designed for the punch cards still is. Whenever an Army maintenance activity orders a repair part using any of the Standard Army Management Information Systems, such as the Standard Army Maintenance System–Enhanced (SAMS–E), the activity uses the 80-position MILSTRIP system, even if those 80 positions are expressed to the user in terms of drop-down menus on a computer screen.

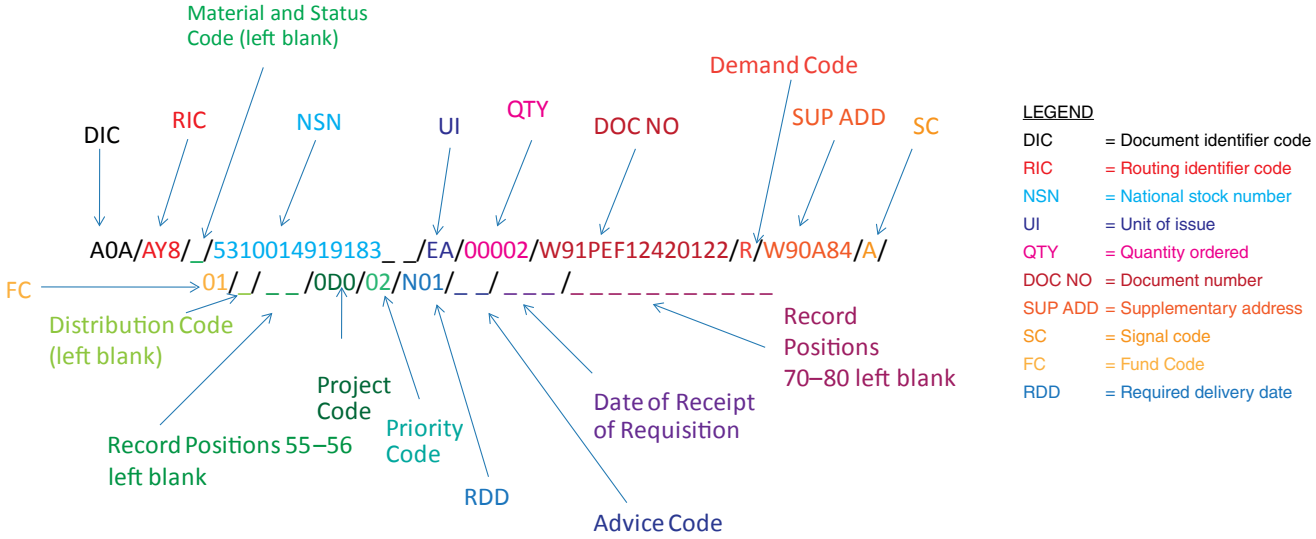
Each 80-character packet of MILSTIP information, such as an individual repair part requisition through SAMS–E, is called a document. However, requisitions are just one type of MILSTRIP document. Other types of MILSTRIP documents include requisition statuses, requisition cancellations, requisition receipts, requisition changes, and requisition adjustments. Supply activities that cannot satisfy a customer's requisition usually use MILSTRIP documents to forward the requisition to higher-level supply activities to see if the items exist elsewhere in the supply system.

Document Identifier Codes

Each position in MILSTRIP is called a record position. Each record position can contain a number or letter or be left blank. The first three record positions, which contain the document identifier code (DIC), are the most important. The DIC is a three-position alphanumeric code that allows both human and computer MILSTRIP users to identify the information contained in the MILSTRIP document.

When a SAMS–E user at an Army maintenance activity creates a MILSTRIP requisition and transmits the requisition to the supporting supply activity, that 80-character requisition gets assigned a DIC, depending on what kind of requisition it is. For example, when a unit located outside the continental United States (OCONUS) requests an item that has a national stock number (NSN), that requisition will receive a DIC of A01. Every MILSTRIP requisition for an NSN part coming from an OCONUS unit has a DIC of A01. Similarly, the DIC for all requisitions of NSN parts by CONUS units is A0A.

Different types of documents get different DICs. There are literally hundreds of DICs, depending on the purpose of the document. The information contained within the document itself, not the DIC, makes each



Above are the elements of a sample MILSTRIP document, by position.

document unique. A listing of what kind of information is found in each type of document, by DIC, is provided in Appendix 3 of DOD 4000.25–1–M, Military Standard Requisitioning and Issue Procedures. For the purposes of accurately requisitioning materials, maintenance leaders should be familiar with the information required by DICs beginning with "A0," which are used in MILSTRIP to place most Army requisitions.

Essential Elements of the MILSTRIP Document

For requisitions beginning with "A0" to be complete, 17 different unique codes must be included in the MILSTRIP document. However, the MILSTRIP user at an Army maintenance activity does not need to fill out every code to make a requisition. Six minimum-essential elements of data are required to requisition supplies via MILSTRIP:

- ❑ The NSN or a combination of the commercial and Government entity code and part number (if the requisitoner wants to order a non-NSN item through an approved vendor).
- ❑ The unit of issue.
- ❑ The quantity.
- ❑ The document number.
- ❑ The priority.
- ❑ The end item code.

A detailed description of these codes can be found in the Logisticians Smart Book available from the Installation Materiel Management Center on the World Wide Web.

With the aforementioned information provided by the requisitioning maintenance activity, the supporting supply activity will conduct accuracy edits to ensure the documents are properly formatted and prepared. If some of the minimum-essential elements of data are incorrect or missing, the supply support activity may reject the requisition or give the requisition a lower priority, causing a delay in getting the required repair part to the requesting maintenance activity.

A maintenance leader using MILSTRIP should be familiar with four other key codes, including—

- ❑ The demand code, which tells the Army supply system if the unit has a broken recoverable item to exchange for a new recoverable item.
- ❑ The signal code, which tells the Army which DOD activity address code (DODAAC) to charge for the requisition and where to send the item.
- ❑ The supplementary address, which is used when a part is charged to one DODAAC and shipped to another.
- ❑ The advice code, which tells the item manager specific information about the required part. For example, if the maintenance activity needs a 100-foot-long piece of ⅝-inch hose, the advice code of "2N" will tell the item manager that 100 continuous feet are needed. Otherwise, the requisitioning unit runs the risk of getting multiple segments of ⅝-inch hose adding up to 100 feet.

A greater understanding of MILSTRIP in the Army maintenance community will reduce vehicle downtime by reducing parts requisition errors at the user level. MILSTRIP is an efficient system for ordering repair parts, but only if MILSTRIP's codes are understood and used correctly to get the right repair part to the right location. Incorrectly ordered parts can be a major headache for maintenance leaders at all levels and impede the rapid regeneration of combat power and increase the total logistics response time–maintenance.

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Environmental Compliance and the Return to Garrison

BY CAPTAIN TRAVIS P. IOMMI

As units redeploy to their home stations, they need to be aware of requirements for complying with environmental policies and procedures. Ordnance officers have a special responsibility to enforce environmental standards in motor pools.

As Operation Iraqi Freedom slowly closes, many Soldiers are experiencing the Army in a garrison environment for the first time. The operating tempo (OPTEMPO) that the typical Soldier experiences while deployed is focused on violent execution and back-to-back missions. As the Army transitions back to a garrison environment, the focus shifts to routinely using proper procedures and reporting methods.

Environmental compliance in our motor pools has deteriorated because of multiple and extended deployment cycles and short dwell times. The lack of environmental compliance supplies in the Army supply system and the costs associated with such supplies hinder the environmental compliance officer (ECO) and the environmental compliance assistant (ECA) from establishing environmental compliance systems within motor pools.

Ordnance captains and commanders are responsible for ensuring that they set a good example and exceed environmental compliance standards. Although they may not be appointed as ECOs or ECAs of units, the ordnance officers own the motor pools and are directly responsible for all activities that occur within them.

To overcome the current shortfalls in environmental compliance, the Army must refocus on garrison operations and garrison OPTEMPO. The forward support company (FSC) directly supports maneuver units, and it is expected to fully support them through their training while simultaneously conducting the same level of training itself. For example, if a maneuver unit conducts a range, the FSC is expected to support and conduct the same training concurrently.

This training regimen, coupled with multiple deployments and shorter dwell times, has led to a loss of environmental compliance, lack of knowledge of environmental compliance programs and regulations, and not enough time to effectively implement environmental compliance systems in motor pools. I have experienced these problems first hand as the ECO for two separate

A wheeled vehicle mechanic replaces a vehicle's engine oil. Compliance with environmental policies and procedures in activities such as engine oil changes is a significant part of motor pool operations, particularly as units return to a garrison environment. *(Photo by PVT DeAngelo Wells)*

FSCs within the Army's brigade combat teams (BCTs).

Adding a DPW Representative

To resolve the problems created by time, knowledge, and training constraints, I recommend that each motor pool be augmented by the installation's department of public works (DPW). The additional DPW representative would be responsible for ordering environmental compliance supplies, conducting random inspections of individual motor pools, educating key leaders at each motor pool, maintaining necessary documentation and records, and establishing and maintaining each motor pool's environmental compliance system.

One person could cover several motor pools and focus on maintaining environmental compliance systems. This becomes exceptionally important as units deploy and redeploy to and from the theater. The DPW representative could maintain the environmental compliance systems that were already in place and provide continuity when a unit returns or personnel undergo a permanent change of station. Even if a new unit transitions into a new motor pool, the DPW representative could provide continuity so the unit does not have to establish new systems that require proper environmental compliance education, time, and supplies.

The DPW representative also would remain more informed about the latest environmental compliance regulations since that is his primary focus. An example of this occurred when the 3d BCT, 82d Airborne Division, returned from Operation Iraqi Freedom 06–08. All of the FSCs redeployed into brand new motor pool facilities at Fort Bragg, North Carolina, but approximately 65 percent of the leaders transitioned out of their duty positions. This forced the new leaders to create their environmental compliance system without any previous equipment or training.

If a DPW representative had been present, he could have established the environmental compliance systems and obtained environmental compliance supplies before the 3d BCT's return. This would have allowed the new leaders to focus on redeployment tasks and their maintenance mission instead of trying to juggle maintenance mission with establishing new environmental compliance systems.

The DPW representative could have left the environmental compliance supplies in the motor pool as units moved around the installation and deployed. This would have reduced the need to requisition environmental compliance supplies that were lost and damaged in transit and ensured that the right supplies were in the right place at the right time.

The obvious drawback of adding additional personnel to DPW is the additional cost of the yearly salaries of those employees. But because each environmental compliance infraction can cost a unit or installation up to $50,000, it is worth paying the additional salaries instead of paying the fines that quickly accumulate during an environmental compliance inspection. Additional DPW personnel would also mitigate the risk of potential hazards to the local environment, Soldiers, and the local population.

Procuring Supplies

Funding environmental compliance supplies creates a new set of issues for each ECO and ECA. While many cleaning products that meet environmental compliance standards have national stock numbers (NSNs), thousands of other supplies that are required to establish an environmentally compliant motor pool do not have NSNs. These items include but are not limited to large spill kits, POL (petroleum, oils, and lubricants) sheds, boom pads, and secondary containment platforms.

These items and many others must be purchased at each installation's self-service supply center or from the local economy, and they can cost thousands of dollars each. Units can only use a small amount of their total monthly budget for such purchases. This makes it very difficult to procure the proper supplies. Although units can work around these funding issues, it wastes a leader's time to navigate through the proper funding channels.

While a unit is trying to obtain the right supplies, the motor pool is subject to inspections and fines from the environmental control offices, which could cost the unit and the installation thousands of dollars. I recommend that the Army add more environmental compliance supplies to the supply system to expedite the requisition of those supplies by units. This would allow leaders to order environmental compliance supplies without having to navigate through funding issues, and it would create a tracking system for environmental compliance supplies.

The Army is moving back to garrison operations, and environmental policies and procedures must be followed. The Army must mitigate the impact of its operations on the environment. As Army motor pool leaders with direct responsibility for all motor pool activities, ordnance officers must take charge and ensure that all environmental policies are followed.

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Data Driven Army

by Lieutenant Colonel Douglas S. Sutter, CTARNG

The author discovered in Iraq that business practices like Six Sigma and Lean can be applied by Army sustainers to improve the efficiency of their operations.

I have had the opportunity to deploy in support of two Operation Iraqi Freedom (OIF) rotations as a guardsman while being a full-time employee of General Electric Company. During both deployments, I found that I used many of the data and quality skills that I had learned at General Electric as much as I did my military training.

Based on my experience, I believe that we could be much more effective as an Army if we could incorporate some of the Six Sigma, quality, Lean manufacturing, continuous improvement, and data training processes and principles from the corporate world into the military's DNA. Everything is a process, and these business tools can be used with everything that happens in the Army.

What follows are some of the lessons my advisory team learned using these tools while working with the Iraqi Army maintenance system during OIF. I also will offer some recommendations for improving our Army's ability to find, manipulate, and analyze data.

Iraqi Asset Management Program

My team spent 9 months in Iraq working at all levels of Iraqi Army (IA) maintenance and advising IA personnel, from the battalion maintenance officer all the way up to the commander of the national parts warehouse. The automated class IX (repair parts) system used by the IA is the Iraqi Asset Management Program (IAMP). The IA was using IAMP for daily transactions but not as an effective maintenance management tool. IAMP was still a new system, and U.S. Forces had not developed a strong enough base knowledge to effectively advise the IA in the management capabilities of IAMP.

One of our initial missions was to advise an IA medium workshop (MWS), which provided the equivalent of direct support maintenance on an area basis. The MWS's primary customer was the 8th IA Division. The initial feedback from the stability and transition team advisers of the division was that the class IX system was broken. No evidence indicated that any IA units were tracking the status of open class IX requisitions on a document control register. We thought that this information would be readily available and tracked at multiple levels throughout the IA and shadow-tracked through the adviser network, but that was not the case.

We initially pulled preformatted reports from IAMP to gain situational awareness, but these reports were not easy to manipulate or summarize and did not give a good common operating picture of class IX. With extensive coordination and requests to the contracting company that developed IAMP, we were able to obtain a report that detailed every single class IX request since the inception of the program. This report provided one easy-to-read and customizable file for reporting class IX status for the entire 8th IA Division.

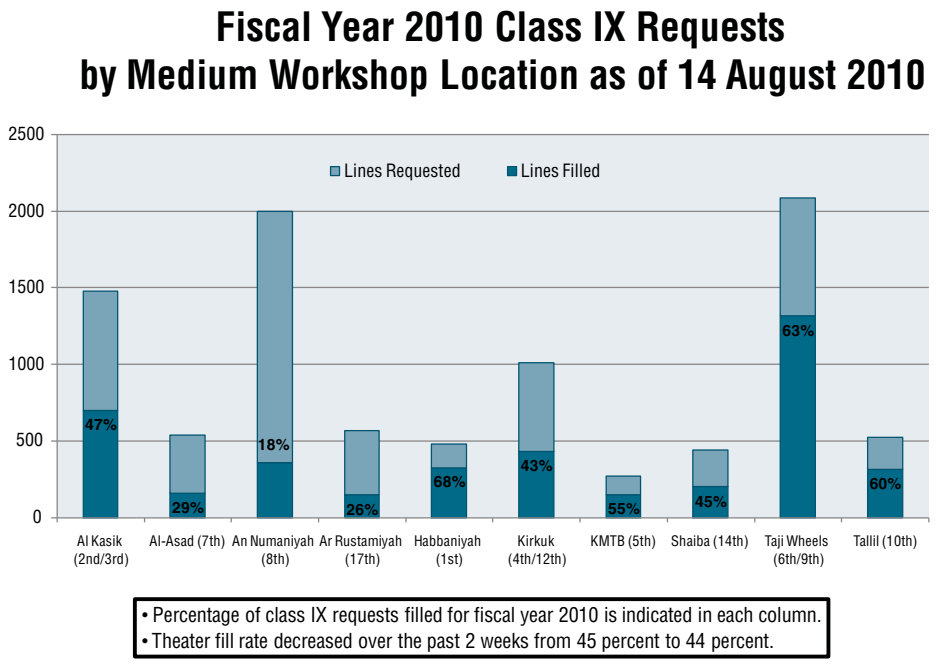
Using a variety of Microsoft Excel tools, we developed a report that showed fill rates by unit and tracked trends on a weekly basis. (See chart at right.) The 8th IA Division's personnel were now able to "see themselves" from a class IX perspective for the first time. None of this would have been possible without a good base knowledge of Microsoft Excel.

80/20 Parts Pareto Chart

Situational awareness of status is great in seeing your supply system, but now the challenge was helping our IA counterparts to capitalize on this newly found common operating picture. The 8th IA Division's fill rate on class IX was 18 percent, and we needed to figure out why it was so low. A Pareto chart was created to determine the top parts requested.

A Pareto chart is a simple bar graph that displays the frequency of events in descending order. The Pareto chart showed that the majority of the fill rate misses were due to the nonavailability of just a small portion of parts. In most processes, 80 percent of the faults stem from 20 percent of the defects; this is commonly referred to as the 80/20 rule. After analyzing our data, we found that the top 15 parts requested made up 27 percent of the total quantity requested and the top 30 parts requested made up 41 percent of the total quantity requested.

Over 1,000 different parts were on order at the time of our analysis, so this was a clear example of the 80/20 rule commonly seen in Pareto charts. The data provided an easy solution to solving the lack of repair parts: Letting contracts for 30 parts would take care of



This sample chart shows the fill rate for class IX (repair parts) by Iraqi Army medium workshop location. It was developed from raw data in the Iraqi Asset Management Program (IAMP).

41 percent of the parts on order for the entire IA.

Budgetary and process issues prevented the IA from acting on the data, but at least the data now were available. The preformatted reports in IAMP would display the top 100 most-requested parts, but they did not provide an analysis of the effect of those parts on the entire class IX system. The Pareto chart provides a prioritized action list that helps units avoid spending time and effort working on defects that do not truly affect the overall performance of the process.

Drive to 65 Campaign

The same data were also used to analyze the potential for repairing parts that were on order and not in stock. Using a variety of Excel tools, we determined that the An Numaniyah MWS had the ability to repair 65 percent of all parts that were on order and not in stock for the 8th IA Division. These data were essential to the development of the An Numaniyah MWS "Drive to 65 Campaign," which had the goal of getting to a 65-percent fill rate through a combination of regular fills, repairing parts at the MWS, and local purchases.

The IA has yet to develop a formal reparable exchange program, but by using the data, we were able to identify which parts had the potential to be repaired to increase the fill rate. At the time of our departure, we had not gotten as far as we would have liked with the development of this program, but we had over 100 lines turned in and repaired that otherwise would have not been replaced.

The data were also used to develop a quick reaction force package to specifically buy equipment to build repair capability at the MWS. This specific repair capability represented 36 percent of all orders placed by the 8th IA Division in calendar year 2010. This never would have been possible without first analyzing the data.

Maintenance Management

The data also provided maintenance management tools, such as volume of requests by unit as an indicator of preventive maintenance checks and services, fault analysis that indicates shortcomings in driver's training or maintenance training, and the cycle time of requests. All of this analysis came from the same base report.

Looking at the information in its tabulated form provided no useful data. The base knowledge of Microsoft Excel provided a tool to turn this information into a plethora of data-filled reports. The more we worked with 8th IA Division soldiers and provided them the data, the greater their desire became to see how they compared to the other IA divisions. This desire spurred a push to start looking at data for the entire theater. We subsequently created the same type of report for all class IX requests throughout the theater.

Joint Repair Parts Command Scorecard

When our advisory team began its work, the Iraq Training and Advisory Mission–Army had just recently received advising responsibilities for the Joint Repair Parts Command (JRPC), which runs the IA national parts warehouse. We were newly assigned to this mission, but we had only a short time remaining in theater. To make this time worthwhile, we determined that we needed an assessment tool to set a baseline that showed where JRPC's warehouse stood as measured against normal industry standards. For the assessment to be effective, we needed skills in manipulating data as well as the ability to analyze the data.

One of the derivatives of the assessment tool was a scorecard. One of the purposes of the scorecard was to develop metrics to measure effectiveness and track progress over time. Metrics drive behavior, and developing the right metrics and having the data to show performance helped JRPC immensely.

A good portion of the scorecard addressed the cycle time of orders processed at JRPC. The presentation of

the data and the metrics allowed JRPC to concentrate on two key areas of order cycle time, cutting the backlog of one by 50 percent and another by 90 percent in just 3 weeks.

Inventory Effectiveness

One of the performance functions addressed in the assessment tool was inventory effectiveness. A number of preformatted reports are available in IAMP, but none of these reports provide the ability to find the needed data. We were able to request a data run from IAMP showing total stock on hand at JRPC. A VLookup was done to match each part on hand to its demand. From this, we were able to show that only 3,500 of the 17,000 lines in stock had ever had any demand at all.

Inventory information is crucial to effectively advising an Army on its class IX replenishment system. Its availability would not have been possible without these simple Excel skills and access to the raw data. An automated system will never be able to provide a preformatted report to answer all questions, but access to raw data and sound Excel skills will provide the ability to address most questions asked.

We used these tools to build our own situational awareness and common operating picture so we could advise effectively. We did have mixed results sharing these tools with our IA counterparts as well as fellow advisers. A common understanding of these tools across the Army will not only help the Army to continuously improve, but it will also aid in the advising of our allies.

Building and Sustaining the Tools

Just as successful infantry squad battle drills start with a foundation of the individual skills of moving, shooting, and communicating and the proper equipment to do so, so data analysis requires a foundation of individual task mastery and the proper tools and equipment as well. A way to start building that mastery of individual data skills and the required toolbox is to—

- Incorporate basic and advanced Microsoft Excel courses and basic Microsoft Access courses, through a combination of correspondence and classroom training, into officer basic courses and advanced noncommissioned officer courses, and add a refresher at captains career courses.
- Add basic Six Sigma training, quality training, and Lean manufacturing training to the curriculum once basic Excel and Access skill sets are developed. The result of this training will be Soldiers and officers who are familiar with the DMAIC (define, measure, analyze, improve, control) process, value stream mapping, advanced process mapping, defect tracking, quality improvement tools, and data collection plans.
- Institute a fairly robust distance-learning course for individuals already developed in their careers who require these skill sets.
- Incorporate these skills into a capstone project that addresses improvement of a process at the school or post. This will give students practical experience as well as improve school or post processes.

For nonautomated processes, data are obtained by using a simple, coherent, and effective data collection plan. Automated processes must be able to access raw data at all levels. A number of preformatted reports are available in automated systems right now, but having access to the raw data is essential to any user's ability to manipulate the data specifically to meet his needs.

How can a junior officer incorporate these skills into his daily operations? Think of your battalion or state Soldier Readiness Program, where you spend 2 days standing in various lines for a total of about 1 hour of value-added time. Using a value stream map to identify areas of waste will cut out hours of non-value-added time.

Another example is late evaluations. By using a defect tracker and a data collection plan to identify your top reasons for lateness, you can put in place a process and controls to prevent the defects from happening in the future and cut down on the total number of late evaluations. This article has discussed numerous ways to use these tools in maintenance.

Everything is a process, and by focusing on data analysis and continuous improvement, then everything the Army does will become better.

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How RFID and Smartphones Will Help Revolutionize Army Sustainment

BY TODD H. GUGGISBERG

The latest technologies, including radio frequency identification devices and cell phones equipped to be handheld computers, could forever change the way the Army sustains Soldiers.

Around 1988, the computer modem began to revolutionize military sustainment down to the battalion level. Maintenance warrant officers and battalion maintenance officers stood in their motor pool offices watching red blinking lights on brick-sized boxes that transmitted their reports to a headquarters across post or across the country. This ability to move digital data represented the start of a new age in sustainment information sharing that led directly to today's high-technology systems such as the Battle Command Sustainment Support System (BCS3).

While the modems of the 1980s and 1990s are now discarded antiques, technology will again transform Army sustainment, this time in the form of radio frequency identification (RFID) devices used in conjunction with smartphones. These technologies will directly contribute to improved efficiencies and effectiveness in the areas of property accountability, maintenance, human resources, and health services.

Property Accountability

Major retail chains have already integrated RFID into their supply chain and inventory systems. In 2010, retail giant Walmart began embedding electronic tags into men's jeans, socks, t-shirts, and even underwear. This has helped Walmart understand which items need replenishing and identify when items are on the wrong shelves.

While the Army is not particularly interested in tracking underwear, it does have a routine requirement to maintain accountability of its equipment. Most important are sensitive or high-value items. By embedding RFID into all sensitive items, a company could complete an inventory of its arms room in seconds.

A noncommissioned officer could simply walk into the arms room and use his smartphone to read the devices implanted on the weapons and night-vision equipment. His smartphone would compare the on-hand inventory by serial number to the unit property book and send a report to the first sergeant and company commander. Simultaneously, the company commander's phone could send a text to the battalion executive officer while the information updates the Property Book Unit Supply Enhanced and BCS3.

Support units could realize even greater efficiencies by using RFID to track inventory items and their locations and record the time that each item sits in the warehouse. A comprehensive study by the Sam Walton School of Business at the University of Arkansas states, "RFID improves PI [physical inventory] accuracy, which means that it reduces stock safety levels throughout the supply chain."

Usage Tracking

RFID and smartphones can also be used to manage usage and expiration data. Grocery store chains are using RFID to generate resupply requests as soon as items leave the shelf and to allow the distribution center to manage in-store inventories. The military could use this technology in many ways. Individual parachute logs could be tracked through a small RFID chip sewn into a parachute seam. The number of jumps, dates, and the name of the rigger that packed the parachute could all be read on a smartphone by the paratrooper, his jumpmaster, or the rigger warrant officer managing the unit's parachutes.

Managing class VIII (medical materiel) is a notoriously time-consuming task for medical units. Even in basic medical equipment sets, keeping track of medicine expiration dates is difficult. Using RFID and smartphones will allow the squad leader to receive text warnings that medicines are close to expiring. The leader can then use his smartphone to order replacements from the brigade medical supply officer. Through this technology, the medical squad's efficiency and effectiveness both increase.

Maintenance

An even more sophisticated application of RFID technology is using it for predictive sustainment and maintenance. An RFID device could transmit fuel and oil levels and the results of a daily internal diagnostic

computer check of every truck in a battalion's motor pool to the maintenance warrant officer's smartphone. This would allow leaders to focus their mechanics on only those vehicles that report an abnormality. It would update the Standard Army Maintenance System and BCS3 immediately.

One futurist, Dr. Patrick Dixon, who was named a "Global Change Guru" by the Wall Street Journal, speculates that RFID technology will soon be able to monitor and report the levels of milk and juice and the expiration dates of the food in your refrigerator.

While this information would certainly be helpful to the consumer, it represents a goldmine of accurate, targeted requirements data for the neighborhood grocery stores. They would know approximately how many gallons of milk to stock because the data would tell them how many neighborhood families are low on milk. Less milk in the inventory and less spoilage result in higher profit margins (efficiency). Simultaneously, it would help to ensure that the store is never out of milk or that the milk on the shelf has not expired (effectiveness).

Applied to the battlefield, RFID permits sustainers to view on-hand fuel, water, ammunition, and medical supplies all the way down to the individual tank or Soldier. The daily logistics status report becomes an autonomously generated report that is sent straight to the S–4's and commander's smartphones.

"Once a new technology rolls over you, if you're not part of the steamroller, you're part of the road."

—Stewart Brand

Human Resources and Health Services

The most contentious application of this developing technology is its potential to improve personnel tracking, administration, and medical information. Implanting RFID into Soldiers would increase human resources and medical efficiency and result in better support to the customer.

People have been implanting RFID in their pets for almost a decade, and the "chipping" of humans has already begun. Wired Magazine reports that nightclubs are using RFID implants for some volunteer customers. The chips allow customers to bypass club entrance lines. At Barcelona's Baja Beach Club, regular customers are injected with RFIDs linked to debit accounts, making wallets, identification, and cash passé. Furthermore, a company called HealthLink, Inc., is advertising the benefits of human RFID implants for medical reasons.

Soldiers deploying into theater could have RFID implanted into the nape of their necks or their forearms. The devices could store their personnel data as well as their medical histories. When Soldiers step off the C–17 Globemaster aircraft in Bagram, Afghanistan, the RFID would automatically update the units' personnel reports, start combat-zone entitlements, check that the Soldiers' shots are complete, and confirm that their emergency contact information, Servicemembers' Group Life Insurance, and wills are all current.

The unit's rear detachment and family readiness group would get another text showing which Soldiers arrived at Bagram. The individual Soldiers would receive a text and link on their smartphones that would display a map of Bagram Airfield, where the designated living space is located, the hours of the nearest dining facility and any other information the command deems important. Finally, if a Soldier gets injured, the battalion aid station could quickly read the Soldier's medical data, evaluate his medical history, confirm his blood type, and determine any medication he currently uses.

Concerns and Issues

Obviously, there are many issues surrounding these technologies, and they are not simplistic remedies to our complex problems. Militarily, the first issue must be security. As the WikiLeaks situation demonstrates, governments face a perhaps impossible task in securing their information. Most RFID can be read by anyone with a little knowledge and access to a nearby RadioShack store. Scrambling the RFID signal is possible but is expensive and limited by the computational performance of current RFID technology. The suggested solution to prevent theft or surveillance of data is a foil-lined pouch.

Second, the transmit ranges of RFID devices are currently limited. Without an antenna, most devices can be read only within 100 feet, so the ability to track or read them from a distance is limited.

Third, the Army would need a herculean leadership effort to standardize applications and ensure their integration with the Standard Army Management Information Systems, the Army Battle Command Systems, and the Global Command and Control System–Army. Add a requirement to read and track North Atlantic Treaty Organization, coalition, and interagency information, and the Army has a monumental challenge. History shows that this is almost an unrealistic goal.

Perhaps the most important issues, though, are accessibility and privacy. Taken to the imaginative extreme, RFID might prevent a Soldier from ever being unreachable or untraceable. Theoretically, someone could track what he ate at the dining facility, how far (and fast) he ran during physical training, and where (and for how long) he slept.

These applications seem farfetched because we assume that a U.S. Soldier would never accept others infringing so deeply on his privacy. Yet we have seen people willingly give out more and more of their

An automated logistical specialist from the 593d Sustainment Brigade attaches a radio frequency identification tag to a CONEX at Camp Arifjan, Kuwait. The tags are used by the Army to track items as they are transported throughout the world and are a key component in the responsible drawdown of forces in Iraq. *(Photo by SGT Jason Adolphson)*

personal data. The ubiquity of Facebook and personal smartphones with constant global positioning system capabilities has demonstrated that people will not only accept constant monitoring but may actually seek personal transparency because of the convenience that the technology offers. Perhaps in the near future it will become impossible to interact with the modern environment without RFID. Doors literally may not open for you without a chip.

Even though these developing technologies threaten some of our ideas of security and privacy, there can be little doubt that the combination of RFID and smartphones is potentially a sustainment game-changer. Managing supply chains, equipment, personnel accountability, maintenance status, and healthcare could all be more efficient, improving support to our Soldiers.

The days of manual reports, checklists, physical inventories, and personnel musters are fading. The leaders who continue to rely on these antiquated ideas of management will waste their Soldiers' time, squander their organizations' resources, and provide increasingly diminished sustainment support to their customers. The technological steamroller of linked RFID and smartphones may not be able to fix everything, but it will almost certainly be a part of our future.

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Is Jumping the BSA Always Necessary?

by Lieutenant Colonel Michael Baumeister,
Command Sergeant Major Thomas W. Hall, Jr.,
and Major Jennifer McDonough

Based on their experience at a combat training center rotation, the authors believe that the success of modular sustainment design may have largely eliminated the need to jump the brigade support area.

The 3d Brigade Combat Team (BCT) of the 82d Airborne Division completed Joint Readiness Training Center (JRTC) Rotation 11–01 at Fort Polk, Louisiana, in October 2010. This was the first full-spectrum operations rotation at JRTC in approximately 8 years, and it was specifically designed to revalidate the brigade's ability to conduct a nighttime mass tactical airborne assault with approximately 1,700 paratroopers.

The mission of those Soldiers was to seize an airfield, clear and repair a flight landing strip, recover heavy-drop platforms of equipment and howitzers, and then, within 4 hours, begin to receive notional and actual air-land C–130 Hercules transports delivering key equipment and necessary sustainment.

As part of the rotation, the 3d BCT's 82d Brigade Support Battalion (BSB) was able to conduct an airborne assault, help to fight and secure a lodgment within the airhead line, and establish and secure an initial brigade support area (BSA). These actions shaped and maintained the logistics conditions that, in turn, allowed the brigade to conduct successful defensive and offensive force-on-force operations against a strong Geronimo opposing force for an 8-day JRTC rotation.

This article will not specifically discuss the sustainment training the 82d BSB conducted in preparation for this JRTC rotation. Those preparations included a tremendous amount of planning effort at Fort Bragg, North Carolina, the brigade's home station; numerous convoy live-fire training events; and a 10-day field training exercise focused on properly establishing a BSA. Instead, our purpose is to help answer the question, Is moving, or "jumping," a BSA something any BSB commander, command sergeant major, or executive officer should be prepared to do as part of a full-spectrum operations rotation at a combat training center like JRTC?

A Full-Spectrum Operations Rotation

The specific collective-level training executed before and at JRTC for this full-spectrum operations rotation caused the 82d BSB to revisit and rehone many basic skills: basic field craft, standards for stand-to and perimeter manning, adjacent unit coordination, fratricide prevention measures, fire control measures, the emplacement and digging of crew-served fighting positions, the emplacement of triple-strand concertina wire to standard around an area occupied by 1,000 paratroopers, camouflaging tactical operations centers and vehicles to standard, CBRNE (chemical, biological, radiological, nuclear, and explosive) preparation and MOPP (mission-oriented protective posture) level-4 execution, and many others.

The attention given to this rotation was highlighted by the presence of senior commanders. The 82d Airborne Division's assistant division commander for operations attended for most of the rotation; the division's commander was the number one jumper on the lead aircraft for the airborne assault; and both the commander of the Army Forces Command (FORSCOM), General James D. Thurman, and the Chief of Staff of the Army, General George W. Casey, Jr., visited JRTC during the rotation.

In our opinion, the Army's goal in the rotation was not only to demonstrate the 3d BCT's ability to become our Nation's designated global response force in 2011—able to exercise a worldwide, no-notice, forcible-entry capability. The rotation also demonstrated the Army's ability to move away from JRTC's counterinsurgency training focus and establish a benchmark for subsequent force-on-force full-spectrum operations unit rotations.

Impact of the Forward Support Company

The logistics organization many of us knew before

the Army's transformation to modular BCTs was the forward support battalion (FSB). The current BSB, which began replacing the FSB in the Army's BCTs in 2004, features increases over the FSB's strength in the headquarters and headquarters company's support operations section and the distribution company's ammunition transfer holding point section; the BSB also has added four forward support companies (FSCs) supporting the BCT's two infantry battalions, fires battalion, and reconnaissance squadron. When the 82d FSB transitioned to become the 82d BSB, it gained 613 logistics paratroopers (an increase reflected in the change from the 2004 modified table of organization and equipment [MTOE] to the 2010 MTOE).

As the 82d BSB conducted initial convoy situational-training-exercise lanes at JRTC in early October, we were asked by several key leaders at JRTC if we planned to jump the BSA during the force-on-force part of the rotation. While we recognized the need historically, and we have personally had the opportunity to "jump the BSA" during JRTC rotations in the 1990s, our gut reaction in 2010, with the creation and successful employment of FSCs, was that we were unsure what tactical condition would present itself that would ever cause the BSA jump. Our answer to all these queries was simple: "Sir, we will make that decision and recommendation to jump the BSA to the brigade commander if the tactical situation dictates."

In hindsight, we could have been asked a better question at JRTC: "Do the Army's current sustainment MTOEs in an airborne infantry BCT allow the brigade commander to maintain logistics momentum through most operations without jumping the BSA?"

The simple truth is that the presence of the approximately 613 additional logistics paratroopers, assigned mostly to the FSCs and colocated in the BSA during our JRTC rotation, allowed defensive and offensive operations to be executed across the brigade's area of operation for the entire rotation without many shortcomings but, of course, with many challenges.

To answer our own proposed question, we think that the sustainment MTOEs are just about right and that jumping the BSA may just be a remnant of the Army of Excellence past for most tactical situations.

Successful Support

During our rotation, lines of communication were never stretched to the point that FSCs could not support their maneuver battalions during both the defensive and offensive phases of the force-on-force rotation. Most FSCs conducted multiple sustainment missions daily as either planned or emergency pushes.

The 82d BSB's distribution company was able, without too much difficulty, to secure and produce 20,000 gallons of water per day at a water point outside the BSA, establish a water distribution site in the BSA, establish and protect an ammunition transfer holding point inside the BSA, operate a bulk fuel retail point, and issue multiple classes of supply from its supply support activity. The recovery of 14 C–130s with combat offloads of 463L pallets of meals ready-to-eat (MREs) and 150 container delivery system bundles of replicated class V (ammunition) and MREs during the rotation were completely supportable operations and were executed to standard without incident.

The field maintenance company manned the initial arrival/departure airfield control group at the field landing strip for the first few days of the rotation until the Air Force's contingency response element arrived. The field maintenance company also processed both real and notional air-land requirements and provided maintenance and recovery assistance as needed across the brigade. The BSB's medical company established level II care to standard and improved medevac and evacuation processes daily.

An Alternative to Jumping the BSA

It is our belief that the Army and FORSCOM got the modular design and manning effort just about right with the formation of the FSCs, and we are huge believers in the success of those units. We believe, more than ever, that FSCs have allowed the maneuver battalion commander to be able to sustain his unit at JRTC without too much assistance from the BSB on a regular basis. If you buy this argument, then maybe you will accept the proposition that there are not many reasons to jump the BSA during most combat training center rotations as long as the FSCs maintains their combat power and the BSB itself is able to augment the FSCs as needed.

Breaking down the BSA and jumping it takes considerable effort and time. The jump is often made at the expense of going without the digital communication backbones we all rely on, such as the Command Post of the Future and the Secure Internet Protocol Router Network. It also can lead to going without the medical company's level II care during the period of the jump.

We believe that the extra 613 logistics paratroopers assigned to the FSCs mean that the brigade commander now has little, if any, logistics need to jump the BSA during any training center rotation. There simply is no tactical reason to do so while the FSCs retain their combat power and are operating from the BSA.

Consistent with Field Manual 3–21.20, The Infantry Battalion, sustainment under modularity is a "shift from the supply-based sustainment system of the Army of Excellence . . . [to a] technically enhanced, distribution-based logistics sustainment system [that] combines information capabilities with streamlined delivery systems."

Before modular transformation, and thus before the creation of FSCs, the FSB was forced to form and use

Continued from page 2

this are the value of the command post exercise–sustainment (CPX–S) to predeployment staff preparation and the need for units to reach out and train with the higher headquarters with which they will deploy. Both of these were previously identified through the R–CAAT process and reinforced by the Joint Sustainment Command–Afghanistan headquarters and by two sustainment brigade headquarters upon their return from Operation Enduring Freedom.

The U.S. Army Learning Concept for 2015 describes a model focused on continuous adaptation, stating very clearly that "Initial Military Training must have the agility to rapidly change training based on lessons learned and feedback from operational units." Only by decisively making the lessons learned collection process an inherent part of the training/deployment/redeployment cycle can we ensure that lessons learned are rapidly incorporated into the adaptive training model and that the institutional Army provides the most relevant training possible.

Scheduled for publication in the January–February 2012 issue of *Army Sustainment* is an article that will discuss the ever-expanding role of the warrant officer corps within sustainment organizations. This article is shaping up to be an outstanding example of the compounding influence of multiple R–CAATs. As we continue to reflect on the insights gained from the first 50 R–CAAT sessions and look forward to the next 50, you can expect to see more articles such as this in future issues of *Army Sustainment*.

Maintaining active involvement in the continuous learning and improvement process is a challenge we each face as we forge ahead and evolve into the Army of the future. We must seek out opportunities to provide feedback to the wider Army audience; the R–CAAT process is a proven model that can assist commanders achieve this end. Only by remaining engaged can we firmly establish the continuous adaptive learning model necessary to maintain the most effective sustainment force the Army can field.

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forward logistics elements (FLEs), which frankly were just parts of the BSA that moved to a location to allow for uninterrupted sustainment while the BSA jumped. The FLEs then collapsed back into the rest of the FSB at the new BSA location when able; the timing of that operation depended on the factors of METT–TC (mission, enemy, terrain and weather, troops and support available, time available, and civil considerations).

Our purpose in writing this article is not to imply that jumping the BSA is not a rock-solid training event or something that should be avoided by a BSB command team at a combat training center just because it is hard work. The 82d BSB jumped our BSA three times in August 2010 during a field training exercise, each time executing it more quickly and to a better standard. We were all reminded how challenging it is to jump a BSA. Battle drills, reconnaissance operations, quartering party operations, advanced echelon operations, and the marshalling of all serials in the field are all great training events, if for nothing else than to reidentify and hone the priorities of work for the defense of the BSA at its new location and to reestablish all tactical operations centers for command and control.

Lots of moving pieces must be synchronized when jumping a BSA, and we hope that anyone who has read this article has good fortune with their own full-spectrum operations rotation at any of the combat training centers. We will leave it to the reader to speculate if the 82d BSB jumped its BSA during its recent JRTC rotation. We could easily write a scenario that supported a decision to jump the BSA as well as one that did not support such a decision.

As always, the only thing that matters in the end is that the BSB and its FSCs maintain the ability to sustain the brigade during all phases of the operations so that the brigade commander's options and decisions are not limited for logistics reasons.

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CSS/HSS Rehearsals: The Initial Step to Logistics Synchronization

by Major Claude E. Walker and Major David C. Wood

The 3d Brigade Combat Team focused on achieving logistics synchronization during its combat service support/health service support rehearsal at the Joint Readiness Training Center.

As the dust settled on the first full-spectrum operations (FSO) exercise in 8 years at the Joint Readiness Training Center (JRTC) in October 2010, the paratroopers of the 3d Brigade Combat Team (BCT), 82d Airborne Division, began the process of reviewing the events, rehearsals, products, and standing operating procedures that positioned the BCT for a successful rotation.

The JRTC Rotation

During the JRTC rotation, the 3d BCT conducted a nighttime airborne assault with approximately 1,700 paratroopers. The mission was to seize an airfield, clear and repair a flight landing strip, recover heavy-drop platforms, and almost immediately receive notional and actual air-land C–130 Hercules aircraft with key equipment and necessary sustainment resupply.

Throughout the force-on-force operation, the 3d BCT defended and attacked in two separate directions and received combat offloads and containerized delivery system resupply as the primary means of resupply to the brigade support battalion (BSB). The BSB's distribution company conducted the transport, inventory, and issue of supplies primarily through supply point distribution in the brigade support area (BSA).

To allow for supply point distribution, all four forward support companies (FSCs) staged their logistics resupply operations from the BSA. This seemingly "old school" way of conducting logistics operations required an exceptional amount of synchronization across resupply operations, communications systems, and future operations planning.

Logistics Synchronization

Despite the overwhelming logistics capabilities in today's modular BCT, striving for logistics synchronization in an FSO exercise is a great challenge. Part of the challenge is the chaotic nature of a forced-entry operation, such as our airborne assault, and the operating environment of an FSO. As many Soldiers have found, sustainment missions of the current counterinsurgency (COIN) operations in Iraq and Afghanistan rarely can be categorized as mission successes or mission failures—unlike what Soldiers face in an FSO situation at a combat training center or in an austere theater of operations.

To mitigate the inherent complexity of logistics synchronization in these types of operations for both COIN and FSO, we suggest revitalizing and updating the combat service support (CSS)/health service support (HSS) rehearsal to reflect the key logistics players and proponents on today's battlefield. The modular BCT is a large, complex organization that can fight and be supported in depth. In the same way that the combined arms rehearsal (CAR) attempts to synchronize the ground tactical plan, the CSS/HSS rehearsal must be briefed by all of the key personnel involved in order to synchronize logistics and medical operations across the battlefield.

All leaders, from team leaders to division commanders, emphasize the need to begin any phase of an operation with a rehearsal. We have rock drills, we have back briefings, we have full dress rehearsals, and we have terrain models that fill an entire hangar. What does it take, though, to conduct an efficient and productive CSS/HSS rehearsal? Does this rehearsal radically change for the type of operation a unit will conduct? Does it change for COIN operations versus an FSO? Our approach to the CSS/HSS rehearsal was to craft a blend of old and new into a product that is easily modified for any operation.

The Old Model

In the old days of FSO CSS rehearsals, the BCT S–4 and the support operations officer (SPO) would play huge roles in the execution of the rehearsal, much like they do today. In fact, much of the rehearsal would be dominated by their speaking roles. This technique synchronized the logistics plan from the top down, which could be beneficial, especially in a time-constrained environment or a brigade-level effort.

However, this method did not work well to decentralize logistics operations to best support the maneuver battalion task forces. It centered on the support battalion rather than the efforts of the field trains and combat trains. Another weakness was the way it focused first on CSS operations and then HSS operations, rather than synchronizing the efforts of both sustainment functions.

During the early years of Operations Enduring Freedom and Iraqi Freedom, the Army began the process of transforming itself to modular BCTs. The modular BCT decentralized logistics operations and placed the logistics focus on FSCs. This change, though, has not been reflected in the synchronization between logistics and medical operations unless necessity absolutely dictates crosstalk among those operators.

The other area that has not evolved to support this new means of conducting operations is the rehearsal format. Gone are the days where the BCT S–4 and SPO spoke ad nauseam. Today, the battalion S–4, FSC commander, and medical operations officer (physician's assistant or medical platoon leader), should play important roles in rehearsals.

A Proposed Method

In today's logistics world, we have to focus the rehearsal on the logistics focal point in the BCT's area of operations: the battalion task force. For the JRTC exercise, we constructed a model based on a number of CSS rehearsal agendas and focused on the battalion task force concept of support. We looked for a one-size-fits-all model but found that many CSS rehearsals did not include or were not specific enough to the modularized BCT.

Another problem with the models we looked at was the lack of a dedicated moment for synchronizing the CSS operations with HSS operations. We knew our model would be used across multiple types of operations, so we began to identify the required components for our specific CSS/HSS rehearsal model. We created a model that places the emphasis of the briefing on the company commanders, BSB commander, the BCT S–1 and S–4, and key logistics enablers, such as the medical officer, the BSB S–3, BCT S–6, BCT S–2, and a representative from the BCT S–3.

We wanted to replicate the successful traits of the CAR. From the outset, the BCT S–4 and the BSB SPO understood that we had to work together to craft, coordinate, and synchronize the CSS/HSS rehearsal. We also understood that we needed to involve the BCT surgeon and the medical planners and executors to maximize logistics synchronization across the battlefield.

As we began to design our rehearsal, we understood that we had some constraints on how we conducted the rehearsal. One constraint was a limited amount of time to conduct the rehearsal. Another was that the CSS/HSS rehearsal usually occurred directly after the CAR. After the CAR, fatigue would begin to set in, causing the quality of the rehearsal to suffer.

During our JRTC rotation, we conducted two CSS/HSS rehearsals that averaged 2½ to 3 hours. The first rehearsal was conducted before the CAR and the airborne assault. We conducted the second rehearsal as we began the transition from defensive to offensive operations. The first rehearsal incorporated our new model, and despite the unfamiliarity with the new model, the participants and, most importantly, the BCT commander and his senior leaders felt a surge of confidence at how well the concept of support seemed to be nested with the ground tactical plan.

Conducted after the CAR, our second rehearsal faced multiple challenges. The first challenge was being notified before the CAR that the BSA would need to move to shorten the lines of communication (LOC) while the BCT transitioned into offensive operations. One benefit of our rehearsal model was that, despite the chaos of support being interrupted from the BSA, the rehearsal focused primarily on the concepts of support to the maneuver units.

One challenge was primarily caused by environmental conditions. The terrain model was outside, and wind degraded the terrain model a great deal. The model was also used for the CAR, which caused some degradation as well.

Another consideration was that we had a group of presenters and an audience that may have had a solid understanding of their maneuver battalions' ground tactical plans and concepts of support but not of the entire logistics picture. We knew that with the spatial distance between units, the austerity of the operating environment, and the intermittent problems in communications, the CSS/HSS rehearsal had to be something more than a briefing on the current logistics disposition. It needed to be synchronized as much as a combat operation is synchronized.

Presenting the CSS/HSS Rehearsal

Our final consideration was our dearth of experience in conducting and presenting during a CSS/HSS rehearsal. We had conducted one CSS/HSS rehearsal with all of the current logistics commanders and staff before the JRTC rotation. This first rehearsal was a lesson in abject failure. The BCT S–4 and the BSB SPO did not take advantage of having all of the BCT's key logistics planners and executors together. They should have synchronized efforts and focused the rehearsal on the requirements and actions of logistics and medical operations. We also found that many of our company commanders and staff officers did not have experience with speaking during rehearsals, especially rehearsals that focus on their own responsibilities in the BCT.

The desire to place the logistics executors at the forefront shaped the final product. Our proposed rehearsal

3d BCT CSS/HSS Rehearsal Agenda

1. Sound attention—Brigade combat team (BCT) support operations officer (SPO)
2. Roll call—BCT S–4
3. Opening remarks—Brigade support battalion (BSB) commander or BCT executive officer
4. Scope and terrain model orientation—BCT S–4
5. Enemy situation—BCT S–2 or representative
6. BCT operations overview—BCT S–3 or representative
7. Phase introduction—BCT S–4
8. Signal plan—BCT S–6
9. Current BSB disposition—SPO
10. Key logistics nodes—Unit officer-in-charge (brief by exception: marshalling areas, forward logistics elements, drop zone operations, etc.)
11. Current disposition—Battalion S–4s
12. Battalion signal plan—Battalion S–6s (brief by exception)
13. Medical—Task force and battalion physician's assistants and BSB and C company commanders and platoon leaders
14. Sustain, arm, fuel, move—Forward support company (FSC) commanders, brigade special troops battalion (BSTB) representative, and BSB and A company commanders
15. Fix—FSCs, BSTB representative, BSB and B company commanders
16. Man—Task force and battalion S–1s
17. Brigade support area operations—BSB S–3
18. Completion of rehearsal—SPO/S–4 recorder
19. Closing remarks—BSB commander, BCT executive officer, BCT command sergeant major, BCT commander

agenda attempts to balance those constraints. (See sidebar above.) We found great success in placing the logistics company commanders and staff officers in the primary speaking roles during the rehearsal. After the initial rough transitions between speakers, we found that battalions briefing by phase instead of by function actually did more to synchronize our efforts.

We found areas that we can refine and improve as we continue to train using this model. Here are some suggestions to consider as your own unit plans its CSS/HSS rehearsal:

- The briefer needs to be comfortable with the terrain model. The briefer should either move across the terrain model as Soldiers will during that phase of the operation or use assistants to move the appropriate icons.
- The battalion executive officers are the key to success for the CSS/HSS rehearsal. We found that executive officers do a remarkable job working with their S–4s and FSC commanders, but they need to work on incorporating their S–1s and medical operations officers or physician's assistants into their concept of support.
- Presenters should be calm, confident, clear, accurate, knowledgeable, and efficient. They should also be willing to address any gaps or misunderstandings in the overall concept of support during the rehearsal.
- Special attention needs to be given to the reconnaissance, surveillance, and target acquisition (RSTA) squadron's resupply and medical evacuation concepts of support. Specifically, focus is needed on how best to synchronize their sustainment efforts with those of the units behind the RSTA squadron on the battlefield.
- Injects are vital to showing friction points in the concept of support. The BCT S–4 and BSB SPO should identify 4 to 6 injects before the rehearsal and work with the BCT executive officer and BSB commander to identify who will inject and who will receive the inject. Those units receiving injects should have prior notification in order for their response to be knowledge-building instead of a response to a "gotcha" moment.

Revitalizing the CSS/HSS rehearsal was crucial for our success at JRTC. The rehearsal is a key component in mission preparation as we assume the global readiness force mission. From the CSS/HSS rehearsal comes better synchronization and actionable products, such as the CSS/HSS synchronization matrix and fragmentary orders. The 3d BCT's method of conducting this invaluable rehearsal gave the BCT commander the confidence that his ground tactical plan was supportable and that his logisticians would minimize any and all logistics friction points.

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Human Resources Operations Branch: Doctrine Versus Reality

by Major David L. Godfrey, Jr., and Warrant Officer 1 LaMika D. Brown

While deployed to Iraq, the 1st Sustainment Brigade's human resources operations branch served several important functions.

According to Field Manual (FM) 1–0, Human Resources Support, the human resources operations branch (HROB) is a subordinate branch of a sustainment brigade or expeditionary sustainment command support operations office and "is responsible for the planning, coordinating, integrating, and synchronizing [of] PA [personnel accountability], casualty, and postal operations missions."

In April 2010, the 1st Sustainment Brigade deployed from Fort Riley, Kansas, to Kuwait in support of Operation Iraqi Freedom 10–12 and Operation New Dawn. Given the mission of the brigade, the HROB participated only in the doctrinal postal operations mission; however, the branch placed a great deal of emphasis on force management, contracting, and public affairs command information, three areas that are inadequately covered in current human resources (HR) doctrine.

Force Management Challenges

FM 1–0 contains very little guidance on deployed force management, referring only to the HROB's role in theater opening and redeployment. However, before the 1st Sustainment Brigade deployed, the HROB officer-in-charge designated HROB personnel to receive formal training on force management. This paid dividends as the branch provided force-flow information to the brigade staff and tracked HR unit rotation schedules to ensure that gaps did not exist. The HROB staff quickly identified requirements and capabilities shortfalls as well as potential solutions to prevent mission degradation.

The HROB used several methods and systems to track and manage force flow, including the following.

Global Force Management Allocation Plan (GFMAP). GFMAP is a document maintained on a classified document-sharing site that displays Secretary of Defense-approved allocations and deployments of forces in support of the combatant commander's rotational force requirements.

Mobilization and Deployment Information System (MDIS). MDIS is an Army-wide, classified tracking application that allows leaders at any echelon to monitor unit rotations.

Force Requirements Enhanced Database (FRED). FRED is a classified database maintained by the U.S. Central Command (CENTCOM) that contains information about its force rotations and allocations.

Joint Operations Planning and Execution System (JOPES). JOPES is a classified system designed to satisfy the information needs of combatant commanders and their staffs in the conduct of joint planning and operations. JOPES is used to monitor, plan, and execute mobilization, deployment, employment, sustainment, and redeployment activities associated with joint operations.

Force management crosswalk. The force management crosswalk is a classified spreadsheet maintained by force managers at all echelons to monitor unit rotations 2 years out. The 1st Sustainment Brigade HROB maintained the HR unit crosswalk for forces based in Kuwait and Qatar.

The HROB encountered some challenges with HR force management. For example, the branch did not have a clear picture of the locations of personnel accountability teams. There were two reasons for this. First, the Kuwait-based sustainment brigade turned over mission command of the theater gateway mission in December 2009 to a regional support group (RSG), a Reserve element that served as the headquarters of the 1st Theater Sustainment Command's task force deployment and redeployment operations.

Second, personnel accountability teams did not maintain unit integrity. Personnel arrived at the theater gateway without the required secret security clearances, causing the RSG commander and theater gateway director to reassign them to locations other than those specified by the force tracking numbers. Although the 1st Sustainment Brigade maintained responsibility for the force management crosswalk, the RSG did not always notify the HROB when these movements occurred.

The HROB also had problems receiving actual arrival date (AAD) memorandums for Active component units in a timely manner. Force managers use the AAD memorandum to compute an Active component unit's boots-on-ground date to start the 1-year deployment clock. This process requires oversight to ensure that the systems indicate correct dates for current and future rotations. As outlined in CENTCOM's force rotation business rules, the unit commander has up to 90 days to complete the

AAD memorandum; otherwise, the GFMAP AAD determines a unit's boots-on-ground date.

Postal Contract Oversight

Although doctrine is clear that the HROB provides technical guidance to the military units that provide postal contractor oversight, the 1st Sustainment Brigade HROB discovered that there are different interpretations of that responsibility.

The brigade's special troops battalion (STB) maintained mission command of the Kuwait postal mission. The postal platoon and postal plans and operations personnel located at Camp Arifjan and assigned to the STB served as technical inspectors and assistant contracting officer's representatives (ACORs) for the Army post offices in Kuwait and Qatar and the joint military mail terminal (JMMT) in Kuwait.

FM 1–0 states the following:

> The success of contracting postal operations when shifting from a "military operated and military supervised" postal operation to a "contractor operated" postal operation is ensuring the government maintains oversight of the service. The military accomplishes this by ensuring trained and experienced postal personnel serve as the primary and alternate Contracting Officer Representatives.

HROB staff conducted troop-to-task analysis to determine the minimum number of personnel required for mission success. The HROB's postal inspection team also conducted numerous staff inspections and staff assistance visits to promote this oversight initiative. However, the HROB did not always receive buy-in or agreement from various organizations about the definition of "oversight" and experienced some challenges in communicating mission requirements.

For example, the 1st Sustainment Brigade's STB commander determined that he required at least two ACORs at each Army post office to ensure mission success (and the HROB concurred), while CENTCOM, U.S. Army Central, and the human resources sustainment center determined that one ACOR was sufficient. The HROB also experienced a challenge with a military mail terminal team director who did not agree with doctrine that the 1st Sustainment Brigade commander should maintain mission command of the JMMT–Kuwait mission.

Through proper oversight, the HROB discovered shortfalls in contract language, specifically in the postal operations section of the Combat Services Support Contract–Kuwait. For example, the contractor had shifted personnel to other locations without completing the necessary training and paperwork. HROB staff immediately ensured that the follow-on contract, Kuwait Base Operations and Security Support Services, contained language that directed the contractor to notify the contracting officer's representative of all pending moves and to complete all necessary training and paperwork before relocations.

Strategic Communication

FM 1–0 does not address the benefits of providing HR products to a public affairs office command information program. But doing so turned out to be a tool for the command information program. The HROB learned early in the deployment that the branch must educate people on what it brings to the fight.

The HROB let Soldiers know about available HR support through a variety of means, such as flyers, articles, public service announcements, standing operating procedures, social networks, and websites. Postal operations became the HR centerpiece in the brigade's strategic communications program. The branch highlighted the absentee ballot program, non-mailable items, and Eagle-Cash usage at the Army post offices.

The HROB took the initiative to create two comprehensive standing operating procedures (postal staff inspections and HROB operations) to share with the field and posted them on S1NET, the Army's HR professional forum. The HROB also spearheaded phase 2 of the Support Operations Course and the Transportation Corps Museum donation project; those initiatives reveal the benefits of Adjutant General's Corps participation in strategic communication.

The Army has undergone a major transformation, and because of it, HROBs are here to stay. HROBs should continue to provide lessons learned to the field and embrace sustainment challenges. HROBs that maintain successful information programs function as force multipliers that promote internal and external networking while educating the field on current HR initiatives. Writers of HR doctrine should incorporate force management, contracting, and public affairs command information into future doctrine.

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Explosives Safety Briefings

BY CAPTAIN CHAD R. HUGGINS

Safety briefings about handling explosives should focus on how explosives react to heat, shock, and friction.

A Soldier takes on the risks of his chosen profession. A few risks are influenced by outside forces, such as enemy combatants and Mother Nature. But many risks directly correlate with how we use the tools of our trade. A risk that is a nightmare for every leader in the Army is explosives. All Soldiers use some form of explosives, from small arms to bulk demolition materials, throughout their careers.

As an organization focusing heavily on force protection, the Army uses many classes (both the hands-on and the dreaded Microsoft PowerPoint versions) to convey the safety precautions necessary for a mission to be successful for all involved. Likewise, to mitigate the risk of an explosive hazard, the Army provides self-taught classes on line, safety bulletins, and PowerPoint slides.

Some PowerPoint presentations on this topic have over 220 slides. No matter how important the topic is, you will lose your audience and not achieve the desired training effect with that number of slides. Explosives safety briefs can be narrowed down to three topics: heat, shock, and friction. What explosives are and how explosives react to those three forces are the critical components of a proper explosives safety briefing.

Explosives Safety Basics

An explosive is a substance or mixture of substances that may be made to undergo a rapid chemical change, without an outside supply of oxygen, with the liberation of large quantities of energy generally accompanied by the evolution of hot gases. Explosives are broken into two categories, low explosives and high explosives. Low explosives burn or deflagrate instead of detonating.

Armaments system repair crews from D Company, 1st Attack Reconnaissance Battalion, 1st Aviation Regiment, inspect and load 30-millimeter ammunition onto an AH–64D Apache Longbow helicopter.
(Photo by MAJ Enrique Vasquez)

Examples of low explosives are black powder and propellants. High explosives are substances that detonate. Composition C–4 and TNT are examples of high explosives.

We know that for an explosive device to function, it must be introduced to heat, shock, or friction. Heat is external or added energy that causes a rise in temperature. Shock is a sudden and violent blow or impact. And friction is a force that appears whenever two things rub against each other.

These forces can act independently or in any combination to start the reaction that causes an explosion. For an example of how this works, consider the 5.56-millimeter round in the M4 carbine. The round comprises a primer and gunpowder enclosed in a brass casing. When the trigger is pulled, the rifle's firing pin strikes the primer, igniting the gunpowder and forcing the bullet out of the rifle. This is an example of shock in action.

As an example of a high explosive, the firing train of a block of Composition C–4 happens this way: An M81 fuse igniter sends the initiating shock down a tube, which sparks the primary high explosives in a blasting cap, which generates the needed heat and shock, which causes the C–4 to explode.

Examples of Explosives Mishandling

Understanding the nature of explosives leads to a better understanding of safety in the workplace. A case in point is the handling of 25-millimeter rounds. A series of accidents with these rounds that occurred from 2003 to 2007 had a common theme: improper handling of explosives.

In 2003, an unknown number of 25-millimeter training rounds blew up in the compartment of an M2 Bradley fighting vehicle. The rounds had already been removed from their shipping containers and were susceptible to the forces of heat, shock, and friction. Added shocks caused by mishandling and rough terrain led to the functioning of the rounds, causing several injuries to the Soldiers in the Bradley.

In August 2007 in Iraq, mishandled 25-millimeter rounds caused a fatal injury to a Soldier. The munitions were being offloaded from one vehicle to another when the primer of one of the rounds was struck during movement. The resulting detonation of the round sent fragments into a Soldier's chest, fatally injuring him.

A memorandum was issued in May 2010 to deter Soldiers from using ammunition as a hammer. A Soldier, obviously not thinking, had grabbed a .50-caliber cartridge and started to pound on the locking pin of his gun mount in order to secure it. The primer on the round, being introduced to shock, set off the explosive firing train and fragmented in the Soldier's hand.

In these incidents, small-arms munitions in three different parts of the world caused serious injuries and death to Soldiers. The incidents were caused by shock, the unneeded force created by mishandling munitions.

An ammunition specialist of the 60th Ordnance Company, 260th Combat Sustainment Support Battalion, 15th Sustainment Brigade, 13th Sustainment Command (Expeditionary), operates a forklift of ammunition while another ammunition specialist guides the forklift to a pallet during ammunition loading operations. All materials-handling equipment requires a ground guide, especially when handling ammunition. *(Photo by SSG Daniel Meeker)*

There have also been reports of heat causing explosives to ignite. During Operation Iraqi Freedom 09–10, a memorandum was published about grenade handling and placement. The memorandum reported that multiple smoke grenades were placed near a vehicle's engine control module device and were introduced to an extra heat source. The added heat was a contributing factor to the functioning of the grenades inside the vehicle. No Soldiers were injured in this incident. This incident was a toll-free lesson about the heat factor in the functioning of munitions.

Explosives are dangerous, but sometimes we go too far while trying to convey the safety message to Soldiers. Building the safety briefing around the key factors of heat, shock, and friction, which cause explosive reactions, will ensure a solid explosives safety program. Leading by example and supervising to ensure that no unneeded heat, shock, or friction is applied to munitions will lead to a successful mission and bring Soldiers home alive and well.

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Mission Command of HR and FM Companies in Afghanistan

BY CAPTAIN ELIZABETH N. STRICKLAND

When the Army added human resources (HR) and financial management (FM) companies to sustainment brigades during its conversion from traditional area support groups, many secondary effects were anticipated. These included benefits such as better service to all Soldiers, more self-sustaining capabilities among brigades, and better support to units located in remote locations. But other effects were not fully anticipated and have caused leaders within sustainment brigades to be more adaptive than ever.

When it deployed to Afghanistan, the 43d Special Troops Battalion, 43d Sustainment Brigade, became the headquarters of a recently deployed Active Army FM company (FMCo), the 126th FMCo, and a Reserve component human resources company (HRCo), the 912th HRCo. The two units provided unique mission command challenges for the companies' leaders as well as for the command team of the 43d Special Troops Battalion.

FMCo and HRCo Deployment

Although the 126th FMCo and the 912th HRCo were based out of Kandahar Airfield, each company always had several teams of Soldiers on various missions throughout Regional Commands South, Southwest, and West. The companies also permanently manned 11 other locations with FM detachments, permanent FM support teams, satellite Army post offices, or a combination of FM and HR offices. These companies were responsible for supporting Regional Commands South and West with HR and FM functions that included postal operations, military identification cards, casualty tracking, personnel accountability, EagleCash cards, casual pay, military pay, and funding pay agents.

Unit Support Problems

When the HR companies were added to the sustainment brigade, their modified tables of organization and equipment did not change to reflect the new mission set. The 912th HRCo experienced the results in Afghanistan.

The company deployed without the integrated retail terminals needed to manage satellite Army post offices (APOs). Integrated retail terminals are necessary to provide money orders, stamp sales, and package postage. Without the integrated retail terminals, the APOs used Pitney Bowes machines, which were considered a secondary means of postal finance support and could not service oversized packages.

The company also needed 4,000-pound forklifts to move and download triwalls and 5-ton medium tactical vehicles to transport mail to and from the flight line. This became increasingly important at forward operating bases (FOBs) where the flight line and the APO were not located in close proximity to one another. This problem was largely solved by the company command team establishing a strong working relationship with the units at each location.

The 912th HRCo executive officer noted that the problem with using other units' equipment for unit support was that the unit's mission had priority over the mail. If the unit needed its forklift or truck, postal personnel had to wait until the unit finished with the equipment before they could use it. However, overall, the units were very supportive of the 912th HRCo's mission.

The distance between the HRCo's headquarters and the HR Soldiers on missions posed obvious mission command constraints. HR Soldiers were always on the move throughout the theater, but the HR company had no organic convoy capability. As a result, HR Soldiers traveled in the supported units' convoys and required support from the supported units in the form of office space, communications, and billeting during stays at FOBs. Leaders learned early that overcoming this challenge required working well with terrain owners and other supporting units, coordinating with over 10 different agencies for transportation, and maintaining constant communication with the supported units. By working closely with FOB mayors, FMCo commanders improved resourcing capabilities at all of their locations. This was a lesson in adaptability.

Battlefield Circulation by Leaders

Both company commanders also realized quickly that frequent visits to their Soldiers throughout the area of operations were essential to maintaining good mission command. The HR and FM companies were not equipped to be split among 12 different locations, so communications equipment was at a premium and find-

ing the right junior leaders to be out on their own was essential. The leaders' battlefield circulation ensured that their Soldiers were continually producing quality work and facilitated a good working relationship with terrain owners, which was critical to obtaining the support necessary for mission success.

The commander of the 43d Special Troops Battalion also recognized the need to ensure that his leaders could move throughout the theater. Within days of arriving in country, he and his staff had completely revised the battalion battle rhythm.

"I made the conscious decision to err on the side of having too few meetings and of having all meetings that required commander participation on one day of the week," said Lieutenant Colonel Simonsgaard about the restructuring of the battalion battle rhythm. "This gave the 126th and 912th commanders the freedom to be off of the FOB and conducting continuous battlefield circulation."

The HRCo and FMCo commanders ran with this freedom, ensuring that they visited Soldiers regularly and participated in various missions. This ensured that the Soldiers were taken care of and were producing quality work, and it raised the morale of Soldiers in distant, austere locations.

HRCo Operations

The 912th HRCo operated nine satellite post offices at FOBs and supported very small combat outposts surrounding each FOB with mobile mail missions. These two-man postal teams received, sorted, and processed thousands of pounds of mail each month. The Kandahar APO was the only full-service post office located in Regional Commands South and West and was the second largest mail hub in the country.

In addition to the daily missions of mail handling and delivery, the HRCo also conducted several identification card issuing missions throughout the region. Each month, the company sent out teams to update and issue identification cards for members of all branches of the U.S. military and Department of Defense civilian employees. Conducting these missions taxed the company leaders, who had to determine if planned locations were technologically capable of supporting the mission before they could send out a team. The leaders began informally surveying sites for common access card production capabilities when on location during battlefield circulation.

FMCo Operations

The 126th FMCo commander was faced with similar challenges. She was responsible for three FM detachments, which were responsible for all finance support within Regional Commands South and West. The company maintained operations continuously at eight FOBs and had regular missions throughout other locations in the area of operations. Its services included disbursing; pay support to all military members, civilians, and contractors in the theater of operations; and contract payment support to multinational vendors.

The 126th FMCo also provided EagleCash card services for secure transactions with the Army and Air Force Exchange Service, post offices, and vendors on U.S. and coalition bases. When not conducting these tasks, the 126th's Soldiers also validated and verified servicemembers' entitlements, resolved pay issues as needed, and administered special programs such as the Savings Deposit Program.

As FM support teams, they provided direct financial services to Soldiers in various remote locations and supported paying agents. Small teams moving throughout the battlespace had presented challenges. However, the FMCo commander expressed the belief that the circumstances also strengthened leaders, stating that the geographic dispersal gave the FMCo commander greater leadership opportunities and forced units to become more self-sufficient and creative in problem solving.

The sustainment brigade is a relatively new concept to the Army. In many ways, it is similar to the former area support groups. The sustainment brigade provides mission command to combat sustainment support battalions and to special troops battalions. To outsiders, the evolution is only a name change. To those who know best, the sustainment brigade is very different from previous support groups. The new structure allows for better support in performing the traditional roles of the area support group, such as fuel, common ammunition, medical supplies, and wheeled-vehicle repair parts.

The sustainment brigade provides new services, neatly packaged in each brigade's special troops battalion. The new features—financial management and human resources support—are as essential to daily operations as they are to morale. The companies that provide these services are successful because of their ability to execute decentralized operations, communicate and coordinate with battlespace owners, and serve the Soldier with a "yes, we can do that" mentality. The transformation did not simply occur; it came with the daunting task of adapting to new challenges in an ever-changing environment.

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Managing Construction Projects in a Sustainment Brigade

by Captain Derek E. Enslow

Sustainment units generally are not familiar with the lengthy and complicated process needed to obtain approval for a construction project in a theater like Afghanistan. While serving with the 43d Sustainment Brigade, the author developed a 20-step process to keep the paperwork flowing and projects on track.

The use of the joint facilities utilization board (JFUB) is a complex process that incorporates checks and balances designed to ensure that a unit's operational needs are met and fraud, waste, and abuse are prevented. The JFUB begins when a unit drafts a letter of justification that details the case for its request for a construction project and ends, ideally, when that unit receives a product that enhances its ability to conduct its mission. However, what most non-engineering units do not understand is the amount of time that this process takes.

The length of the JFUB process can be compounded in a country like Afghanistan, where demining of the building site may be necessary before construction can begin. One can therefore understand why it can take most of a deployment before a construction project can break ground. This long lead time validates the importance of a redeploying unit understanding an incoming replacement unit's operational needs so that minimal modifications have to be made by the incoming unit when it assumes authority and begins to use the new facility.

Having worked in the facilities realm as a staff engineer for what was then the 13th Corps Support Command at Fort Hood, Texas, and then for the 4th Infantry Division at Fort Carson, Colorado, I understand the process of working with an installation department of public works within the continental United States. This process is simple: You submit a service order to repair existing facilities, or you submit a work order, which is like a letter of justification, proposing that a new facility be constructed.

However, what seems like a simple process at home somehow becomes convoluted when you are deployed, and even more so when you work in the combined and joint arena.

Deployment Construction and Demining

My second deployment was to Baghdad, Iraq, with the 62d Engineer Combat Battalion (Heavy), then a legacy horizontal and vertical construction battalion, from December 2005 to December 2006. While deployed, I was the executive officer for C Company, whose mission was to build 1 brigade, 2 battalion, and 16 company tactical operation centers and 10-bay Southwest Asia huts to house personnel at Forward Operating Base Kalsu. During this mission, I learned the intricacies of construction from the ground up.

My third deployment was to the Mine Action Center at Bagram, Afghanistan, from August 2007 to August 2008. As both the operations and executive officer, I managed the demining operations of a U.S. contract for mine clearance within military compounds as well as local national efforts for demining outside the compounds within all of Regional Command East. After this experience, I can now apply my knowledge of both the construction and demining aspects of getting a facility completed.

At the Mine Action Center, I had an additional role besides managing demining operations: I was a signatory to a checklist in Bagram that had to be signed before a unit could even propose its construction needs before the JFUB. What I was unaware of was the need to scrutinize the intricacies of letters of justification. I became familiar with those intricacies while serving as the 43d Sustainment Brigade engineer at Kandahar Airfield (KAF) in Afghanistan.

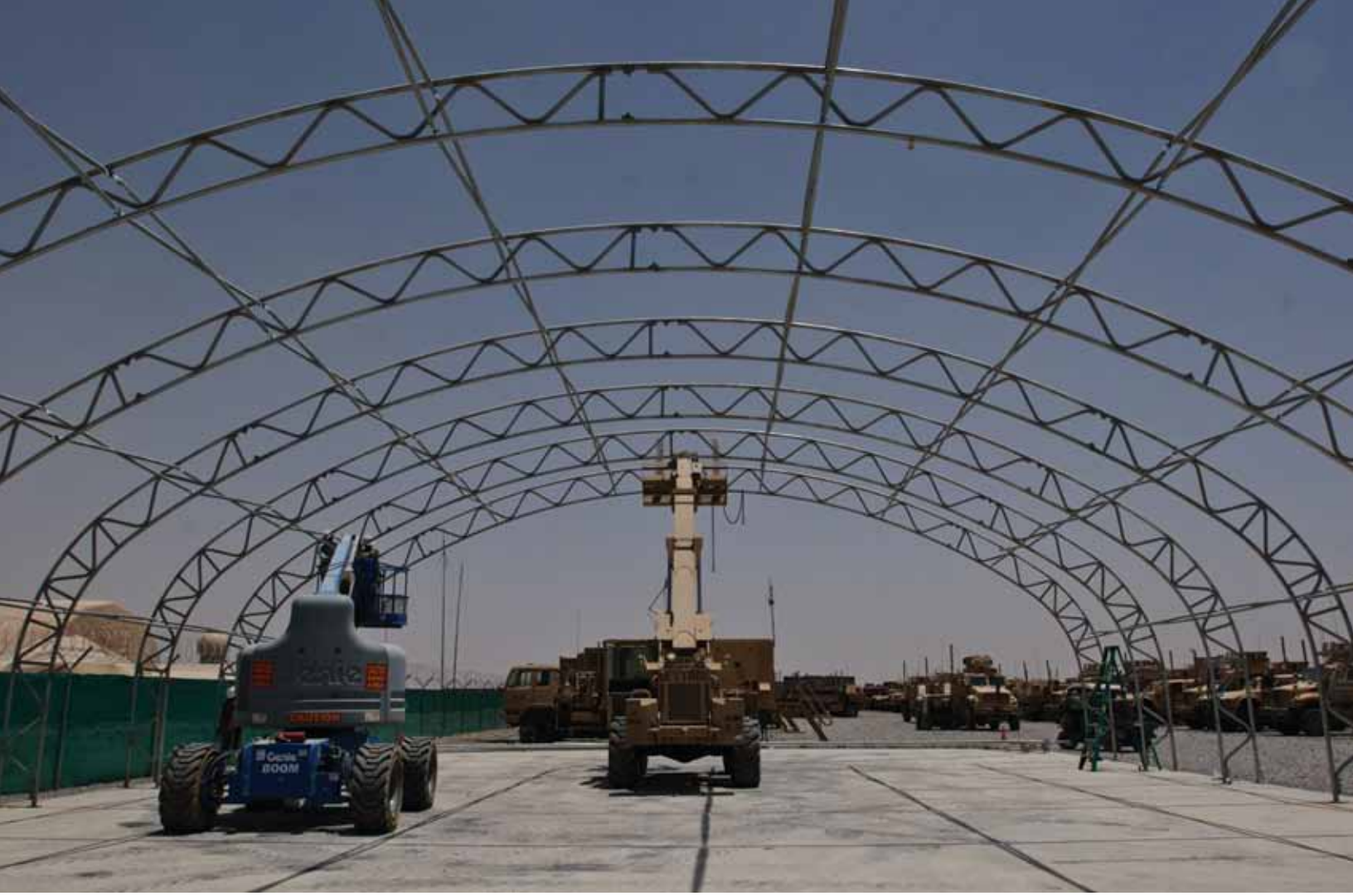
Joint Facilities Utilization Board (JFUB)

According to Joint Publication 3–34, Joint Engineer Operations, a joint facilities utilization board is "a joint board that evaluates and reconciles component requests for real estate, use of existing facilities, inter-Service support, and construction to ensure compliance with Joint Civil-Military Engineering Board priorities."

An Engineer Working With Logisticians

The mission of the 43d Sustainment Brigade from March 2010 to March 2011 was to provide sustain-

Seabees from Naval Mobile Construction Battalion 18,a Naval Reserve unit from Joint Base Lewis-McChord, Washington, lay wooden flooring for the 43d Sustainment Brigade expeditionary tactical operations center at Kandahar, Afghanistan.



A large area maintenance shelter–vehicle is built for the 43d Special Troops Battalion motor pool in Kandahar, Afghanistan.

ment support to all U.S. Forces in Regional Commands South and West and to coalition forces within the scope of national agreements. In doing so, the brigade provided senior commands in Afghanistan with maximum flexibility to ensure successful operations throughout the Combined Joint Operations Area–Afghanistan in accordance with the commander of the International Security Force's campaign plan.

My mission as the brigade engineer was to provide route analysis of main supply routes and alternate supply routes, including the bridges, culverts, and roads associated with them, in order to maintain battlefield awareness and maneuverability of sustainment support. I also had to ensure that the brigade and its subordinate units had facilities to meet their operational needs so they could maximize their efficiency and effectiveness in support of their mission.

When a non-engineering logistics unit submitted its letter of justification to me, I relied on my operational experience to convey to other engineers the logistics terms and operations that I had learned and ensured that the justification was thoroughly and clearly explained. In essence, I became a translator, able to describe logistics functions not commonly known by all engineers and identify such acronyms as VHA (vehicle holding area), KTY (Kandahar transshipment yard), CRSP (central receiving and shipping point) yard, SSA (supply support activity), and MHE (materials-handling equipment). If these acronyms and functions had been misinterpreted by the engineers designing the project, the logisticians could have received a poorly functioning facility.

So I became a scrutinizer of integral details to ensure that each letter of justification was properly written to meet the needs of all units involved. Because available engineer resources were constrained by the need to support uplift operations, actually getting the letter of justification to the JFUB proved to be challenging.

A Tracking Process for Letters of Justification

To mitigate confusion, I created a 20-step flowchart to simplify the process for tracking letters of justification within the two regional commands. This process began when a commander, a unit, or a unit staff re-

A Southwest Asia hut is constructed by contractors to serve as a brigade headquarters in Regional Command South.

quested construction support. The 20 steps proceeded as follows:

Step 1. Schedule a working group to assist in determining valid requirements.

Step 2. Write a letter of justification.

Step 3. Staff and identify any additional requirements.

Step 4. Correct the letter of justification for the brigade commander's approval and signature.

These first four steps were internal to the brigade and were the basic process that any unit would have in place for commander's signature submissions.

Step 5. Submit the letter of justification to the naval construction regiment. The location of the project determined which command (Regional Command West or Regional Command South) would provide an engineering operational needs statement (EONS).

However, if the project was to construct a facility at KAF, additional steps had to be completed before the submission could take place. The project first had to be presented to a council of colonels at the U.S. Base Camp Planning Board (BCPB). This board was held each Thursday at KAF. Once approved (and it could take multiple attempts to get approval from the BCPB), the project was presented to the COMKAF [Commander of KAF] Planning Board. This board was held each Wednesday at KAF. Following approval from both planning boards, the project received its EONS from U.S. Forces–Afghanistan (South).

Step 6. Post the EONS on a Microsoft Share-Point portal.

Step 7. Distribute the EONS to other agencies to coordinate and plan.

Step 8. The naval construction regiment conducted an internal board to determine the source of the labor for the construction: troop labor, contract labor obtained by the regional contracting command, or the Logistics Civil Augmentation Program (LOGCAP). This meeting was held every Friday.

Step 9. The Prime BEEF [Base Engineer Emergency Force] Squadron, a group of Air Force engineers who provided quality designs and blueprint drafts, assisted in conducting an initial site survey.

Step 10. The Prime BEEF Squadron conducted an initial design and reviewed the project with the customer to ensure that all of the requirements were captured within the design.

Step 11. Once the design was completed, the Prime BEEF Squadron created the JFUB packet to determine the cost of the project. The packet included the letter of justification, the EONS, the design, and the build-of-materials document created from the design. If the cost was over the $750,000 threshold, the customer had two options: either descope (reduce the size of) the project, or turn it into a military construction project. The latter required Congressional approval and about a 3-year wait before actual construction could begin. Naturally, units usually sacrificed building the ideal project to save time.

Step 12. Submit the JFUB packet to the appropriate regional command headquarters.

Step 13. The regional command headquarters conducted a legal and financial review of the packet for approval.

Step 14. Once approved, the packet was prioritized to go to the actual JFUB. Each regional command could submit 10 projects to the board each Saturday.

Step 15. The JFUB meeting was chaired by U.S. Forces–Afghanistan in Kabul. Decisions about projects were made there.

Step 16. The JFUB decision was posted on a Share-Point portal.

Step 17. A solicitation for a contractor was issued if the naval construction regiment determined that the project would be conducted through the regional contracting command or LOGCAP.

Step 18. The contract was awarded, and a notice to proceed was provided.

Step 19. Construction began.

Step 20. Ninety days before the estimated completion date of the project, coordinate with the customer, the fi-

A local-national truck dumps gravel in Afghanistan. Local national contracts awarded by the regional contracting command were one source of labor for construction projects.

nancial manager, and the brigade S–4 to begin the joint acquisition review board process to furnish the facility.

The completion of demining, the availability of troop labor, or the need to use the regional contracting command or LOGCAP determined the amount of time it would take to begin construction. Based on the time of each step, this process could take a minimum of 3 to 9 months. And that is not accounting for the end of the fiscal year, when all projects came to a stop until the budget is approved. The end of the fiscal year could add another 4 to 5 months of delay. The timeframe for projects can be hard for non-engineers to conceptualize.

Establishing this complex engineering process in a forward sustainment brigade and synchronizing it with the Navy and Air Force engineering units in Afghanistan was based on the principle of building working relationships to facilitate support in accomplishing the overarching mission of the 43d Sustainment Brigade.

Construction support is simply a process of coordination among multiple agencies. It is a lesson in problem solving: identify the problem; gather information; develop criteria; generate, analyze, and compare possible solutions; and make and implement the decision. As I served as the brigade engineer, I found that the JFUB process is about educating others to manage expectations and becoming educated about the unit's operations and the JFUB process. Essentially, it is basic engineering.

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Postal Operations in the Human Resources Operations Branch

by First Lieutenant Troy A. Danek,
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and Sergeant First Class Eric A. Nitzel

The 43d Sustainment Brigade's human resources operations branch projected postal support requirements and ensured that postal elements properly supported the uplift of forces.

While deployed to Afghanistan, the 43d Sustainment Brigade was one of two sustainment brigades responsible for providing logistics, personnel services, and health services support for regional command (RC) operations. The 43d Sustainment Brigade was responsible for RC South, RC Southwest, and RC West, and the 82d Sustainment Brigade (until December 2010) and the 101st Sustainment Brigade (after December 2010) were responsible for RC North, RC East, and RC Central.

The 43d Sustainment Brigade relied on its human resources operations branch (HROB) to help provide postal operations support for its RCs. The HROB is an embedded element within a sustainment brigade support operations (SPO) section. Field Manual (FM) 1–0, Human Resources Support, explains the HROB's mission in this way:

> The HROB has the mission to plan, coordinate, integrate, and assess the emplacement and operations of HR [human resources] elements executing the personnel accountability, casualty, and postal operations functions. This includes providing technical guidance and assistance to supported G–1/AGs [adjutant generals] and S–1s in the personnel accountability, casualty, and postal mission. As part of the SPO, the HROB has the responsibility to coordinate the execution of non-HR related sustainment in support of HR operations.

Postal Operations at Kandahar Airfield

FM 1–0 states, "The mission of the military postal system is to operate as an extension of the United States Postal Service (USPS) consistent with public law and federal regulations beyond the boundaries of U.S. sovereignty and provide postal services for all DoD [Department of Defense] personnel and U.S. contractors where there is no USPS available."

During the 43d Sustainment Brigade's deployment, postal support at Kandahar Airfield (KAF), RC South, and RC West was provided by a combination of postal platoons assigned to the HR company and contracted civilian workers. The HR company provided mission command and technical support for postal platoons that provided postal support to units at KAF and forward operating bases within their assigned areas of operations through satellite Army post offices (APOs).

Three postal platoons provided support for KAF and 10 satellite APOs throughout RC South and RC West. Responsibilities of the postal platoons included—

- Directing daily postal operations at the KAF APO, to include receiving, processing, and dispatching outgoing mail for onward movement.

Soldiers work together to provide postal support inside the satellite Army post office at Tarin Kowt, Afghanistan.

- Receiving, processing, and distributing incoming intratheater mail to supported locations, including mail for special services.
- Preparing mail for pickup by unit mail clerks at KAF.
- Conducting mobile postal support missions to supported locations that were not serviced by satellite APOs.

When the 43d Sustainment Brigade's HROB arrived in Afghanistan, the biggest challenges it encountered were planning and projecting postal support requirements, ensuring that the emplacement of postal elements at KAF and throughout RC South and RC West properly supported the uplift of forces, and ensuring that postal elements were properly resourced to accomplish their missions. Resourcing postal platoons with the necessary equipment, supplies, and facilities to accomplish their missions was another challenge in Afghanistan.

Initiatives undertaken in coordination with the sustainment brigade's special troops battalion included upgrading the APO storage yard to increase mail storage capacity and acquiring an additional facility at KAF for sorting and storing mail. Other initiatives executed in coordination with the HR company included working with the expeditionary sustainment command and the human resources sustainment center postal operations division to resource postal platoons with required postal equipment. This equipment included Integrated Retail Terminal computers and postage validation imprinter machines to replace the Pitney Bowes postage meters being used at satellite APO locations.

Planning Postal Requirements

The HROB used the military decisionmaking process and the rapid decisionmaking and synchronization process to ensure that the enduring HR principle of responsiveness was maintained.

According to FM 1–0, HR responsiveness includes the "ability to meet ever-changing requirements on short notice and to apply HR support to meet changing circumstances during current and future operations. It involves identifying, accumulating, and maintaining sufficient resources, capabilities, and relevant information to enable commanders to make rapid decisions."

This was critical because, as a result of the force cap on Afghanistan, no additional requests for forces were submitted to meet the rules of allocation, which called for one postal platoon to serve 6,000 personnel.

Planning and projecting postal support requirements involved analyzing the increases in supported populations expected at locations in RC South and RC West and determining the best method of providing postal support to these locations. Key elements of this process included identifying locations where supported populations were expected to increase and determining whether or not the current method of postal support in place at that location would be adequate.

Often, locations with large increases in supported populations already had established satellite APOs, so the outcomes of this process involved recommendations for improvement, such as augmenting the location with additional postal Soldiers or adding storage capacity to support increased mail volumes.

In several instances, planning and projecting postal support requirements was needed for emerging locations lacking established methods of postal support. In these cases, planning to establish postal support included considerations of available space,

Soldiers at the Kandahar Airfield Army post office break down a pallet of incoming mail while other Soldiers wait to sort the mail for distribution.

This new facility was erected to serve as the Shindand Airbase, Afghanistan, satellite Army post office.

required facilities and storage capacity, methods of mail delivery, and resourcing personnel to man the satellite APO. These processes involved coordination with U.S. Forces–Afghanistan engineers, the sustainment brigade engineer planning cell, and forward operating base mayors for available space.

Planning and projecting postal support also involved the production of letters of justification and design intent layouts to detail requirements for postal support facilities, mail volume projections based on expected supported populations to determine mail storage requirements, and coordination with the HR company to determine the best method of re-allocating postal Soldiers to support the new locations.

Establishing a New Satellite APO

Establishing a new satellite APO can be a lengthy process, depending on how big the project is. The letter of justification for the project needs to address these specific requirements:

- The detailed project justification, including the need for or purpose of the project.
- The facility requirements in accordance with Department of Defense Postal Manual 4525.6–M, Operation Iraqi Freedom/Operation Enduring Freedom Postal Operations Manual.
- Internet connectivity.
- Mail storage capacity.
- Mail transportation.
- Expected start date of construction.
- The impact on the mission if the request is not granted.

For KAF, the site must be approved by the U.S. base camp planning board. A location plan must be submitted to the planning board. This plan will consist of a site map created using computer-aided design and drafting or Microsoft PowerPoint or, instead, a satellite or aerial photo showing the exact layout of the camp with the project location noted. It must be easy to identify where on the base the project will be located. The site map is a close-up picture of the site to show the project footprint in relation to its surroundings.

All of the 43d Sustainment Brigade HROB's efforts ensured that postal support was positioned correctly and resourced adequately throughout RC South and RC West to support the uplift of forces accomplished during the 43d Sustainment Brigade's deployment. These challenges were inherent in the role of the HROB as defined by FM 1–0, which is to provide technical guidance and resources to HR organizations and ensure that they have the capability to provide the required HR support as directed in the HR concept of support.

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Supply and Services Operations in Afghanistan

by Staff Sergeant Joseph Radermacher

In March 2010, the 43d Sustainment Brigade out of Fort Carson, Colorado, deployed to Kandahar Airfield, Afghanistan. This deployment marked a significant event in the history of the United States' 9-year effort to topple the Taliban regime in Afghanistan and to support the placement and strengthening of a legitimate government within the country.

Throughout the campaign, Afghanistan had been supported by a single sustainment brigade. The arrival of the 43d Sustainment Brigade was significant because it allowed the coalition forces to split the country into two zones, each with the support of a dedicated sustainment brigade. In April 2010, the 43d Sustainment Brigade assumed control of Regional Commands South, Southwest, and West from the 82d Sustainment Brigade. This split allowed two brigades to start providing immediate, dedicated support to their now smaller areas of responsibility.

Supply and Services Section

The 43d Sustainment Brigade's support operations supply and services section (SPO S&S) gained responsibility for Kandahar Airfield, one of the most important logistics hubs in the country. Kandahar Airfield has been one of the largest through points for the country because of its location in the south and its proximity to the Pakistan border. The 43d SPO S&S area of responsibility in Regional Commands South, Southwest, and West included 7 supply support activities (SSAs), one of which was the main SSA on Kandahar Airfield, supporting more than 900 Department of Defense activity address codes (DODAACs).

As the main logistics hub for Regional Commands South, Southwest, and West, the SSA at Kandahar Airfield was an integral player in the support of operations across all three regions. However, when the 43d SPO S&S took over operation of this SSA, it found an operation suffering from several years of neglect and mismanagement by previously assigned units and contracted companies. The extent of the problems at the SSA was monumental, including more than 8 months of backlogged items needing to be received, poor container management, and storage areas that had never been properly maintained. Pilferage was rampant, and security was an issue. Customer issue lanes were filled with items that had been there for weeks.

The unit that was in place had developed and implemented some measures to combat the problems and had been supported in their efforts by the 82d Sustainment Brigade, but the mission to correct the SSA's operational environment had just begun.

Correcting SSA Management Problems

When the 43d SPO S&S arrived, the SSA had more than 600 containers, half of which had been there for 6 to 8 months. More than 30 customer lanes were overflowing because of the lack of timely customer pickup of items and because of unit departures from the theater. These two problems alone contributed to the severe mismanagement of the SSA by limiting workspace and cluttering the area with an extensive amount of unaccounted-for items.

The SSA staff worked diligently to finish processing all backlogged items and began a massive reorganization of work areas to improve container management, increase item flow through the SSA, and expedite the pickup of items by supported customers.

The SPO S&S responsible for the Kandahar Airfield SSA supported the SSA with capabilities that it had available. Some of those capabilities included managing the manager review file, overseeing logistics movements, overseeing operational and procedural management, and providing a more accessible chain of support for both the SSA staff and customers.

By maintaining the manager review file, the 43d SPO S&S controlled the requisitioning process through an approval system for command-regulated items, excessive quantities, high-dollar items, and items no longer available. This process safeguarded the Army and the Department of Defense against fraud, waste, and abuse of the supply system. It allowed units down to the battalion level the opportunity to be aware of their requisitioning habits, spending, and critical needs. The communication between the 43d SPO S&S and the battalion elements and the positive awareness of unit-level requisitioning habits resulted in cost savings in excess of $265 million during the 43d Sustainment Brigade's deployment.

DODAAC Management

The 43d SPO S&S also provided support to all seven SSAs within its area of responsibility by monitoring and clearing inactive customer DODAACs from the supply system. It was evident when the 43d Sustain-

ment Brigade arrived that the SSA had no effective system of checks and balances for units departing the theater. The SPO S&S conducted a review of the systems for which it was responsible and found more than 500 inactive customer DODAACs.

The process of clearing inactive DODAACs includes identifying the DODAACs, reviewing open-document histories, purging those documents from the supply system, and reporting to the appropriate higher source the DODAACs that are ready for removal.

The 43d SPO S&S purged the supply system of more than 10,000 open documents from inactive customers and prepared more than 400 DODAACs for removal by the 1st Theater Sustainment Command.

Other Customer Support

The 43d SPO S&S supported its customers in several other ways. Two of those were the high-priority and "aircraft on ground" referral processes. These processes allowed unit-level customers to expedite high-priority needs from alternate sources when critically needed items were not immediately available from the unit's supporting SSA.

The SPO S&S also built catalog files for uncommon items that were needed by customers with equipment that is not traditionally used, such as refrigeration containers and electrical and plumbing materials for construction projects.

Working in conjunction with Defense Logistics Agency representatives, the 43d SPO S&S regularly assessed available supplies to improve the support capabilities of the supply system. As the regional subject-matter experts, the SPO S&S helped improve operations at three SSAs and streamline the establishment of three new SSAs.

With the ever-evolving operating tempo and environment, the 43d SPO S&S was a critical logistics support team for seven SSAs operating within Regional Commands South, Southwest, and West. The 43d SPO S&S evolved its support abilities to meet and exceed the needs of those operations, all the while providing world-class support to its customers within its area of operations.

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Statement of Ownership, Management, and Circulation
(required by 39 U.S.C. 3685).

The name of the publication is *Army Sustainment* (formerly *Army Logistician*), an official publication, published bimonthly by Headquarters, U.S. Army Combined Arms Support Command, for Headquarters, Department of the Army, at the U.S. Army Logistics University (ALU), Fort Lee, Virginia. Editor is Robert D. Paulus, ALU, Fort Lee, VA 23801-1705.
Extent and nature of circulation: the figures that follow are average numbers of copies of each issue for the preceding 12 months for the categories listed.
Printed: 9,877.
Total paid circulation, sold through Government Printing Office: 300.
Requested distribution by mail, carrier, or other means: 9,452.
Total distribution: 9,752.
Copies not distributed in above manner: 125.
Actual number of copies of a single issue published nearest to the filing date: 9,927.

I certify that the statements made above by me are correct and complete:

Robert D. Paulus
Robert D. Paulus, 01 September 2011

The 11th Transportation Battalion Supports a Joint Operational Access Exercise

by First Lieutenant Andrea L. Whitaker

In the Army Transportation Corps, the motto "Nothing happens until something moves," is common. Both tactically and strategically, transportation support units play a critical role in moving cargo, vehicles, and other necessary equipment forward into the fight.

After spending the last decade engaged in combat operations, the leaders of the 82d Airborne Division wanted to train their units to conduct the basics of full-spectrum operations. To support this goal, the division conducted a joint operational access exercise (JOAX) from 9 to 16 February 2011. The exercise allowed the division's paratroopers and supporting units to train together in a weeklong, large-scale joint training exercise.

Support From the 11th Transportation Battalion

The 11th Transportation Battalion, 7th Sustainment Brigade, established an intermediate staging base (ISB) at Mackall Army Airfield, North Carolina, to provide key logistics support to the 82d Airborne Division for the JOAX. The battalion was a critical provider of logistics support throughout the exercise.

The JOAX gave the battalion an excellent opportunity to train with personnel from several units, including the 615th Contingency Response Wing from Travis Air Force Base, California; the 689th Rapid Port Opening Element (RPOE) from Joint Base Langley-Eustis, Virginia; and the 550th Area Support Medical Company from Fort Bragg, North Carolina. The latter units joined together to create a logistics task force (LTF) responsible for providing support to the 3d Brigade Combat Team's tactical operations.

To successfully deploy its headquarters staff components and execute the ISB, the 11th Transportation Battalion implemented many implied tasks. The battalion's advance party, composed of the staff components and Soldiers assigned to the headquarters and headquarters detachment and the 119th Inland Cargo Transfer Company (ICTC), arrived on site 7 February to establish a forward operating base (FOB) adjacent to Mackall Army Airfield.

Once the FOB was up and running, the 119th ICTC provided security while the battalion staff began 24-hour operations. Staff components assumed mayoral duties for the ISB, which included providing logistics and personnel situation reports to the 3d Expeditionary Sustainment Command and executing sanitation, feeding, and fueling operations for the Air Force and the attached units of the LTF.

Help From the Air Force

Throughout the exercise, Air Force assets flew cargo, vehicles, equipment, and personnel from nearby Pope Air Force Base to the ISB. Once on site, the 11th Trans-

A generator mechanic from the 119th Inland Cargo Transfer Company maintenance platoon repairs a generator supporting the 11th Transportation Battalion's mobile kitchen trailer at the intermediate staging base at Mackall Army Airfield, North Carolina, during the joint operational access exercise.

portation Battalion, which acted as the forward element of the 3d Expeditionary Sustainment Command, ran 24-hour operations in its tactical operations center, tracking the movement of all logistics assets throughout the battle.

C–17 Globemaster and C–130 Hercules aircraft simultaneously dropped paratroopers from the 82d Airborne Division onto a nearby tactical objective, resulting in a full-on assault. At the same time, back at Mackall Army Airfield, cargo and equipment continuously arrived and were offloaded by Air Force personnel.

Specialists from the 11th Transportation Battalion S–6 shop install a Movement Tracking System transceiver on top of a high-mobility multipurpose wheeled vehicle at Mackall Army Airfield during the joint operational access exercise.

"An exercise such as the JOAX gives the Army and Air Force an excellent opportunity to train together and create a strong partnership," said Major Alton Williams, executive officer of the 11th Transportation Battalion. "The result of this partnership is the seamless execution of operations when faced with a real-world situation."

Supplying the Paratroopers

Once the items were on the ground at Mackall Army Airfield, Soldiers of the 689th RPOE sorted and digitally logged all cargo using the in-transit visibility tracking system. After the logging and sorting of cargo was completed, Soldiers staged the supplies at a nearby distribution center to await allocation to the end users, paratroopers from the 82d Airborne Division.

The needs of the warfighters ranged from food and water to specific types of ammunition, equipment, and military vehicles. These needs drove the priority of battlefield distribution.

"This meant accounting for 300 personnel, managing 35 flights in and out of the airfield, accounting for cargo consisting of 55 pallets [and] 79 pieces of rolling stock, and accounting for 133 personnel either boarding or exiting the aircraft at any given time," said Captain Malaya Simmons, the day-shift battle captain of the ISB. "That's a lot of moving pieces."

At the culmination of the JOAX, flights landed on the airfield every 30 minutes nonstop for 18 hours.

Aside from tracking flights, cargo, and personnel, Simmons noted that the battalion's dining facility staff prepared 3,500 meals using the Army's mobile kitchen trailer. The battalion was able to provide life and logistics support to combat arms units forward in the fight while simultaneously supporting and securing itself.

While delivering logistics support to the 82d Airborne Division, LTF Soldiers and staff continued to conduct training focused on strengthening Soldiers' military occupational specialties, warrior tasks, and battle drill skills.

The JOAX provided an ideal training platform for the 11th Transportation Battalion, a terminal operations battalion, to command and control an LTF in support of 82d Airborne Division operations.

"The ISB mission enabled us to perform our core mission of command and control of attached units employed in terminal operations, to include seaport, aerial port, railhead, and joint logistics over the shore," said Lieutenant Colonel John Broomhead, the 11th Transportation Battalion's commander. "This is part of the battalion's progressive training strategy to shape our JLOTS culminating training event, Operation Fall Trident, in September 2011."

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LOGCAP Demystified: A Primer on LOGCAP Services

BY MAJOR MALCOLM G. HAYNES

The Logistics Civil Augmentation Program (LOGCAP) touches almost every aspect of life on a forward operating base (FOB) during a deployment. A LOGCAP contractor runs everything from the dining facility to the gym, and a great deal of money can be involved. For example, according to a 2007 press release, DynCorp International, one of three current contractors under LOGCAP, revealed that it expected to generate annual gross revenues of $5 billion from the LOGCAP contract for southern Afghanistan.

Despite the importance of LOGCAP for sustainment and the great sums of money involved, surprisingly few publications address LOGCAP. In fact, the only official publication specifically devoted to LOGCAP is Army Regulation 700–137, Logistics Civil Augmentation Program (LOGCAP), which has not been modified since it was originally published in 1985.

Although a tactical unit may incorporate some form of LOGCAP training before it deploys, few units know how to effectively employ LOGCAP. As a result, most units treat LOGCAP like a "magic box" and throw their hands up in frustration when it fails to deliver as expected.

This article is written for those who need to tinker with the "magic box" in order to change the output. It will explain the nine key steps required to start or modify a LOGCAP service and will offer several techniques for streamlining the process.

Why Tinker With LOGCAP?

Tactical units have three predominant reasons to tinker with LOGCAP. The first is the need to start a new service. Perhaps the unit is establishing a new FOB or a FOB is increasing in size and now needs a service it previously did not use.

The second reason is the need to modify a service. For example, a FOB has a bus service that runs 12 hours a day and the unit wants it to run for 24 hours instead.

The third reason to peer into the magic box is because of dissatisfaction with the quality of service provided by the LOGCAP contractor. This article will only address the first two reasons: starting and modifying LOGCAP services.

Step 1: Determine Type of Action Required

The first step in starting or modifying a LOGCAP contract is determining the type of action required. The action will be executed through either a letter of technical direction (LOTD) or a change order.

The Defense Contract Management Agency (DCMA) administers the LOGCAP contract. Given the size and scope of this contract, it would be impossible for one person at DCMA to effectively manage LOGCAP and approve the many changes required on a daily basis on numerous FOBs. Therefore, DCMA assigns a primary contracting officer as the overall lead contracting officer for LOGCAP, supplemented with many administrative contracting officers (ACOs).

An ACO is responsible for one or more FOBs. Only the ACO has the authority to direct the actions of the LOGCAP contractor. The ACO can direct the contractor through either an LOTD or a change order.

LOTD. An LOTD is used for minor changes that do not require any additional outlay of funds. For example, an LOTD should be used if the commanding general were to decide fish and chips should be served every Friday in the dining facility (DFAC) in lieu of steak. Since the LOGCAP contractor has already been funded to provide meals, changing the meal from steak to fish will not cause the contractor to incur additional expenses. The ACO could implement the new policy with an LOTD.

Case study: As a result of logistics changes in the theater of operations, the 68th Combat Sustainment Support Battalion (CSSB) at FOB Leatherneck required the LOGCAP contractor to run a class IV (construction and barriers materials) yard. The contractor had not previously provided this service and would require additional funding and several months leadtime to begin executing.

Realizing that only a portion of the class IV yard needed to start running immediately, the 68th CSSB support operations officer spoke with the LOGCAP contractor and discovered that four people could be reassigned immediately without degrading contract performance in other areas. Four people would be sufficient for an initial operating capability.

However, the LOGCAP contractor could not move any personnel without being directed to do so by the ACO. The CSSB support operations officer worked with the LOGCAP support officer (LSO) to prepare the required unit-level document. Within days, the ACO gave the contractor an LOTD formally directing the contractor to provide limited class IV service.

Change order. In contrast to an LOTD, a change

A trash-burning incinerator is installed at Forward Operating Base Warhorse, Iraq, through a LOGCAP contract.

order is required when additional expenses will be incurred. In the DFAC example, the commanding general could issue orders for the DFAC to remain open 24 hours a day. To implement this modification, the contractor would need to purchase additional food and hire additional personnel. As a result, the contractor would incur a new expense that would be charged to the Army. To ensure that the Army understood and agreed to the increased charges, the contractor would not proceed without a change order. The change order is the formal notification to the contractor to proceed.

Usually, the need for an LOTD or a change order is obvious. As the case study shows, working with the contractor and DCMA will often reveal the quickest and most viable way to achieve results.

Step 2: Prepare Required Documents

The ACO will not issue an LOTD or change order without supporting documentation provided by the unit. Samples of all required documents can be obtained from the LSO.

LOGCAP checklist. The purpose of the LOGCAP checklist is to make sure that neither military manpower nor local contractors can support the requirement. Both of these options must be considered before requesting LOGCAP services. The LOGCAP checklist is not complete without two key signatures: one from the FOB mayor (indicating that military manpower is unavailable) and one from the commander of the regional contracting command (indicating that local contractors cannot support the request). The LOGCAP checklist is not required for an LOTD.

Letter of justification (LOJ). The unit must also prepare an LOJ signed by the unit commander that explains why the unit requires a service.

Work statement. Finally, the unit will need a work statement. [“Work statement” is the term that has replaced the term “statement of work” in the Federal Acquisition Regulation.] The work statement should clearly specify what tasks the LOGCAP contractor must perform.

The work statement for a LOGCAP project should not be confused with the LOGCAP performance work statement (PWS). The LOGCAP PWS applies theater-wide. It is very broad and intentionally vague. Therefore, each project requires a work statement that is tailored to that particular project. Although specific to a project, the work statement cannot dictate to the contractor the equipment and personnel that he must use. In other words, the work statement should indicate what must be done, not how to do it.

In addition to the work statement, early direct communication with the contractor who actually manages the service being changed is recommended. The manager is a different person than the estimator who prepares the contractor’s estimate. The manager is the person on the ground who runs the service. Contacting the manager early in the process limits the potential disparity between the unit’s intent and the final contractor estimate. This manager is the person who will likely determine the resources needed to fulfill the requirements in the work statement. After getting the manager’s input, the estimator puts a dollar value to the resource requirements.

If the manager misinterprets the work statement or the work statement is unclear, the estimate of the resources required will be incorrect. Communicating early and often with the service manager prevents this problem. For example, if you want the DFAC to operate 24 hours a day, you should discuss this requirement with the DFAC manager. This person will be able to tell you the resources he believes are needed to satisfy the requirement.

This conversation with the service manager is where you will discover any disparity between what the contractor believes is the intent as conveyed in the work statement and the actual intent of the unit. Just as important, the service manager may have ideas based

Process for Starting or Modifying LOGCAP Services

1. The administrative contracting officer determines the type of action required: letter of technical direction or change order.
2. Unit completes the LOGCAP checklist, letter of justification, and work statement.
3. Administrative contracting officer prepares the project planning request.
4. LOGCAP contractor prepares the project planning estimate.
5. ACO conducts a technical evaluation with the unit and the LOGCAP contractor.
6. Unit obtains funding.
7. ACO issues a change order to the LOGCAP contractor.
8. Contractor executes the service.
9. Unit monitors contract execution.

on experience about how to achieve the desired effect more rapidly or in a more cost-effective manner. Most of the contractors involved in LOGCAP are former military (usually retired senior noncommissioned officers and warrant officers). Taking advantage of their expertise can pay huge dividends.

The Center for Army Lessons Learned Handbook 09–48, Developing a Performance Work Statement in a Deployed Environment, may be of some help in developing a work statement. However, the importance of making sure the contractor understands the unit's requirements through face-to-face interaction cannot be overemphasized. Relying solely on the work statement is not ideal.

Step 3: Prepare a Project Planning Request

Once the LOGCAP checklist, work statement, and LOJ are complete, these documents must be taken to the LSO. The LSO should review the documents to ensure that the paperwork is filled out correctly. After his review, the LSO will take these documents to the ACO, who will prepare a project planning request (PPR). The PPR is the formal request to the contractor to provide an estimate for the service requested in the work statement. Since only the ACO has the legal authority to direct the contractor to do anything, including providing an estimate, both the ACO and the LSO will sign the PPR and send it to the LOGCAP contractor.

The PPR can generally be prepared within 2 to 3 days. If you have not heard back from your LSO within 3 days of submitting the required documents, check on the PPR status. It may be a cliché, but it is helpful to keep in mind that the "squeaky wheel gets the oil." Once the PPR is prepared, keep a hard copy for your records and an electronic copy to distribute to others as required. Remember that without a PPR, no project will be planned. This is why it is important to get a copy of the PPR.

Step 4: Prepare a Project Planning Estimate

Once the PPR is complete, the contractor will normally have 3 to 4 weeks to complete the project planning estimate (PPE). The date that the estimate is due back to the ACO is included in the PPR; however, the contractor can request extensions if necessary. After the contractor receives the PPR, he will assign it to one of his estimators to prepare the estimate.

The estimator normally will go to the manager in charge of the service that is being modified and ask what additional resources are needed to satisfy the work statement. From this input, the estimator will estimate the cost of providing the required resources. For example, if you want bus service 24 hours a day instead of a 12-hour service, the estimator will talk to the bus manager and ask how many additional personnel and how much additional equipment would be required to satisfy the request. The estimator has tables and charts that estimate costs based on the required number and types of personnel and equipment.

Being proactive by discussing the need with the manager before the estimator talks to the manager can save time by ensuring that the military unit and the unit's service manager share the same understanding of the intent. Ideally, the unit should designate a subject-matter expert (SME) who has sufficient knowledge and expertise to work with the service manager. The SME should be someone with a stake in the expected outcome. Normally, the SME will already have a working relationship with the manager.

The unit SME and the service manager should come to a shared understanding of the additional resources required. This will save time. For example, if the unit wants additional bus service, it will prepare a packet with a work statement that reads, "Require bus service able to support 1,000 personnel and operate 24 hours per day." Your SME then goes to the bus manager and informs him that, in reality, only during meal times will he need to surge bus capacity to 1,000 personnel; otherwise, the current service is adequate. Based on this input, the bus manager thinks an additional three buses and six personnel will meet the need. Your SME agrees with this assessment.

With this understanding, when the estimator shows up, the bus manager will not overestimate or underestimate required resources because the work statement did not fully explain every aspect of the requirement. (Although the work statement should explain every as-

pect of the requirement, quite often it does not.) If your SME and the service manager have already worked out the required resources before the estimator arrives, the PPE is more likely to be satisfactory.

After talking with the manager, the estimator will prepare an estimate of costs: the PPE. Once the PPE due date has passed, contact your LSO to find out the status and get both a hard copy and an electronic copy of the PPE. Unlike the PPR, however, the PPE is proprietary information and cannot be shared with any commercial entity under the terms of the Procurement Integrity Act.

Step 5: Conduct Technical Evaluation

Once the PPE is complete, the ACO schedules a technical evaluation (TE). The TE team should include the ACO, the LSO, the estimator, your unit SME, your unit LOGCAP management officer, and the contractor's service manager. The purpose of the TE is to ensure that the estimate prepared by the contractor is sufficient to fulfill the needs identified by the unit. Having the unit SME and the service manager talk beforehand pays dividends during the TE because it significantly increases the probability that the contractor's estimate is satisfactory to meet the unit's requirement.

Any issues that anyone has with the estimate are discussed during the TE. If the estimate is deemed insufficient by the unit or the ACO, the contractor has to provide a new estimate. This is an iterative process that repeats until everyone is satisfied. It is important to note that the contractor may take several weeks to revise the estimate after each TE. It can be extremely frustrating for a unit to identify a relatively minor change during the TE and then wait several weeks for an updated PPE.

TEs are sometimes conducted without the unit present or without the service manager present. However, it is imperative that both the unit and the service manager attend the TE. The unit must be proactive in ensuring that it is present at the TE. Having the unit and the service manager at the TE minimizes friction. If a problem is identified during the TE, all the key players are present to agree on the fix.

After the final TE, when all parties are satisfied, the unit signs off on the technical evaluation and obtains funding for the project.

Step 6: Obtain Funding

The unit obtains funding for a project through the Joint Acquisition Review Board process. Obtaining funding is a separate, detailed process that can take from 2 weeks to 3 months.

Step 7: Issue Change Order

Once the unit obtains funding for the project, the ACO will issue a change order. The change order is the legal document directing the contractor to provide the service as agreed upon in the TE. Without a change order or LOTD, the contractor is not obligated to take any action. In fact, the contractor incurs risk by acting without a change order because it is possibile that the Army will not approve funding for the project.

Step 8: Execute Service

Once the contractor has a change order or LOTD, execution begins. In the case of an LOTD, execution is simply reassigning resources already on hand. In contrast to an LOTD, executing a change order will usually take 90 to 120 days. First, the contractor must advertise the job. It can take from 30 to 90 days just to fill the job. Once the job is filled, mobilizing the new employee will take several weeks. Finally, when the new employee arrives in country, additional time for in-processing is required. The time requirement is similar for equipment that is shipped to theater by sea from the United States.

Step 9: Monitor Contract Execution

It is important to monitor the LOGCAP contractor once the service has been implemented. The unit should assign a contracting officer's representative who will be responsible for monitoring the new service. The contracting officer's representative will report any issues with contract performance to DCMA. Only DCMA can formally address performance issues with the contractor.

The LOGCAP process is poorly understood by many military units. Yet, LOGCAP has a direct bearing on a unit's success because of the life-support services it provides. The LOGCAP contractor on a FOB runs everything from the DFAC to the laundry point and from the billeting office to the gym. Without a thorough understanding of LOGCAP and the process for starting or modifying a service, a unit puts itself at a distinct disadvantage in taking care of its Soldiers. Armed with the knowledge of how to establish and modify a contract, any unit can more effectively tinker with the LOGCAP magic box.

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Interagency Logistics Education and Training: Building Homeland Defense and Civil Support Liaisons

BY DR. BILLY J. DAVIS

Disasters within the United States require a "Whole Government" approach and coordination among numerous agencies.

The Interagency Logistics Course (ILC) offered by the Army Logistics University helps prepare local- through national-level agencies to participate in a national disaster response should the need arise. Based on recent weather-related disasters, it appears that the time to prepare for future disasters is now.

Part of this preparation was the National Level Exercise (NLE) 2011, which validated the ability of the participating states and agencies to prepare and coordinate a multiple-jurisdiction, integrated response to a simulated national catastrophic event in the central U.S. region known as the New Madrid Seismic Zone (NMSZ). Now that NLE 2011 is over, after-action reports and discussions will likely indicate that there is a tremendous need and value added when the "Whole Government" community trains together before a catastrophic event takes place. As it relates to disasters, it is not a matter of if disasters will occur; it is a matter of when they will occur, and that fact makes interagency team preparation critical for all stakeholders.

The Interagency Logistics Course

Interagency training before a disaster is the purpose of the Interagency Logistics Course (ILC) taught at the Army Logistics University located at Fort Lee, Virginia. ILC is sponsored by the Federal Emergency Management Agency (FEMA) and the General Services Administration (GSA). The purpose of ILC is to familiarize students with logistics planning considerations that are applicable to disaster relief and humanitarian assistance missions.

The course provides a tactical- through strategic-level overview of interagency disaster logistics, identifies and discusses parameters for national logistics support coordination, and creates a forum for exchanging best logistics practices for interagency logistics functions.

Five classes, including a pilot, have been delivered so far at ALU, with students in each class representing the diverse cultures of the organizations and agencies that make up the "Whole Government" community. This course is not restricted to logistics students; it includes individuals in operations disciplines.

By providing a forum where logistics and operations staffs learn the capabilities of partner organizations and agencies, mission sharing can increase and redundant efforts can be minimized.

Why is ILC Needed?

ILC is an enabler that can serve as a catalyst for building collaboration and interagency familiarization. The collective local and international interagency community must train and practice together if it is going to maximize the employment of scarce life-saving and life-sustaining resources and reduce redundancy during times of major to catastrophic natural or manmade disasters.

The National Military Strategy of the United States 2011 states, "We will develop leaders who are capable of operating in interagency and multinational environments and providing liaison to other U.S. agencies, allies, and partners." As military missions in Southwest Asia draw down and reductions in forces occur as they have after past conflicts, the needs of the national and international interagency community will increase if current trends in natural disasters continue.

White House Directives, Congressional testimony and mandates, and numerous Government Accountability Office (GAO) reports state that appropriate action must be taken to prepare the Nation at the federal, regional, state, local, tribal, and private-sector levels for a catastrophic response and recovery action in the event of natural or terrorist disaster.

Department of Defense (DOD) Directive 3025.1, Military Support to Civil Authorities (MSCA); Joint Publication 3–08, Interagency, Intergovernmental

Organization, and Nongovernmental Organization Coordination During Joint Operations Volumes I and II; GAO Report–10–364, DOD Needs to Take Actions to Enhance Interagency Coordination for Its Homeland Defense and Civil Support Missions; and the National Response Framework all address the need for interagency stakeholders to work together. The problem is that few agencies read doctrine and policies from partner agencies.

ILC helps local- to national-level logistics planners and operators from the interagency community prepare to work together during disaster events. This is accomplished by lectures and discussions led by subject-matter experts, including guest lecturers from the Department of Homeland Security, FEMA, DOD, GSA, the Department of State, state and local governments, nongovernmental organizations, and other Federal departments and agencies, and culminates with a logistics planning exercise.

What Makes Interagency Coordination Difficult?

A saying in ILC is, "Logistics is not rocket science; it's harder!" The jobs of DOD, FEMA, GSA, the U.S. Agency for International Development, the Army Corps of Engineers, and other responders are as difficult as they are important, but decisionmakers and managers have found that to be fully effective during a disaster, early interagency coordination is necessary for success.

Leaders face a range of barriers when they attempt such coordination. According to a GAO report, one main barrier concerns missions that are not mutually reinforcing or that may even conflict. This makes reaching a consensus on strategies and priorities difficult. Other significant barriers to interagency coordination are a lack of trust as agencies strive to protect what has historically been their turf and concerns over resource control.

ILC addresses current policy, doctrine, theory, and processes so that students develop an understanding of the various agency authorities and perspectives. This course also provides insights and explores the potential solutions that are needed to manage logistics at the strategic, operational, and tactical levels during a national disaster or incident. At a minimum, all first responders and stakeholders should be aware of the capabilities, missions, and entry points of the interagency organizations and agencies that they must interface with during a disaster or other mission. As is said in ILC, "Before you can think outside the box, you must know what is inside the box."

The Interagency Logistics Course is ongoing at ALU. The dates for fiscal year 2012 classes are shown above at right. Those wishing to attend should register through the Army Training Resource Requirements System.

Interagency Logistics Course Fiscal Year 2012

From	To
31 October 2011	4 November 2011
23 January 2012	27 January 2012
26 March 2012	30 March 2012
4 June 2012	8 June 2012

Guidelines for course registration are as follows:

- Students should be mid-to-senior level logistics managers from organizations such as the Department of Homeland Security, FEMA, or one of the military services (Active, Guard, or Reserve).
- Students should be military officers in the grades of O–4 through O–6, warrant officers in the ranks of W–3 through W–5, senior noncommissioned officers in the grade of E–8 or E–9, DOD civilians in the grades of GS–12 through GS–15 (or equivalent) assigned to, or en route to, a position requiring interagency logistics knowledge.
- Civilians from nongovernmental and volunteer agencies are invited to attend.
- International logistics exchange officers assigned to a U.S. joint-level or multinational staff billet are also eligible.

All others not falling into one of these categories by either rank or duties but who feel that they may benefit from this course may attend with an approved waiver. They should fax a request for a waiver, in memorandum format, with a justification to the ALU registrar's office at DSN 539–4240 or (804) 765–4240. They should be sure to include the course title and class number that they are requesting to attend.

Dr. Billy J. Davis is the chair of the Logistics Operations Committee at the Army Logistics University. He supervises the delivery of the Joint Logistics Course, the Multinational Course, the Logistics Precommand Course, the Intern Logistics Course, and the Interagency Logistics Course. He holds a B.S degree in business administration from Saint Leo University, an M.S. in secondary education from Old Dominion University, and a Ph.D. in education administration and leadership from Virginia Commonwealth University.

The AG School Implements HR Training Simulators

by Major Boyce L. Edwards, Jr.

Students graduating from the AG School are now better prepared to provide HR services because of improved HR systems training they receive using new system simulators.

Army senior leaders rely on the Adjutant General (AG) School commandant to prepare human resources (HR) Soldiers to support commanders throughout the Army Force Generation (ARFORGEN) cycle. To improve this support, the commandant is implementing the concepts of Army Training and Doctrine Command Pamphlet (TRADOC Pam) 525–8–2, The U.S. Army Learning Concept for 2015, which was published in June 2011.

TRADOC Pam 525–8–2 describes the new security environment as a challenge requiring U.S. Soldiers to learn faster and better than their future adversaries. The new learning concept emphasizes dynamic virtual environments and online gaming to ensure readiness. This article will explain the investments made by the Army's senior HR leaders to significantly improve the training of HR professionals.

HR Training Simulator

Leaders continually aspire to provide realistic, challenging training. Frequently the greatest challenge to providing that caliber of training is resource availability.

In fiscal year 2011, Army HR leaders allocated funds to the AG School to construct a robust HR systems training simulator that incorporated required lesson plans. This investment provides students with simulated HR training systems across the full spectrum of the Officer Education System (OES), the Warrant Officer Education System (WOES), the Noncommissioned Officer Education System (NCOES), and Advanced Individual Training (AIT).

These simulations replicate field conditions that HR Soldiers will experience in brigade and battalion S–1 sections. This investment in HR training system simulations provides Soldiers across the training spectrum with an enormous opportunity for professional growth, comprehension, and practical application in operating HR systems.

eMILPO Training Simulator

Before the spring of 2011, the electronic Military Personnel Office (eMILPO) simulator training database contained fewer than 100 personnel files and lacked the full functionality of the production system. Instruction on the use of eMILPO included only Microsoft PowerPoint screen-shot slides and practical exercises focused on system capabilities rather than hands-on systems execution. One AIT instructor likened this to training with a rubber M16; it was a recognizable facsimile but extremely limited in practical application.

Developing quality HR system training was essential in order to achieve the AG School commandant's intent of better preparing HR Soldiers to support commanders throughout the ARFORGEN cycle. Quality training emulates the field environment, allows time for repetitive use and practice, and increases the students' critical thinking capabilities. The previous eMILPO simulator did not provide these capabilities. To bridge the gap, a major training database upgrade was required.

Recognizing the constraints of the previous simulator, the AG School solicited support from the Adjutant General of the Army to develop a new eMILPO simulator. Simultaneously, the AG School developed new hands-on lesson plans and practical exercises. The new eMILPO simulator, fielded in the spring of 2011, contains a full brigade combat team's complement of personnel and associated personnel data, amounting to more than 4,000 notional Soldiers. Every capability and functionality within the Army's live database of record (eMILPO) is available in the simulator (with the exception of digital signatures).

New Training Process

The new lesson plans and associated practical exercises emphasize experiential learning rather than PowerPoint lectures. The new training system also supports the AG School commandant's implementation plan for TRADOC's Army Learning Concept for 2015 "learner centric" environment. Using eMILPO, students now gather and analyze data and develop real-world solutions to Army HR and personnel issues. This requires their full engagement and thereby dramatically expands their comprehension and knowledge.

The program of instruction for initial military training students was significantly remapped to incorporate

capabilities with the new eMILPO simulator. Personnel systems instruction for AIT Soldiers, warrant officers, and lieutenants expanded by 16 to 20 hours to include more time for hands-on practical exercises. The culminating exercise was restructured and a new staff exercise (STAFFEX) was developed for the AG Warrant Officer Basic Course (WOBC) and AG Basic Officer Leaders Course (BOLC).

STAFFEX

The new eMILPO simulator allows Soldiers to practice functions required to execute two of the HR core competencies stated in Field Manual 1–0, Human Resources Support: man the force and provide HR services. The simulator provides WOBC and BOLC students with opportunities for data analysis in order to assist in accomplishing the two remaining core competencies: coordinate personnel support and conduct HR planning and operations.

AG WOBC and BOLC students use the eMILPO simulator extensively during the AG School STAFFEX to focus on unit personnel readiness and HR operational planning conducted during the predeployment phase of the ARFORGEN cycle.

During a recent after-action review, one student compared the STAFFEX to an "eMILPO qualification range." Overall response from students and instructors alike is positive; students appreciate the challenging training, and instructors know they are providing the students and the Army with a quality product. Most importantly, the eMILPO learning curve is significantly reduced at the Soldier's first unit of assignment and HR Soldiers make an immediate positive impact for their commanders and Soldiers upon arrival.

Culminating Exercise

Following the STAFFEX, students participate in the culminating exercise, which focuses on HR support in a deployed contemporary operating environment. During the AG School culminating exercise, the eMILPO simulator is linked to the Joint Deployed Logistics Model (JDLM) simulation system to provide a virtual HR battlespace and much more realistic training for students. The battalion- or brigade-level S–1 team includes AIT, Noncommissioned Officer Academy, and WOBC or BOLC students. Students focus on casualty reporting and tracking, personnel accountability, strength reporting, awards, evaluation requirements, records updates, and daily battle update briefs. Students also regularly conduct eMILPO queries to prepare their notional commands for congressional delegations or distinguished visitors and identify personnel eligible for upcoming centralized promotion boards.

The culminating exercise reinforces previous classroom training and practical exercises in a deployed field environment, similar to the HR environment seen in Iraq and Afghanistan. It builds Soldiers' confidence by increasing their comprehension and skill sets. After several hours of hands-on practical exercises in the classroom followed by the culminating exercise reinforcement, students develop "muscle memory" and internalize HR techniques and procedures.

Commanders and HR professionals can now expect reduced time to integrate new Soldiers into the unit's HR staff section, coupled with increased productivity. Graduates arrive better prepared to contribute to the unit mission and more capable of taking care of the Army's most precious resource: Soldiers. Soldiers leave the AG School and join their units with the foundation required to confidently proclaim themselves "trained and proficient . . . an expert . . . a professional," in accordance with the Soldier's Creed.

Plans for the Future

Building on the success of the new eMILPO simulator, the AG School commandant, in coordination with the Human Resources Command, intends to expand the scope of HR systems training simulation in fiscal year 2012. Systems that will have new training programs include the Enlisted Distribution and Assignments System, the Total Officer Personnel Management System, the Deployed Casualty Information Processing System–Casualty Reporting, the Deployed Theater Accountability Software, and the integrated Personnel Management System. These upgrades will further replicate real-world conditions and prepare AG and HR graduates for rapid assimilation into their gaining commands, providing them with the capability to impact their unit's HR mission positively and immediately.

One of the defining characteristics of HR professionals is their technical expertise. The foundation for building this expertise begins during initial military technical training by developing the right skill sets and attributes. Those skills are then honed as Soldiers continue self-development, organizational training, and professional military education. The new eMILPO simulator and revised HR training allow AG Soldiers to develop the required expertise expected by operational commanders. Providing quality, relevant training is just one more way HR and sustainment professionals are meeting the force's challenges in today's contemporary operating environment.

Major Boyce L. Edwards, Jr., is the chief of the Adjutant General Basic Officer Training Division at the Adjutant General School at Fort Jackson, South Carolina. He holds a B.S. degree in applied science and is a graduate of the Field Artillery Officer Basic Course, the Adjutant General Advanced Course, and Intermediate Level Education.

PS Magazine: 60 Years of Supporting Preventive Maintenance

BY JONATHAN W. PIERCE

Preventive maintenance checks and services are critical to ensuring that vehicles and equipment are ready for use when needed. *PS* magazine provides an interesting and informative venue for keeping Soldiers up to date on PMCS issues.

The nearly $100 billion in budget cuts that the Department of Defense is facing should have managers and commanders wondering where those cuts will occur. With the business community likewise looking for ways to reduce costs during this economic downturn, *Plant Engineering* magazine examined best practices in its December 2010 issue. The magazine identified four major areas that affect performance on the plant floor: maintenance, people, energy, and systems. This article will focus on maintenance.

PMCS

Plant Engineering argues that "break-fix" as a maintenance strategy is disastrous and that a sound maintenance plan preserves capital and protects productivity. The preventive maintenance checks and services (PMCS) program is the Army's way of addressing this maintenance issue. Conducting PMCS is key to ensuring the success of a unit maintenance plan. When operators and unit-level mechanics conduct PMCS correctly, they can find deteriorating conditions and correct them before malfunctions occur.

The PMCS process (with its resulting maintenance actions) and equipment breakdowns are both forms of downtime. However, PMCS and re-

Master Sergeant Half-Mast,* PS *magazine's expert avatar for preventive maintenance, passes on useful tips for helping Soldiers identify potential maintenance problems.

No matter how advanced Army equipment may be, corrosion, friction, vibration, temperature, and precipitation are constant threats to equipment readiness. Preventive maintenance can substantially reduce repair costs.

lated maintenance are far less expensive in terms of time, money, and personnel safety than fixing broken systems. A replacement o-ring does not cost much, though it may take some time to install. But installing a new o-ring is a lot cheaper and less time-consuming than replacing a burned-out engine.

Similarly, on an M2/3 Bradley fighting vehicle, a 62-cent spring for the ammunition compartment door latch may seem insignificant. However, if the spring fails, then the latch can unhook and the door can open. If the turret is then traversed, the door can slice through cables and rip open a fuel line, dumping fuel into the hull. From the failure of a 62-cent part, the million-dollar vehicle can be lost or, if not lost, require significant downtime for repairs.

Corrosion Reduction

Another aim of PMCS is to find corrosion, remove it, and prevent it. PMCS is simply the most cost-effective way of dealing with corrosion, and it is where huge cost savings can be found.

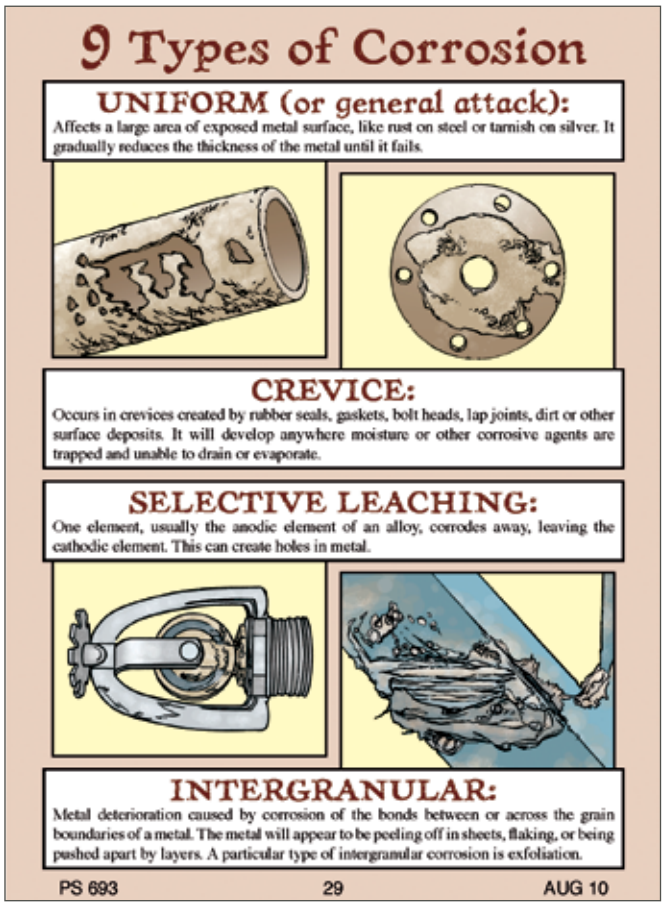
Corrosion studies offer some insight into how maintenance costs rise when PMCS is not emphasized at the unit level. Some studies indicate that corrosion of Army vehicles in fiscal year 2004 cost the Army $2 billion. Another $1.6 billion was lost in fiscal year 2005 to corrosion of Army aviation and missile assets.

Finding Time for PMCS

Plant Engineering asks the question, "Who has time to idle their plant in the middle of a production cycle?" In the Army, especially in combat environments, the equivalent question of local commanders is, "Who has time for PMCS when this convoy needs to move out now?"

Unfortunately, maintenance and operations are often considered two different, sometimes even opposing, actions. Such thinking often leads commanders to choose operations over maintenance. Commanders must be free to make those decisions, but they need to apply risk management principles when choosing maintenance or operations. At risk are Soldiers' lives, vehicle breakdowns in hostile environments, weapon failures in firefights, and equipment that will not perform during operational missions.

The real issue is whether commanders can trust that unit equipment is mission capable and can protect Soldiers in harm's way. Anything short of performing PMCS is rolling the dice. Commanders who delay or ignore PMCS gamble with Soldiers' lives and put mission success at risk.



PS Magazine

During World War II and its aftermath, the Army's prevailing attitude was that vehicles, weapons, and equipment were to be used, worn out, and replaced. The Korean War made it clear that the "use it up and replace it" attitude was flawed because Army materiel had not been maintained and did not function as needed early in that conflict.

As a result, the Army decided to emphasize preventive maintenance as the principal means of improving Army materiel readiness. Army leaders remembered a World War II publication, *Army Motors,* which used a few cartoon characters to discuss maintenance problems, and decided to use it as the model for a new publication. In June 1951, the first issue of *PS, The Preventive Maintenance Monthly*, was published using the cartoon format. Popularly known as *PS* magazine, it was eventually classified as a monthly technical bulletin (TB), TB 43–PS–series.

Today, Soldiers recognize *PS* magazine as a tool to get the latest PMCS actions for their equipment. *PS* magazine is a pioneer in the instructional use of cartoon characters, and 60 years of continuous publication validates the usefulness of cartoon sequential art as an information medium. *PS* magazine characters and talking vehicles deliver maintenance, supply, and logistics information to the Soldiers, Army civilians, and contractors who work

PS ***magazine is not just a comic book. It is the Army's technical bulletin dedicated to promoting preventive maintenance. Preventive maintenance reduces the maintenance draw on Army dollars by spending a little on preventing expensive repairs.***

in companies and battalions—the units that actually own, operate, and maintain the Army's equipment.

Occasionally, Soldiers write to the magazine staff and ask what official publication their commanders can reference to implement what was published in the magazine. What is the magazine's source of information?

The answer is *PS* magazine. It is an official Army technical bulletin and is as reliable as any other technical publication. Unfortunately, some people don't take it seriously because of the cartoon characters. However, all *PS* magazine articles are cleared twice by Headquarters, Department of the Army, the Army Materiel Command, life cycle management commands, the Department of Defense, or the Army equipment proponent. The proponent subject-matter expert for each piece of equipment addressed in the magazine agrees with the PS magazine article and concurs that its instructions should be implemented by field-level units.

Readers of *PS* come away with the conviction that preventive maintenance is preferable to equipment breakdowns. The slogan of the magazine goes right to the heart of the matter and asks each Soldier individually, "Would you stake your life, right now, on the condition of your equipment?"

Subscribing to *PS* Magazine

To support preventive maintenance efforts, have your unit publications clerk add TB 43–PS–series, *PS, The Preventive Maintenance Monthly*, to your unit publications account. Encourage the magazine's use at commander's calls and sergeant's time. Subscriptions are available through the Department of the Army Directorate of Logistics–Washington website: https://dol.hqda.pentagon.mil/ptclick/index.aspx.

For units stationed in U.S. Army Europe or deployed to Southwest Asia, subscriptions are available from the U.S. Army Publication Distribution Center Europe through the Army in Europe Library and Publishing System website: https://aepubs.army.mil.

A bonus for commanders is that *PS* magazine also operates a readers' service for Soldiers, Army civilians, and Army contractors. When unit personnel have exhausted their regulations and technical publications and still cannot find an answer to a concern or question, or when they have a bright idea they would like to share with their peers throughout the Army, they can send *PS* magazine an email. The magazine staff will research it with the right proponent and return an answer, usually within 30 days and often much sooner than that. Emails can be sent to: half.mast@us.army.mil.

Preserving the lives and well-being of Soldiers, Army civilians, and contractors and maintaining high levels of equipment combat readiness and dependability have enormous budgetary value for the Army. PMCS reduces maintenance and supply costs, shipping expenses, and not-mission-capable time. It also preserves precious training dollars needed to train new Soldiers when experienced personnel are lost.

In a time of reduced budgets, we need to support actions that keep the Army from having to replace vehicles, engines, and other major components that can cost from tens of thousands to half a million dollars or more each. Cost savings will require unit commanders to consider maintenance and operations as the opposite sides of the same mission-accomplishment coin. These two concepts should complement each other, not be either-or choices.

Preventive maintenance gives the Army the most bang at the least expense in terms of both money and time. Preventive maintenance means fewer breakdowns in hazardous conditions, which preserves Soldiers' health and lives. Preventive maintenance can play a significant role in reducing costs in the coming budget reductions.

PS magazine is determined to be at the tip of the spear in the Army's preventive maintenance campaign.

Jonathan W. Pierce is the editor-in-chief of the PS Magazine Division, Logistics Support Activity, Army Materiel Command, at Redstone Arsenal, Alabama. He is a retired Army master sergeant and holds a B.S. degree from the University of Maryland. He is a former National Defense University Press book editor and editor of the Strategic Forum occasional papers on foreign and military affairs.

The Ordnance Order of Samuel Sharpe

BY CAPTAIN JEFFREY J. QUAIL

In my experience supporting a field artillery battalion, I have seen firsthand the rich tradition of the Order of Saint Barbara. So much emphasis is put into this recognition that the field artillery branch even holds a ball in her honor that focuses specifically on inducting deserving Soldiers into the order. Many field artillery Soldiers strive for their entire careers to be inducted and place emphasis on the honor above other awards.

Each branch of the Army has a special award given to Soldiers who demonstrate outstanding characteristics and qualities. Among these honors are the Infantry's Order of Saint Maurice, Armor's Order of Saint George, Signal's Bronze Order of Mercury, Quartermaster's Order of Saint Martin, and Transportation's Honorable Order of Saint Christopher. The Ordnance Corps also has a special, but little known, order it reserves for its outstanding Soldiers.

The Order of Samuel Sharpe

First introduced in May 1994 by the United States Army Ordnance Corps Association (USAOCA), the Order of Samuel Sharpe ensures the proper recognition of Ordnance personnel who have demonstrated the highest standards of integrity and moral character, displayed an outstanding professional competence, served the Army Ordnance Corps with selflessness, and contributed to the promotion of the Ordnance Corps in ways that stand out to the recipient's seniors, subordinates, and peers.

The order was named for the first master gunner in what is now the United States. Samuel Sharpe was born in England around 1610 and, by the age of 18, was charged with the "five pieces of ordnance" by the Court of Assistants in London. Later, as a member of the Council of the Plantation in the Massachusetts Bay Colony, he was officially named the "Master Gunner of Ordnance" and, according to the Army Ordnance Corps website, was charged with the care of the "ordnance, shot, powder, match, ladles, sponges, wormes, cartridges, armes, fire-works and the rest of the gunners."

The Samuel Sharpe medal depicts an eagle holding a flintlock rifle, surrounded by oak leaves, with a shell and flame overhead. The eagle represents America's freedom, which has been defended faithfully by members of the corps since 1812. The flintlock rifle represents the Ordnance Corps' beginnings and the materiel support provided by Ordnance personnel in both peace and war. The oak leaves represent the strength and resolve of the Ordnance Corps to stand the test of time. The shell and flame represent the unleashed energy of the Ordnance Corps.

Why the Obscurity?

While attending the Combined Logistics Captains Career Course, I talked to many Ordnance officers who did not know that the Ordnance Corps has this award. The Ordnance's Order of Samuel Sharpe is relatively new, which may explain its oversight by many Ordnance Corps members.

In my 6 years of active-duty service, I have neither been a part of nor even heard of a Samuel Sharpe ball. Talking with other Ordnance members, I have found that I am not alone in this. Little information is available about Samuel Sharpe on the Internet or in the library other than in a handful of unit newsletters announcing a new member. I received tremendous help from the USAOCA, but I believe that it should be the responsibility of each Ordnance member to know our corps' history.

Any member of the Ordnance Corps may nominate a deserving candidate for the Ordnance Order of Samuel Sharpe award. The approval authority is the nominee's superior Ordnance Corps general officer or colonel. When there is not an ordnance general or colonel available in the nominee's organization, the nomination must be endorsed by the nominator's commander and submitted to the USAOCA. The association will then review and coordinate approval by the Chief of Ordnance.

I encourage each member of the Ordnance Corps to nominate all those who are deserving of this award and show the rest of the Army that we too are proud of our corps and the countless contributions it has made to our Nation. Go Ordnance!

CAPTAIN JEFFREY J. QUAIL IS A TRAINER/MENTOR AT THE JOINT READINESS TRAINING CENTER IN FORT POLK, LOUISIANA. HE PREVIOUSLY SERVED AS THE COMMANDER OF A FORWARD SUPPORT COMPANY DURING OPERATION IRAQI FREEDOM 06–08 AND 09–10. HE HOLDS A BACHELOR'S DEGREE IN PUBLIC RELATIONS FROM MARQUETTE UNIVERSITY AND IS A GRADUATE OF THE ARMY ORDNANCE OFFICER BASIC COURSE AND THE COMBINED LOGISTICS CAPTAINS CAREER COURSE.

Transforming U.S. Army Supply Chains: Strategies for Management Innovation. Greg H. Parlier, Business Expert Press, New York, 2011, 290 pages.

The genius of Internet marketplaces like Amazon and eBay is not the millions of products (the hardware) that they carry; the genius is the software—the management of those products. As we launch into the 21st century, the U.S. Army supply system—or "supply chains," to more accurately reflect the full spectrum of acquisition, distribution, and utilization—is desperately in need of a major overhaul. This task is vastly more complex and difficult than the management of an Internet-based marketplace.

Greg H. Parlier's *Transforming U.S. Army Supply Chains: Strategies for Management Innovation* provides the "software" that will enable and empower the Army to complete the task of bringing together an increasingly interconnected world of vast and disparate resources into a coherent, innovative, thriving, and successful package. The book outlines demonstrated concepts for "management innovation as a strategic technology" that can transform the Army's supply chain and save billions of dollars as we approach a period of defense budget cuts.

Knowledge of these realms is not gained overnight. Parlier's book is based on his 30-year Army career and additional private-sector experience. Parlier graduated from the United States Military Academy in 1974 and received extensive education and experience in leadership and management, operations research, and strategic planning during his career. A former assistant professor of operations research at West Point, he was named the Army's Operations Research Analyst of the Year in 1987. He later served as the chief of the Resource Plans and Analysis Division in the Office of the Chief of Staff of the Army and then as the deputy commander for transformation at the Army Aviation and Missile Command (AMCOM). The final third of his career was focused on building, developing, and leading successively larger analytical teams confronting increasingly more demanding transformational challenges in large, complex commands.

After retiring from the Army, Parlier was a senior research scientist at the University of Alabama, developing a scientific approach for designing and implementing analytical architectures to improve public policy, operations management, and strategic planning in complex organizations and systems. His applied research focused on adapting supply chain theory and inventory management concepts to support Army logistics. Parlier then joined Science Applications International Corporation as a senior systems analyst, where he developed and applied "management innovation as a strategic technology."

His life's work in this field culminates in this book. Parlier begins by presenting a "practical approach for understanding the U.S. Army's extremely complex global logistics system." He moves on to a multistage conceptualized model used to "systematically analyze major organizational components of the supply chain, diagnose structural disorders, and prescribe solutions," using cost-benefit perspectives that incorporate the supply chain objectives of "efficiency, resilience, and effectiveness."

Next, he proposes an "analytical architecture" consisting of "four complementary modeling approaches," collectively referred to as "dynamic strategic logistics planning," in order to enable a coordinated, enterprise-wide approach for transformation. Parlier continues by pulling his theory together into a proposal for a "Center for Innovation in Logistics Systems" to accelerate and sustain continual improvement.

He also addresses strategic management challenges that he expects to arise with enterprise-wide integration and transformational change. He makes the point that "the fundamental issues and potential solutions [in his book] are broadly applicable to other large-scale military and industrial supply chains as well."

This is not some pie-in-the-sky academic theory. It is the product of a "multiyear, multiorganization research and development project" initiated by AMCOM shortly after 9/11. Beginning with an in-depth study, then a simplified research model, a research task group was organized in 2003 and proceeded to conduct demonstrations, experiments, and field tests.

The group was made up of personnel from the Army Materiel Command's Logistics Support Activity, the Army Materiel Systems Analysis Activity, RAND Corporation, the Institute for Defense Analyses, and the Logistics Management Institute. Stanford University, the Wharton School of Business at the University of Pennsylvania, the Massachusetts Institute of Technology, the Forum for Supply Chain Innovation, the Center for Transportation and Logistics, and the Lean Advancement Initiative provided additional academic expertise.

The concepts of this book have great potential to make enormous worldwide contributions to broad governmental and corporate realms. This is a powerful set of ideas that the corporate world will and must apply to fuel a worldwide revolution of innovation and transformation.

Dave Grossman is a retired Army lieutenant colonel and the author of numerous books, including On Combat and On Killing.

National Guard Troops Respond to Hurricane Irene

More than 7,600 National Guardsmen from 18 states, the District of Columbia, and Puerto Rico responded to civil authorities dealing with Hurricane Irene-related emergencies during the last weekend of August. During this disaster, National Guard coordination was greatly improved by the use of three new resources: a new National Guard Coordination Center (NGCC) in Arlington, Virginia, dual-status commanders authorized to command national and state troops in an emergency, and the deployment of strategically placed force packages before the storm.

Air Force General Craig McKinley, the chief of the National Guard Bureau, explained that the coordination center gave the National Guard the capability to coordinate with the Federal Emergency Management Agency, the U.S. Northern Command, and the District of Columbia, as well as the states and territories, to ensure the most effective support to civil authorities.

McKinley added that the NGCC enabled the National Guard to "bring the full benefit of our size, skills, training, experience, command and communications infrastructure, and legal flexibility to the whole-of-government response to the storm."

In response to the disaster, National Guardsmen—

- ❑ Provided maritime transportation to the islands of Vieques and Culebra in Puerto Rico.
- ❑ Flew helicopters from Alaska, Florida, Mississippi, New Mexico, and Ohio to stand by in the affected region for search and rescue, damage assessment, transportation, and other missions.
- ❑ Provided search and rescue, security, and transportation in North Carolina.
- ❑ Provided engineer support and equipment staging in Virginia.
- ❑ Helped transportation officials control traffic in the District of Columbia.
- ❑ Aided in recovery efforts to rescue people stranded by floodwaters in a hotel in upstate New York.
- ❑ Filled sandbags and assessed damages in Massachusetts.
- ❑ Supported communications in Rhode Island.
- ❑ Handed out cots and supplies in Delaware.
- ❑ Provided shelter in New Jersey.
- ❑ Cleared debris and performed high-water search and rescue missions in Connecticut.
- ❑ Provided mission command support in Maine.

Virginia Army National Guardsmen unload pallets of cots and meals ready-to-eat in Sandston, Virginia, in preparation for response to Hurricane Irene.
(Photo by Cotton Puryear, Virginia Department of Military Affairs)

TRANSCOM Holds Exercises in Conjunction With National Level Exercise 2011

In May, the U.S. Transportation Command (TRANSCOM) participated in National Level Exercise (NLE) 2011—a White House-directed, Congressionally mandated exercise to test the Government's response to catastrophic earthquakes—by holding Turbo Challenge 2011 and Ultimate Caduceus 2011.

Turbo Challenge is a tier 1 command post exercise, and Ultimate Caduceus concentrates on testing patient transport capabilities. The TRANSCOM exercises gauged the command's readiness to—

- ❑ Plan and conduct mobility forces deployment and patient movements in support of Department of Homeland Security and U.S. Northern Command (NORTHCOM) requirements in a cyber-constrained environment.
- ❑ Plan logistics sustainment for Defense support of civil authorities.
- ❑ Conduct fused planning and manage current operations.
- ❑ Demonstrate continuity of operations in a physically degraded environment.

A deployment training team from the Joint Warfighting Center, U.S. Joint Forces Command, observed the exercise and noted TRANSCOM's accomplishments in operation plan execution, medical planning and operations, and cyber awareness.

The TRANSCOM exercises were two of several exercises held as part of NLE 2011. Others included Positive Response 2011 (a Joint Chiefs of Staff exercise), NORTHCOM's Ardent Sentry 2011, and the Department of Health and Human Services' Noble Life Saver 2011.

Reservists Test Skills During Nationwide Quartermaster Liquid Logistics Exercise

From 1 to 17 June, the Quartermaster Liquid Logistics Exercise 2011 provided Army Reserve Soldiers from across the country a chance to hone their quartermaster skills. The exercise was held at Fort Pickett, Fort A.P. Hill, Fort Eustis, and Fort Story, Virginia; Fort Dix, New Jersey; Fort Bragg, North Carolina; Fort Huachuca, Arizona; and San Pedro, California.

The exercise allowed Soldiers to drive fully loaded 5,000- to 7,000-gallon fuel trucks, operate and maintain field laboratory equipment and reverse osmosis water purification units, and experiment with the mobile expeditionary water packaging system that bottles purified water. The exercise also tested other quartermaster functions, such as laundry, tailoring, bath and shower services, laboratory testing of potable water, and inspections of field conditions.

A Soldier from the 973d Quartermaster Company assists an officer from the 1893d Medical Detachment in obtaining a water sample from a bladder of purified water to be tested for microbacterial contamination during the nationwide Quartermaster Liquid Logistics Exercise 2011. *(Photo by SFC Jo Hoots, 214th Mobile Public Affairs Detachment)*

Construction of New Defense Logistics Agency Distribution Center Underway in Europe

In early 2012, the new 250,000-square-foot Logistics Distribution Center Europe in Germersheim, Germany, will be ready to house all Defense Logistics Agency (DLA) Europe offices and supply chain operations.

The $25 million building will enable DLA to support Soldiers in Europe, the Middle East, and Africa more effectively by consolidating its business functions, such as receiving, storing, issuing, cross-docking, and transporting supplies, under one roof. The new facility will increase the distribution center's storage and transportation capability by increasing the number of its bays from 9 to 26 and will improve efficiency by eliminating redundancy in materials handling.

In addition to giving Soldiers better service, the new building will also be environmentally friendly, boasting a biomass heating system that will allow the center to generate close to 100 percent of its heating on site. The building will also have rooftop solar panels to generate electricity, energy-efficient lighting, extensive skylights, and radiant-heat flooring.

Energy Initiatives Office Task Force Established

On 10 August, Secretary of the Army John M. McHugh announced the establishment of the Energy Initiatives Office (EIO) Task Force to help address the rising energy security challenges, escalating fuel prices, and stricter Federal energy mandates facing the Army. The task force is part of the Office of the Assistant Secretary of the Army for Installations, Energy and Environment and will centrally manage the development of large-scale renewable energy projects for the Army.

Army installations have been interested in building renewable energy infrastructure, but they often lack the expertise needed to develop these projects. Through the task force, the Army plans to conduct an aggressive outreach effort to attract and engage private industry to foster strategic and financial collaborations in support of the Army's installation energy needs. (The Army's current goal is to have 25 percent of its energy coming from renewable sources by 2025.)

The renewable energy that the Army needs to produce in order to achieve enhanced energy security is estimated to require an investment of up to $7.1 billion over the next 10 years. This investment would generate 2.1 million megawatt hours of power for the Army each year.

Oshkosh Defense to Supply New and Recapitalized Family of Heavy Tactical Vehicle Trucks

In June, the TACOM Life Cycle Management Command ordered more than 730 new and recapitalized trucks from the family of heavy tactical vehicles from Oshkosh Defense, a division of Oshkosh Corporation. The trucks include new heavy equipment transporter (HET) A1s and new and recapitalized heavy expanded-mobility tactical truck (HEMTT) A4s, including light equipment transporters.

The new HET will feature a six-person armor-ready cab, high-capacity front suspension, electrical upgrades, improved diagnostics, and standard air conditioning.

To meet HEMTT A4 configuration requirements, recapitalized vehicles will receive improved suspension

systems, a fully air-conditioned and armor-ready cab, and a more powerful drive train.

Production of the trucks is expected to begin in April 2012.

Defense Maintenance Award Winners Announced

A Fort Campbell, Kentucky, unit was among the field-level winners of the 2011 the Secretary of Defense Maintenance Awards. The awards are given each year to recognize achievements in weapon system and military equipment maintenance.

This year, D Company, 6th Battalion, 10th Aviation Regiment, 101st Combat Aviation Brigade, tied the Navy's Fleet Readiness Center Southwest, Naval Base Coronado, based in San Diego, California, in the field-level medium category.

The 2011 Robert T. Mason Depot Maintenance Excellence Award went to the Air Force's KC–135 Programmed Depot Maintenance Team at the Oklahoma City Air Logistics Center in Oklahoma. In 2010, the team maintained a record 55 aircraft and kept the over-50-year-old jets flying nearly 50,000 sorties in support of Operation Enduring Freedom, Operation Iraqi Freedom, and Horn of Africa missions.

U.S. Army Africa Conducts Deployment Capability Training in Burundi

At the request of the Burundian military, the Africa Deployment Assistance Partnership Team (ADAPT), U.S. Army Africa (USARAF), conducted its first deployment capability training event with members of the Burundian Defense Forces from 6 to 10 June at the Bujumbura Military Airfield in Burundi.

Traffic management specialists from the 21st Theater Support Command in Kaiserslautern, Germany, and an ammunition specialist and the theater security cooperation program manager from the USARAF Logistics Directorate in Vicenza, Italy, taught and monitored the event.

ADAPT is a U.S. Africa Command program managed and executed by USARAF. The team was in Bujumbura to share best practices on deploying personnel and equipment by aircraft and to enhance the force-projection capabilities of African militaries to better support peacekeeping, humanitarian relief, and United Nations missions. Increasing deployment interoperability with U.S. forces in joint and combined operations, training, and exercises was a focal point of this military-to-military training opportunity.

ADAPT is a four phase program that is conducted every 12 months on the African continent. USARAF has already conducted training in Rwanda, Uganda, Burkina Faso, Botswana, and Ghana.

Solar Shade Produces Electricity in Djibouti

A year-long limited-user test of a solar shade by Kansas National Guard Soldiers at Camp Lemonnier, Djibouti, has proven successful. The solar shade system consists of 72 solar panels located on top of a 40- by 60-foot tent and generates 2 kilowatts of power from the sun daily. The power is stored in high-mobility multipurpose wheeled vehicle batteries housed in three metal boxes.

According to Major Tim Franklin, the uniformed science technology advisor to U.S. Army Africa, "The solar shade produces the same amount of power that would be produced by a gas-driven generator using 8 gallons of fuel a day, or approximately 2,900 gallons in a year."

A Burundi soldier tightens a cargo strap during the practical exercise portion of Phase I of U.S. Army Africa's ADAPT training at the Bujumbura Military Airfield in Burundi.

RECENTLY PUBLISHED

Army Tactics, Techniques, and Procedures (ATTP) 1–0.1, S–1 Operations, published 16 May 2011, was previously published as Field Manual Interim 1–0.1. The ATTP enhances the delivery of human resources (HR) support in brigade and battalion S–1 sections by providing HR leaders with the tools to develop operation plans, standing operating procedures, and military decisionmaking process strategies. The S–1 structure has been enhanced to support operations through all force pools of the Army Force Generation process. Continuing HR transformation will affect S–1 operations by reshaping HR processes and business practices, introducing technological changes to multicomponent HR systems, realigning the Army HR structures, revising doctrine to integrate lessons learned, delivering HR services as close to Soldiers as possible, and building on the ability to provide support from home station.

ATTP 4–33, Maintenance Operations, published 18 March 2011, was previously published as Field Manual 4–30.3. This ATTP describes operating force maintenance operations and includes detailed information on the change from the Army's four-level maintenance system (unit/organizational, direct support, general support, and depot) to a two-level maintenance system (field maintenance and sustainment maintenance). While the ATTP focuses on operational- and tactical-level maintenance organizations and their missions, it also lays out the roles and functions of strategic-level maintenance organizations.

Department of Defense (DOD) Directive 1300.22E, published 25 May 2011, establishes policy and assigns responsibilities for the DOD Mortuary Affairs Program. The directive designates the Secretary of the Army as the DOD Executive Agent for Mortuary Affairs; establishes the Central Joint Mortuary Affairs Board for coordinating mortuary affairs policy, procedures, mobilization planning, and recommendations on mortuary services during military operations; and provides overarching policy guidance for Joint Publication 4–06, Mortuary Affairs in Joint Operations.

Franklin said that when the costs of transportation for fuel and generator maintenance are figured in, a system like this could save the Army as much as $40,000 a year.

"Most importantly, the reduction in fuel convoys equates to a reduction in associated casualties from IEDS [improvised explosive devices] and small-arms fire when used in a hostile environment," Franklin said.

The system has proven itself to be relatively maintenance free, despite its exposure to extreme weather conditions, such as harsh winds, high temperatures, and dust. Now that the limited-user test is complete, it is ready for use in the Combined Joint Task Force–Horn of Africa area of operations.

Rapid Equipping Force Initiative Reduces Reliance on JP8 in Afghanistan

In August, the Army's Rapid Equipping Force (REF) began equipping units for an initial assessment of equipment that will reduce the Army's reliance on JP8 fuel. The assessment is part of a partnership initiative between REF and the Defense Technical Information Center's Weapon Systems Technology Information Analysis Center to procure, deploy, and assess alternative and renewable energy systems for deployed units, particularly those in remote locations.

The initiative is called "Energy to the Edge," and it is part of the Army's Net Zero effort to respond to growing energy demands.

REF, with input from the Marine Corps' Expeditionary Energy Office, Project Manager Mobile Electric Power, Product Manager Ground Soldier, and the Army Communications-Electronics Research, Development, and Engineering Center, selected solutions based on availability, deployment performance, and Department of Defense safety test results. The selected solutions are now being tested for viability in theater.

A Soldier in Afghanistan drinks clean water from a carbon water purification system provided through the Rapid Equipping Force "Energy to Edge" initiative. Using the water purification system decreased the number of water supply vehicles traveling on roads known to be threatened by improvised explosive devices.

1244th Transportation Company Helps the United Kingdom Withdraw From Iraq

A British shipping container in Umm Qasr, Iraq, is loaded onto a truck belonging to the 1244th Transportation Company, Illinois Army National Guard, for transportation out of Iraq on 16 May. The British liaison officer asked for the unit's assistance in moving the country's last remaining equipment out of Iraq because it did not have the assets to do so on its own. The 1244th received assistance from the personnel security detail of the 230th Sustainment Brigade, Tennessee Army National Guard. *(Photo by SGT Shannon R. Gregory)*

UPCOMING EVENTS

Defense Working Group on Nondestructive Testing

The 59th Defense Working Group on Nondestructive Testing (DWGNDT) will be held from 6 to 8 December 2011 at the Kingsmill Resort and Conference Center in Williamsburg, Virginia. This year, the event will be hosted by the Army Aviation Logistics School, based at Fort Eustis, Virginia.

DWGNDT is an annual meeting of engineers, scientists, technicians, and managers from all U.S. Government commands and agencies responsible for developing and applying nondestructive testing methods in research, engineering, maintenance, and quality assurance. The working group is restricted to U.S. military, Government civilian, and contract personnel under the direct control of a military or Government civilian. However, this year a full day will be dedicated to non-Government presenters.

For more information or to register, visit the DWGNDT website at www.dwgndt.org.

Defense Logistics 2011

Worldwide Business Research will hold Defense Logistics 2011 from 29 November to 2 December at the Marriott Crystal Gateway in Arlington, Virginia.

This year's event focuses on global, affordable, and efficient logistics and will address the challenges of locating cost savings for the military, drawing down troops in overseas theaters, and delaying and eliminating programs designed to acquire new equipment.

For more information or to register, visit the conference website, www.defenselog.com.

ISSN 2153-5973
DEPARTMENT OF THE ARMY
ARMY SUSTAINMENT
US ARMY LOGISTICS UNIVERSITY
2401 QUARTERS ROAD
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- ❑ A Logistics Major's 5-Year Plan
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- ❑ Who Pays the Bill?
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