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ARMY SUSTAINMENT

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Finding the MRAP's Future Role

LOGSA and the Logistics Information Warehouse
Deploying a Financial Management Support Operations Team
A New Dash for BCS3

PB 700–11–05 Headquarters, Department of the Army
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Cover: The MRAP—the mine-resistant ambush-protected vehicle—might turn out to be the iconic image of the wars in Afghanistan and Iraq. The Department of Defense acquired MRAPs to meet an urgent requirement: protecting troops on the move against improvised explosive devices. But the rapid fielding of this solution to a specific challenge has created issues of doctrine, training, sustainment, and integration into the Army's force structure and raised questions about how the MRAP will fit into the Army's future plans. In the articles beginning on pages **24**, **26**, **28**, and **30**, four officers examine how the MRAP should be used. In the cover photo, Soldiers check returning MRAPs after a combat patrol at Camp Spann in Afghanistan. *(Photo by PO2 Jonathan Chandler)*

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Vital Partners in Sustainment: CASCOM's Support of the Reserve Component

BY MAJOR GENERAL JAMES L. HODGE

One of the key factors underlying the Army's status as the preeminent land-based military force in the world is its ability to integrate and employ the Reserve component—the Army National Guard and the U.S. Army Reserve—as part of the operating force. This incorporation of the Reserve component is crucial to maintaining one of the Army's decisive advantages in the global environment: its ability to sustain itself over global distances. With the majority of the Army's total sustainment force in the Reserve component, the Guard and Reserve provide the depth needed to sustain Army forces in all but the most limited contingencies.

For example, at echelons above brigade, Reserve component sustainment units comprise over 72 percent of the total force. That number is projected to increase to 77 percent by 2017, with 100 percent of many capabilities found only in the Guard and Reserve.

While serving as the commander of the Surface Deployment and Distribution Command (SDDC), I saw firsthand the invaluable contributions made to the fight by the Reserve forces. They clearly understood the importance of support to the warfighter, embraced the mission, and melded seamlessly into the organization with the Active component.

Because the Reserve component is such an important part of the sustainment force, the Army Combined Arms Support Command (CASCOM) and its proponent schools are heavily engaged across the doctrine, organization, training, materiel, leadership and education, personnel, and facilities spectrum to ensure continued institutional support to the Guard and Reserve.

That engagement begins with CASCOM's organizational structure, where Reserve component personnel are integrated at every level. The integration starts in the command group, where CASCOM's Deputy Commanding General (DCG) for Mobilization and Training is a Reserve brigadier general. Supporting the DCG are over 70 Active Guard Reserve Soldiers assigned to the CASCOM staff and its proponent schools. These Soldiers' understanding of the Reserve component's structure and training environment provides the critical insights that CASCOM needs to effectively support the Guard and Reserve.

The knowledge and understanding possessed by its Reserve component personnel, in turn, provide the foundation for CASCOM's direct support of Reserve component education and training. The size of this support can be seen in the student load for 2010, when CASCOM schools trained more than 27,000 Reserve component sustainment Soldiers.

CASCOM also worked closely with the Army National Guard's regional training institutes and the Army Reserve's 94th Training Division to train an additional 28,000 sustainment Soldiers. CASCOM's ongoing effort to update both Active and Reserve component programs of instruction in its schools ensures that all Soldiers, regardless of which school provides their training, meet the same standards upon graduation.

Beyond the schoolhouses, CASCOM provides major support to the collective training of both Components through the Command Post Exercise–Sustainment (CPX–S). This innovative collective exercise fills a training gap for Active, Guard, and Reserve expeditionary sustainment commands, sustainment brigades, and movement control battalions as they prepare to deploy.

Reverse collection and analysis team events for redeploying units have identified the CPX–S as one of the most important training events Soldiers received during their preparation for deployment. The CPX–S is not currently a program of record, so CASCOM is working with the Army Training and Doctrine Command, the Guard and Reserve, and the Army Forces Command to develop a long-term training strategy to meet sustainment units' needs.

In the coming months and years, CASCOM support of the Reserve component faces two major challenges: a more austere funding environment that will affect all Army organizations and programs, and the transformation of the Army's way of doing business to an enterprise approach.

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LOGSA: Sustaining the Heartbeat of the Materiel Enterprise

by Colonel Robert P. Sullivan and Juanetta L. Brent

The Secretary of the Army recently directed the Army Materiel Command to create "a single, common location for all Army materiel stakeholders to access, acquire and deliver data and information for managing Army materiel." The Logistics Support Activity's Logistics Information Warehouse is serving as that repository, and all logisticians should be familiar with how it is changing in response to a changing military environment.

The Army's Materiel Enterprise must have a heart that can pump the information it needs in order to function as a healthy and effective system. The Army Materiel Command's Logistics Support Activity (LOGSA) at Redstone Arsenal, Alabama, plays a key role in sustaining the heartbeat of the Materiel Enterprise by providing logistics data, information, and analysis for its customers worldwide.

Logisticians must continually focus on the effect of the operational environment on the Soldier. Having a clear perspective on the ever-changing conditions facing Soldiers enables logisticians to accurately interpret the environment and make tough decisions based on the best information available. Where do logisticians find that information? The answer is the Logistics Information Warehouse (LIW).

The New Military Environment and LOGSA

In our individual lives, we must become acclimated to our environment—wherever we find ourselves—if we are to function effectively. The same is true for the Army. Soldiers must continually adapt to environmental changes, especially in an era of persistent conflict.

The revolutionary changes and technological advances affecting military affairs today are unlike any witnessed before in the long history of U.S. warfare. Massive increases in materiel procurement and the heightened readiness demands of the Army Force Generation (ARFORGEN) cycle have dictated a shift toward a new system of business management—the Army's enterprise planning system.

The enterprise planning system consists of four core enterprises: Materiel, Readiness, Human Capital, and Services and Infrastructure. The Materiel Enterprise is cochaired by the Assistant Secretary of the Army for Acquisition, Logistics, and Technology (ASA [ALT]) and the commanding general of AMC. This partnership creates a more complete integration of the life-cycle management of systems between the developer (ASA [ALT]) and the sustainer (AMC).

The Army's Materiel Enterprise and the emerging Enterprise Resource Planning (ERP) system are revolutionizing logistics automation business practices, processes, and functions. LOGSA's role in ERP is to support the development and execution of an integrated approach to managing logistics information.

LOGSA's Mission and Today's LIW

Our mission at LOGSA is to provide timely and integrated life-cycle logistics information and expertise in support of warfighters globally to meet full-spectrum operational requirements. Our workforce of 850 military, civilian, and contractor personnel provides acquisition logistics support, logistics information intelligence, and logistics technical assistance to customers worldwide.

LIW is essential to LOGSA's successful performance of its mission. In fact, the Secretary of the Army in March designated LIW to serve as the Army's authoritative repository for logistics data. This will support the optimization of ARFORGEN materiel management.

LIW is the Army's primary source for storing, accessing, acquiring, and delivering integrated logistics domain data and information for reuse, analysis, and aggregation. However, LIW is more than just a data repository. It also houses logistics reference information, such as electronic technical manuals and interactive electronic technical manuals, FED LOG [Federal Logistics Data], reports, applications, and tools made available to the customer in a user-friendly portal format. The broad suite of tools offered by LIW is gov-

erned by business rules and logic that ensure that data are presented to Army commanders and senior leaders as actionable intelligence.

The Future of LIW

To keep LIW healthy, LOGSA must integrate and transform its products and services to support the emerging ERP and the AMC and ASA (ALT) Materiel Enterprise Transformation Plan. To accomplish this, LOGSA developed a comprehensive plan, with a related executive order, structured along four overlapping lines of effort (LOE). You can think of these four LOEs like the four chambers of the human heart. The heart's chambers serve to pump blood, but each has a specific life-preserving purpose. What follows is a summary of the LOE framework.

LOE 1

The first LOE is to ***develop the lead materiel integrator decision support tool***. AMC is the Secretary of the Army's designated lead materiel integrator for synchronizing and integrating equipping distribution. This includes materiel distribution solutions to improve equipment on-hand readiness and achieve the goals established in the Army's Equipping Strategy. AMC's executive agent for this task is the Army Sustainment Command.

To enable equipping, a web-based, collaborative decision support tool will—

- Provide an automated link to an integrated demand signal.
- Provide a predictive capability that allows the Materiel Enterprise to visualize the future impacts of current sourcing decisions.
- Provide a course-of-action capability to rapidly evaluate alternative sourcing solutions.
- Automate an interoperable materiel synchronization capability networked to LIW that provides shared situational awareness across the Army.
- Present output reports, such as an equipping matrix.

To achieve these objectives, LOGSA's role is to lead the development of the decision support tool module, the work flow module, and all associated reports. However, before moving out, we must first identify acquisition and logistics information and data requirements in support of the lead materiel integrator. Once the data requirements are determined, data gaps must be identified and filled. Sufficient data oversight is also critical to ensure that the data are the highest quality and most accurate available.

LOE 2

The second LOE is to ***support Army logistics transformation to the ERP strategy***. LOGSA established an enterprise-class integrated data warehouse in July 2010. A second phase of development is now underway that includes maturing the integrated data warehouse, reengineering business processes and redesigning applications to exploit data in providing futuristic analytics, and modernizing applications and data brokering by means of a service-oriented architecture. ["Data brokering" refers to gathering and making available information.]

LOGSA has also developed a growing partnership with the Project Manager, Army Enterprise Systems Integration Program. Several key tasks have evolved as part of these initiatives.

The most significant task is to sustain operations as the Army transforms to an enterprise system. Users must be capable of reading data from legacy systems and the emerging ERP system. A process dubbed "backwards compatibility" allows for the translation of enterprise data into a legacy format. However, legacy logistics tools (such as the Battle Command Sustainment Support System [BCS3], Defense Readiness Reporting System–Army [DRRS–A], and Operating and Support Management Information System [OSMIS]) cannot translate certain ERP data elements and records. To mitigate this shortfall, the initiative to make data "backwards compatible" will enable LIW to broker logistics data from GCSS–Army (Global Combat Support System–Army)-converted units to legacy systems.

Another task is developing metrics to measure system readiness and capacity to perform enterprise-level analytics. Similar to an x ray, the enterprise LIW will maintain domain-wide visibility of requirements and capabilities while simultaneously sustaining current and enduring operations.

LOE 3

The third LOE is to ***develop and sustain LIW architecture and storage***. As we redesign applications to provide customers with a better presentation, we are also redesigning the internal, or "back-end," architecture of LIW. This will allow us to move data to the lowest possible level. We will also use multiple tiers of storage. Data that users need to access immediately will thus be available on a higher tier of storage to more rapidly satisfy their needs.

Data stored for archival or historical purposes will be placed on less expensive storage tiers. If we see a need to access this type of information rapidly, it will be moved automatically to a higher-performing storage tier. It then will be returned to a lower tier as the demand decreases.

We also have created an LIW Data Warehouse that will power the integrated LIW and its applications. This warehouse will also be the foundation for brokering large amounts of data to critical Army decision support tools such as DRRS–A, BCS3, OSMIS, and the Army Enterprise Equipping System.

As we transform LIW, we are conducting continual

mission analysis and working to develop the best solutions for hosting primary and critical backup data.

LOE 4

The fourth LOE is ***LIW's transformation and optimization in support of the Army ERP strategy, making data more accessible to our Soldiers and partners***.

How does LOGSA envision the future of the enterprise LIW? Our intent is to optimize current structure, data, architecture, and important business practices, processes, and rules to—

- ❑ Provide the Army a central, authoritative repository for data and logistics answers.
- ❑ Improve logistics and financial visibility by synchronizing and integrating a complex suite of networks and functional components.
- ❑ Enable an effective and efficient feed of actionable information to other logistics domains, commands, and trading partners through the expanding use of web services.

As we transform to meet the needs of the Army, we must ensure that LIW provides customers an efficient and user-friendly system. Adhering to Army and AMC guidance, we will determine the best "front-end" applications available for LIW and ensure that quick and effective query functions are available.

To meet this objective, we are documenting legacy products and services, identifying faulty logic within near- and long-term enduring products and services, identifying candidate processes for "leaning" [applying Lean Six Sigma analysis], and facilitating a value-stream mapping event. We are also evaluating internal resources and potential substitutes, evaluating related agreements with customers and external suppliers of information and services, and identifying overlaps with other organizations. Finally, we are developing and executing a "sunset" plan for applicable legacy tools and data feeds that will have no utility once we achieve the ERP's full operating capability.

As we take revolutionary steps to improve access to and the accuracy of logistics data, information, and analysis, logisticians should remember these key points about LOGSA.

The environment drives change. Information and automated systems that turn data into actionable information and intelligence must change with the environment.

LIW has more than 1,500 legacy reports, tools, and applications available and passes data to over 150 trading partners. We recognize the need to provide customers with sustained capabilities while instituting enduring change. We have developed clear lines of effort that extend from meeting the data needs of emerging partners to upgrading and optimizing our storage and services capability.

LOGSA's Most Critical Tools in Support of ARFORGEN

Tools developed to support theater redistribution:

- ❑ Theater-Provided Equipment (TPE) Planner
- ❑ Automated Reset Management Tool (ARMT)
- ❑ Left Behind Equipment (LBE) Visibility Tool

Special tools built to support Army modularity:

- ❑ Task Force Builder
- ❑ Preset Equipment Assessment Tool (PEAT)

Tools developed to provide a strategic-level common operating picture:

- ❑ The Army Force Generation Common Operating Picture (ARFORGEN COP)
- ❑ 360 Degree Logistics Readiness (360dLR)
- ❑ My Supply Support Activity (MySSA)

The Secretary of the Army has designated LIW as the Army's single repository of authoritative logistics. LIW provides end-to-end life-cycle logistics support data and information to support activities across the Department of Defense. LOGSA's goal is to provide an integrated, single source in meeting the information needs of the Materiel Enterprise and beyond.

The significant assistance that LIW brings to the table makes LOGSA's role vital in sustaining the heartbeat of the Materiel Enterprise.

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Force Management and Integration Within a Deployed Sustainment Brigade

BY MAJOR JOHN M. RUTHS

Deployment is a complex management challenge for sustainment brigades because they must identify and coordinate the arrival and replacement of numerous units over time.

In the fall of 2009, theater planners recommended that a second sustainment brigade be added to the force structure in Afghanistan and that it be placed at Kandahar Airfield to support Regional Commands (RCs) South and West and the soon-to-emerge RC Southwest. As U.S. Forces increased and expanded throughout Afghanistan, one sustainment brigade located in RC East could no longer provide mission command for all tactical logistics above the brigade combat team (BCT) level in Afghanistan.

In December 2009, President Obama announced a force uplift strategy, and the 43d Sustainment Brigade was identified as the second sustainment brigade to deploy to Afghanistan and was organized into the first push of forces, Force Package 1. The brigade's force management section, organized under the plans section, immediately started to identify the rest of the brigade's down-range task organization and to assemble a force management team.

A sustainment unit trains at the National Training Center at Fort Irwin, California, before deploying to Afghanistan. This unit's predeployment force integration process was effective and helped to influence how it trained before deployment. *(Photo by MAJ John M. Ruths)*

The Army's modular force logistics concept, while giving considerable flexibility to sustainment commanders in developing a force structure to support any maneuver element, also creates many challenges for force management. Unlike a BCT, which deploys as one unit on a set timeline, a sustainment brigade must manage the deployment, relief in place and transfer of authority (RIP/TOA), and redeployment of each element within its formation. Successfully executing this critical task requires a comprehensive strategy that covers the entire force management process.

In retrospect, the modular nature of the 43d Sustainment Brigade—one where units are arriving and departing a theater over time rather than all at once—served as a forcing function to expeditiously move the force integration process forward. In preparation for its deployment to Afghanistan in support of Operation Enduring Freedom 10–11, the brigade had to develop this process for the existing force structure in RCs South, West, and Southwest and for new units included in Force Packages 1, 2, and 3 of the force uplift.

Unit Identification

The first step was to identify each subordinate unit in the formation and its position in the Army Force Generation (ARFORGEN) cycle. With the support of the 82d Sustainment Brigade, which was the sustainment

brigade in RC East, the 43d Sustainment Brigade was able to obtain a common operating picture of the units on the ground and their projected replacements.

Identifying every unit associated with the force uplift proved more challenging. A team of three people was assembled and trained to compile all the unit data pulled from U.S. Joint Forces Command and Army Forces Command (FORSCOM) deployment orders, the Forces Requirements Enhanced Database, the Joint Capabilities Requirements Manager (JCRM) system, and the Army Force Management Support Agency. This information was used to create a complete picture of the brigade's deployed task organization.

The brigade commander, Colonel Edward M. Daly, and the rest of the command group immediately recognized the importance of these data. Back at the brigade's home station at Fort Carson, Colorado, during formal ARFORGEN briefs held before the deployment, Colonel Daly often said, "It takes a brigade to deploy a company." The very same proved to be true about the reception of units within the deployed brigade headquarters.

The picture of the task organization that the force management team created was more than just a line-and-block chart. The brigade staff had to array the task organization over time to identify potential points of friction. For example, were there any windows of time in which a large number of RIP/TOAs were scheduled or that overlapped with the RIP/TOA of a major supported unit? It also was important to find contact information for every down-trace unit and initiate contact.

While the whole team was being identified and contacted, the next challenge in the process was being tackled: What did the brigade need to know about these units, what would it be able to influence, and what did the units need to know about the brigade?

Unit Integration

The brigade's force management team, in conjunction with the entire brigade staff, created a thorough product to pass on to new units. This product included the down-range mission, operating environment, unit standards, command philosophy, and process for tracking units through the deployment cycle. That packet was a critical first introduction to subordinate units.

Though the task organization would not take effect until a unit arrived in Afghanistan, the brigade wanted to bring units on board as quickly as possible to make them part of the team. Anything that helps chip away at the "first 100 days" concept is a positive step. Early contact with company-sized formations served several purposes. It gave home-station commanders an opportunity to model their training plans to match the unit's deployed mission set. That is valuable because a unit does not necessarily perform its doctrinal mission in theater.

For example, in Afghanistan, petroleum transportation companies serve as general transportation and convoy security companies. A deploying unit's mission is crucial information for home-station commanders and mobilization stations to have. It gives the not-yet-deployed unit's command team the opportunity to coordinate for the resources they need to train. Units that arrive with untrained Soldiers burn valuable "boots on ground" time before they are able to support any missions.

Not knowing the mission set can also add strain to the TOA process by potentially making it longer. Early contact can facilitate a vital early snapshot of supply and personnel readiness. Repeated deployments have left some units severely short of equipment and personnel. Having this information on hand early enough to correct problems proved to be vital. A commander down range, in the fight, can influence the Army Human Resources Command and FORSCOM to fill resource shortfalls. The 43d Sustainment Brigade staff was able to make those calls and help deploying units because it possessed the information in time to assist. Learning when a unit arrives that it is 70-percent filled is too late to effect change.

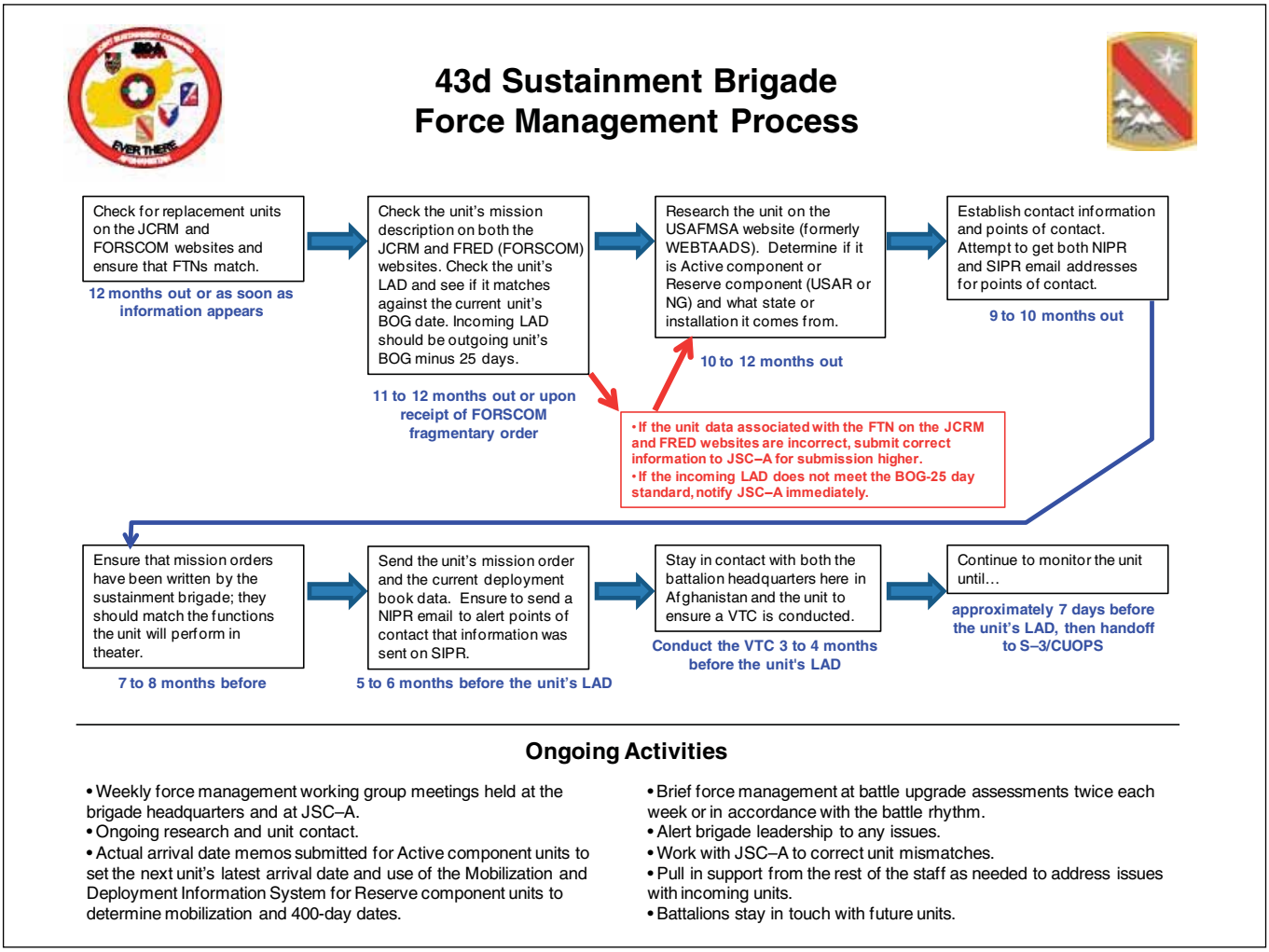
Two products came out of this staff assessment. One was a guide for newly identified units that educated them on 43d Sustainment Brigade policies and procedures and provided critical training guidance for their commanders to use in shaping their predeployment training. The other was a force integration brief that informed the brigade commander about the unit transition schedule 9 to 12 months ahead of a unit's arrival and the status of each unit RIP/TOA. These products were critical tools to make the initial transition smoother for units new to the brigade.

The introduction and guide for new units included the following products:

- A letter of introduction from the brigade commander and command sergeant major.
- The brigade's mission and the commander's intent and priorities.
- The command philosophy.
- The mission set order, spelling out what the unit would do and the nature of its mission.
- The RIP/TOA packet.
- RIP/TOA tasks.
- The mission's anticipated timeline.
- A list of theater-provided equipment, if applicable.
- The brigade force integration brief, which tracked the progress of both incoming and outgoing units through the RIP/TOA process. (This was also briefed to the brigade commander twice weekly in his update brief for active transitions or assumptions.)

First impressions are lasting impressions. Quickly integrating a unit and bringing it on board helps to ease the transition process and maintains uninterrupted support to maneuver units.

Another important facet involved the mission information on each unit that is shown on the FORSCOM



This process map shows what happens and when it should happen throughout the force management process. A process map such as this helped the 43d Sustainment Brigade develop measures of effectiveness for each major area of operations. These measures prevented actions from happening too late.

and JCRM websites. The force management team had to determine if each unit's narrative matched what the brigade would send out in the mission set order. This is important because the unit's normal predeployment higher headquarters may also check the unit's information. The narrative should really describe what the unit will do while deployed and, in doing so, give the commander an idea of what to train on and even how to do it. This might not seem very important, but it is really a key part of the process. A monthly working group was started to closely examine unit narratives so that adjustments could be sent to correct those that needed it.

Managing the Process

The ARFORGEN cycle and unit transitions are dynamic processes that demand constant oversight. To stay current with every ongoing and upcoming unit transition, force management and integration must be part of the unit's battle rhythm and receive the appropriate command emphasis. To manage the process on a weekly basis, the brigade's force management team hosted a weekly video teleconference (VTC) with the brigade's subordinate battalions. Those VTCs, chaired by the brigade deputy commander or executive officer, were a critical forum for providing updates on incoming units' preparations for deployment and for providing guidance and addressing concerns.

Like all meetings, preparation for the VTC was essential to maximizing the meeting's effectiveness. Each battalion was required to update its information no later than 24 hours before the meeting and to address any concerns. In the VTC, battalions were able to provide more thorough, interactive updates. Most issues were either successfully addressed or assigned to an action officer with a suspense for resolution. Eventually, the brigade's higher headquarters, the Joint Sustainment Command–Afghanistan (the 184th Expeditionary Sustainment Command from the Mississippi Army National Guard), started a weekly working group meeting that brought yet another useful tool to the process.

Legend		
BOG	=	Boots on ground
CUOPS	=	Current operations officer
FORSCOM	=	Army Forces Command
FRED	=	Force Requirements Enhanced Database
FTN	=	Force tracking number
JCRM	=	Joint Capabilities Requirements Manager
JSC-A	=	Joint Sustainment Command–Afghanistan
LAD	=	Latest arrival date
NG	=	National Guard
NIPR	=	Nonsecure Internet Protocol Router
SIPR	=	Secure Internet Protocol Router
USAFMSA	=	U.S. Army Force Management Support Agency
USAR	=	U.S. Army Reserve
WEBTAADS	=	Web Based Total Army Authorization Documents System

The 43d Sustainment Brigade effectively linked each currently deployed unit with the unit that would eventually replace it. Since these units shared force tracking numbers (FTNs), they were fairly easy to match with each other (the only difference being the part of the FTN that delineated the year). The brigade's force manager created a single sheet that made it possible for each subordinate battalion's force manager to track units. A timeline across the top of the sheet showed key dates, including the date of the incoming unit's arrival in theater, the date the outgoing unit would reach its last day of boots on the ground (which was the date of its arrival in theater plus 364 days), and the date the units would conduct their TOA ceremony. The rest of the space was evenly divided between the incoming unit and the outgoing unit.

On the incoming side, various areas were tracked under the headings of S–1, S–2, S–3, S–4, S–6, medical, and transportation. These areas of the sheet were populated as the information became available or as the subordinate battalion and the future deploying unit got to know one another through the process of exchanging information.

On the other side, the outgoing unit was tracked with the same headings but covered specific tasks that fit an outgoing unit. These included the tracking of ratings, end-of-tour awards, redeployment briefings, awards and TOA ceremonies, the clearance of accounts, and the transfer of property. Having all of this information on a single page made briefing it simple and straightforward. It also made it easy to see if the battalion was on track with both the incoming and outgoing units over time.

Typically, the accuracy of information improved as the incoming unit got closer to its deployment. The overall situation in each of the three RCs—South, Southwest, and West—differed from one another. This was yet another way that conducting weekly working group meetings paid off. The efforts and outputs of the force integration working group created another way for the brigade staff to visualize the RC differences and how those differences related to bringing in new units.

Systems, Practices, and Positive Results

One example of the 43d Sustainment Brigade's force management process in practice is offered by an active-duty petroleum transportation company stationed in the continental United States (CONUS) that knew it would deploy to Afghanistan. The 43d Sustainment Brigade headquarters also knew this, and it forwarded this information to the combat sustainment support battalion (CSSB) headquarters under which the company would fall while deployed. The CSSB S–3 contacted the company through the battalion's headquarters.

Eventually, the company commander talked to the CSSB S–3, who was also in charge of force management at the battalion level, and an important communication process commenced. Through requests for information, company personnel in CONUS learned a great deal about who they would replace, what their mission would be, what it would be like in the particular area of operations to which they would deploy, and a great deal more. They also learned that they would be employed primarily for convoy security, which is a key element to completing successful convoys. So, even if there had been a mismatch between the FORSCOM and JCRM websites, the company was able to learn about its mission through a "pitch and catch" proactive communication process.

In this particular case, the unit knew well ahead of time what its mission would be and even the specific type of vehicles it would use to perform that mission. This led to all three platoons of the company being trained and licensed on the MaxxPro mine-resistant ambush-protected vehicle (MRAP).

If the overall force management process, along with solid lines of communication, had not been in place, over 100 Soldiers of these three transportation platoons would have had to become vehicle certified after deployment. This would have proven to be a lengthy process, with a 40-hour course and a finite number of vehicles and instructors available for training. It also would have strained the RIP/TOA process between this unit and the unit it was replacing. Being able to avoid such strains was a major benefit and made the integration of the company into the battlespace much more predictable.

This was just one instance in which the force integration process paid dividends within the 43d Sustainment Brigade. A smooth RIP/TOA process not only helps a new unit assume its mission more effectively, but it also helps the outgoing unit redeploy successfully. When the RIP/TOA process is well planned from the company through the battalion and up to the brigade, it gives the outgoing unit adequate time to accomplish all of its redeployment tasks.

The positive result was that the receiving battalion headquarters in Afghanistan was able to clearly communicate what mission the unit would routinely perform in theater and the unit was able to positively adjust its

U.S. Soldiers arrive in Afghanistan. After a short reception, staging, onward movement, and integration period, they will be deep into the RIP/TOA process with the unit they will replace. *(Photo by SFC Kevin W. Quill)*

own training as a result. Deploying with the maximum number of MRAP-qualified personnel also reduced the potential risk that transportation units faced while deployed.

The 43d's force managers eventually developed a process map and an action plan specifically for force management and integration. (See process map on page 8.) Times were built into the process map for such important predeployment events as when to research units, when to contact them, and when to send mission orders. Later, this information helped leaders develop an action plan for force management with well-defined measures of effectiveness for each line of effort.

Products such as a process map and an action plan help units to "see" themselves more effectively because they provide specific criteria that units can use to grade themselves and do not allow room for units to make subjective judgments. Both products are also useful when conducting the RIP/TOA process. They give the incoming unit assuming the mission effective products it can use to help learn the force management process and to determine how well it is executing that process.

During the 43d Sustainment Brigade's tour of duty in Afghanistan, the force management process steadily improved. It became a factor within the brigade that provided regularity and predictability to the potentially stressful deployment process. It helped the brigade on the ground in Afghanistan, the units training for deployment under the brigade, and even the units they would eventually replace.

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The Challenges and Risks of the ARFORGEN Process for a Sustainment Brigade

BY CAPTAIN THOMAS A. KNOTHE

The Army Force Generation process is different for sustainment units and brigade combat teams—a lesson the 43d Sustainment Brigade learned during its deployment to Afghanistan and its return to Fort Carson.

On 9 March 2010, the 43d Sustainment Brigade departed its home station at Fort Carson, Colorado, to deploy to Kandahar Airfield, Afghanistan. Its mission was to provide logistics support for combat operations in Regional Commands South, Southwest, and West. What made this deployment stand out was that the brigade did not replace an existing unit. Its arrival resulted in the presence of two sustainment brigades in Afghanistan for the first time since U.S. military operations began there in 2001.

The 43d Sustainment Brigade's deployment was part of the uplift of forces in Afghanistan directed by President Obama in December 2009. Since it did not replace another unit, the 43d did not fall in on another unit's theater-provided equipment and thus had to start its operations from the ground up.

The only theater-provided equipment the 43d received was a small amount of computers and office supplies transferred from the 82d Sustainment Brigade. (Before the 43d Sustainment Brigade arrived, the 82d had been the sole sustainment brigade in the country, responsible for supporting all of Afghanistan). Knowing that there was not very much property to fall in on, the 43d had to anticipate all of its supply requirements before deploying, including items to construct its own expeditionary tactical operations center.

Roughly half of the units that were attached to the 82d Sustainment Brigade were reorganized to fall under the 43d Sustainment Brigade. A total of 31 subordinate units would fall under the mission command of the 43d at some point during its 12-month deployment. This placed an unprecedented amount of strain on the brigade staff to familiarize themselves with the Army Force Generation (ARFORGEN) process for all of those units. ARFORGEN creates challenges and risks for sustainment brigades that are different from those faced by brigade combat teams (BCTs).

Deploying a Sustainment Brigade

One of the ARFORGEN risks is the continuous deployment and redeployment of subordinate units under the sustainment brigade that are at different points in the ARFORGEN cycle.

A significant difference between the deployment of a sustainment brigade and the deployment of a BCT is that when a sustainment brigade deploys, the battalions and companies that fall under it in garrison do not necessarily deploy with it. The only subordinate unit organic to a sustainment brigade that deploys with it is the special troops battalion's (STB's) headquarters and headquarters company (HHC).

It is possible for a logistics company to be attached in a deployed environment to its home-station sustainment brigade, but the two units likely will not deploy or redeploy together. A sustainment brigade commander may elect to leave the STB in the rear to carry out its garrison logistics responsibilities and provide mission command for the brigade's attached subordinate units that did not deploy with the brigade.

The way that a sustainment brigade deploys and redeploys has several advantages and disadvantages. The main advantage is that its attached subordinate units that have already been in theater can assist the new brigade headquarters in ongoing operations when it arrives. This can actually serve as a continuity multiplier for the incoming headquarters, which will benefit from the already established units.

The biggest disadvantage to deploying as a sustainment brigade is the great likelihood that the currently deployed array of subordinate units will not have trained together for the deployment. Since they will have come from a variety of continental United States locations and even overseas locations such as Germany, they probably will have all trained along different lines of effort.

The Army can take sustainment battalion headquarters and a large variety of companies from anywhere and organize them under the mission command of a sustainment brigade. It is not uncommon for Army National Guard and Army Reserve units to be placed under the mission command of an Active Army sustainment brigade, or vice versa.

Regardless of its Reserve component or Active Army status, when a new subordinate unit arrives in theater to fall under a sustainment brigade, its capabilities, strengths, weaknesses, and company leaders are all unknown. This can lead to variations in the relief in place/transfer of authority (RIP/TOA) process while the incoming unit learns all of the sustainment brigade's internal policies and procedures.

Deploying a BCT is a different situation. Under the Army's modular design, all combat battalions and the brigade support battalion (BSB) within a BCT deploy and move through the ARFORGEN process together as a single unit. When a BCT deploys, the entire brigade is brand new to the theater and a large portion of the existing knowledge the previous BCT had can be lost in the transition. Once the previous BCT redeploys back to its home station, the new BCT is forced to recreate or relearn many of the products and tasks that the previous BCT had already completed and that the new BCT may have missed during the RIP/TOA process.

Rear Detachment Responsibilities

While a sustainment brigade headquarters is deployed, its rear detachment is still accountable for many responsibilities. Even with the STB and sustainment brigade headquarters deployed, normal business operations will continue at the brigade's home station.

The sustainment brigade's rear detachment is responsible for pushing its attached companies that are not deployed through the ARFORGEN process and preparing them for deployment. It also must provide logistics support to the installation and receive redeploying subordinate units, start their reset process, and begin to plan training.

The primary responsibilities of a BCT rear detachment are far less extensive. Its primary duties include receiving and preparing newly arriving Soldiers for deployment, ensuring that they receive theater-specific training, performing medical and administrative actions for Soldiers who have returned home from theater, and providing family readiness group support.

Reset and Individual Training

New ARFORGEN challenges awaited the 43d Sustainment Brigade after it completed its mission in Afghanistan and redeployed to Fort Carson. The amount of ARFORGEN risk associated with a sustainment brigade is at its highest level when the brigade returns home from a deployment and takes over operations from its rear detachment.

Immediately after a sustainment brigade assumes operational control after a deployment, it enters into the first phase of the ARFORGEN process, the reset/training phase. At this point, many of the experienced staff officers and noncommissioned officers will transition out of the sustainment brigade. The primary objectives for this phase are turning in equipment to reset and conducting individual training, such as physical fitness and weapons training. The first phase is considered complete when the unit receives all of its equipment back from reset, which should be in no more than 180 days.

The redeployed unit must also get back to Army individual training standards. Being away for a year and having to retrain is significant. It is not only a matter of getting back to individual standards but also of sending Soldiers to noncommissioned officer education system schools and getting selected Soldiers certified in various unit additional areas.

What makes the ARFORGEN process more difficult for a sustainment brigade is that the subordinate companies attached to the sustainment brigade will be at different points in the ARFORGEN process preparing for their own deployments. It is the brigade's responsibility to prepare and resource these units for their deployments and to reestablish all of their other predeployment systems and practices to meet ARFORGEN requirements. The brigade staff will undoubtedly be busy juggling the different phases of the ARFORGEN process for all of its downtrace units and managing reset for the brigade headquarters.

Ready Force and Collective Training

After completing the reset/training phase, the unit will enter into the second phase of the ARFORGEN cycle, the ready force phase. This phase consists of extensive collective training and is completed after the unit successfully concludes its culminating training event (CTE). If the unit properly planned individual training during the reset/training phase, its foresight will pay off during the CTE and any other collective training events.

Scheduling internal collective training poses a significant challenge for the sustainment brigade because of the same ARFORGEN cycle disparity between units mentioned earlier. If the brigade schedules a field training exercise, a unit may be unable to attend because it is going through reset or taking block leave before it deploys. With a portion of the companies under the 43d constantly deployed or unable to attend a training event because of their ARFORGEN cycles, the brigade's support capabilities potentially will be different for each training event.

Like most Army sustainment brigades, the 43d is the senior logistics unit at its home station and is responsible for providing logistics support to all tenant units

when it is not deployed. The sustainment brigade might at times be unable to provide transportation assets or fuel support because the units that furnish those capabilities are deployed or in reset. This will force the modular BCTs to look internally in some areas to meet their logistics training requirements.

Sustainment brigades are in a constant state of training support, and BCTs rely heavily on them throughout the Army to support the logistics needs of their training requirements. This symbiotic relationship between the BCTs and the sustainment brigade also benefits the 43d because supporting the BSBs and maneuver battalions at Fort Carson provides great training opportunities for the sustainment brigade's staff and attached units.

The final portion of the ready force phase is the execution and successful completion of the CTE. When a BCT enters into its CTE at the National Training Center or the Joint Readiness Training Center, the entire BCT normally goes together. In a sustainment brigade, the units are forced to "fight to train" based on the unit commander's guidance and intent.

As noted, all of the subordinate units in a sustainment brigade are at different phases of the ARFORGEN process and at different phases in the training process. If a battalion or company within a sustainment brigade needs a CTE, it must coordinate with a BCT for space in the BCT's rotation. This predeployment capstone training exercise is vital to mission success. The training value it provides is irreplaceable because it allows the commander to evaluate the competence and capability of his unit before deploying.

Even though the company or battalion headquarters will not necessarily be deploying with the same unit it trains with, a CTE will still provide essential collective training for the company and allow the commander to see his unit's strengths and weaknesses. The main risk for a sustainment unit seeking a CTE is that the unit will rely completely on the BCT to allow it to attend the training. However, the BCT is not required to allow a sustainment unit the opportunity to train with it during its rotation.

A large amount of coordination between the two brigades is needed before executing the training in such areas as determining equipment available on the rotational draw grid, arranging for billeting and transportation, defining the support unit's role while executing the training, and integrating the sustainment brigade into the overall concept of the operation for the BCT. This is even more difficult to coordinate when the two units are not at the same installation. Smart sustainment units "sell" the benefits of training with a sustainment brigade to the BCT that is the centerpiece of the training rotation.

Available Force Phase

The third and final phase of the ARFORGEN process before deployment is the available force phase. Upon reaching this phase, the unit is considered trained, equipped, and available for deployment. If the unit has been slated for a deployment, it will normally receive its deployment orders just before entering this phase.

During the available force phase, the unit prepares its equipment for movement, purchases and packs supplies, splits its property book, and allows its Soldiers to take block leave before deploying. Whether the unit is a single company or the sustainment brigade headquarters, it will deploy by itself and not as part of a larger organization, as a company within a BCT would do.

The unit will arrive in theater and fall in under a different chain of command. Upon arrival, it is possible that the deploying unit and its already deployed headquarters will know little about each other. A well-functioning and effective force integration process, led from the already deployed unit's headquarters, can eliminate this lack of knowledge and the communication gaps one might expect.

The purpose behind the Army's implementation of the ARFORGEN process is to provide predictability and stability to Soldiers during a time of extremely high operating tempo in an era of persistent conflict and continuous deployments. In addition to ensuring that the Army has units prepared to deploy in support of operations all over the world, the ARFORGEN process also provides some measure of predictability to the Soldiers who make up those units.

Soldiers can familiarize themselves with the ARFORGEN model to gain a better understanding of what training they can expect to perform during each phase and when their unit is available for deployment. It is important for Soldiers to understand and appreciate the differences in the overall ARFORGEN process between BCTs and sustainment brigades. Knowing these differences can help sustainment brigades through the process as they prepare to deploy and, in doing so, leave their traditional task organization at home station and become part of another organization in a deployed environment.

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82d Sustainment Brigade Rear Provisional Headquarters

by Lieutenant Colonel Peter B. Windsor

When the 82d Sustainment Brigade prepared to deploy to Afghanistan in 2009, it decided to establish a rear provisional command consisting of Active and Reserve component Soldiers that could perform the brigade's Fort Bragg sustainment mission.

Many scholars judge General Creighton W. Abrams' plan known as the Abrams Doctrine, which set up the Army so that the Nation can never go into major conflict without calling up the Army Reserve components, to be brilliant. The doctrine has certainly been decisive in the conflicts since 2001, to which the Army National Guard and Army Reserve have provided thousands of troops in support of the Active Army both in the continental United States and in theater operations.

Putting Abrams' Principle Into Play

When examining mission command options for the 82d Sustainment Brigade during its deployment to Afghanistan, the brigade commander, Colonel John "Skip" O'Neil, put Abrams' principle into practice by integrating Active and Reserve component Soldiers into a rear provisional command that would continue the sustainment mission at Fort Bragg, North Carolina.

This option was selected over setting up a rear detachment because it provided the most efficient way to manage the training and readiness authority for 3 support battalions totaling nearly 3,000 Soldiers in the dwell cycle. It was also the best way to manage fiscal year 2010 training and certification on low-altitude delivery systems for 20 units and the reset of 12 units following deployment.

The request for authorization to establish the 82d Sustainment Brigade (Rear) (Provisional) was submitted, and in July 2009, the Army Forces Command G–3/5/7 approved its establishment effective 1 September 2009 for a period not to exceed 2 years.

Soldiers of the 82d Sustainment Brigade load pallets of supplies for air-drop during the Joint Forcible Entry Exercise.

The rear provisional headquarters for the 82d Sustainment Brigade, called Task Force Provider, was a mix of Active and Reserve component Soldiers. It included a blend of 87 Army Active officers and noncommissioned officers, 5 Army National Guard Soldiers, 19 Army Reservists, 3 Individual Ready Reservists, and 2 retiree recalls. It was led by a Reserve component commander, Colonel Hector Lopez, and an active-duty command sergeant major, Command Sergeant Major Edward Bell. Most of the primary staff positions were filled by Army Reservists.

The multicomponent organization assumed command on 5 November 2009 to form a hugely successful

Task Force Provider Soldiers load high-mobility multipurpose wheeled vehicles onto an aircraft for transport during the Joint Forcible Entry Exercise.

rear provisional headquarters for the 82d Sustainment Brigade. This truly was the "One Army, One Team" concept of a combined Active Army, Army National Guard, and Army Reserve force in practice and at its best. Although Task Force Provider's strength was less than 25 percent of the normal sustainment brigade headquarters, the operating tempo did not subside.

In a video teleconference from Afghanistan, Colonel O'Neil said that Colonel Lopez and Task Force Provider had done much more than just maintain the status quo. This was evident in Task Force Provider's many accomplishments, including the successful outcome of the XVIII Airborne Corps Organizational Readiness Assessment.

Operation Unified Response

Shortly after taking charge, Task Force Provider was confronted with a real-world scenario in which it played a critical role in support of Operation Unified Response, the earthquake disaster relief effort in Haiti.

During this crisis, the brigade provided mission command for logistics support, transported 3,764 Soldiers for deployment, moved 330 containers and 816 463L pallets, escorted 23 civilian transports, loaded 223 aircraft, and distributed 47 pallets of medical supplies.

Unit Achievements

Other noteworthy accomplishments during Task Force Provider's tenure were the establishment of the first-ever brigade headquarters outload support mission command cell for the Joint Forcible Entry Exercise 10–06 and Forcible Entry Demo. In this XVIII Airborne Corps and Air Force exercise, a brigade combat team (BCT) from Fort Bragg assumed duties as the Army's global reaction force with the potential of deploying up to the entire BCT in support of both domestic crisis responses and overseas contingency operations. Two mobilized Reserve component Soldiers led the logistics synchronization efforts and provided outload mission control for this high-visibility mission.

Task Force Provider also manned a theater support command response cell with 18 officers and noncommissioned officers to support the XVIII Airborne Corps' 3-week mission rehearsal exercises as it prepared to deploy to Iraq.

Task Force Provider hosted or executed several other high-visibility events, including the Annual Rigger Rodeo, which is a multicomponent, interservice best rigger competition. The task force also hosted the brigade's new expert action badge training program—a validation and training event that measured the combat readiness of sustainment brigade Soldiers. This event tested the Soldiers' physical fitness, land navigation skills, and expertise on 30 warrior tasks. Candidates completed lanes training, which culminated with an event-driven scenario and a 4-mile validation run.

Task Force Provider developed other sustainment brigade initiative guidance, such as the leader's book and the program and continuity book, for redeploying a sustainment brigade headquarters. The task force also participated in an Iraqi logistics visit with Iraqi general officers.

Benefits From Diverse Backgrounds

Task Force Provider has benefited greatly from

Supplies are delivered by airdrop on pallets prepared by the 82d Sustainment Brigade's Task Force Provider during the Joint Forcible Entry Exercise.

having all three Army components in its ranks. The Active Army task force members contributed their considerable experience and familiarity with the corps and the installation. Two products of the Active component were the Primary Leaders Course and the Junior Leadership Course. These courses educate all new 82d Sustainment Brigade leaders about the brigade policies, procedures, and standards that they are expected to adhere to and enforce. The Task Force Provider S–1 laid the groundwork for the Reserve recruitment and mobilization efforts, which have been emulated by other sustainment brigades throughout the Army.

The National Guard and Reserve task force members contributed manpower, varied military and civilian backgrounds and experiences, and Reserve component sources and contacts. The brigade executive officer was a high school science teacher, a certified Lean Six Sigma green belt, and an Intermediate Level Education instructor in the Reserve. He was a great trainer and leader for the staff. Another Reservist was a civilian certified public accountant who performed brilliantly as the brigade budget officer. The brigade S–4 was an operations supervisor for Otis Elevator in Buffalo, New York. During his tenure, the 82d Sustainment Brigade won the Commanding General's Best Dining Facility Award twice.

Sustainment Brigade Accomplishments

The sustainment brigade provided support to more than 30,000 Soldiers in 12 BCTs and corps separate brigades stationed at Fort Bragg. It provided oversight and expertise on issuing, packing, and maintaining more than 27,000 parachutes. The brigade supported 1,202 ground movement missions for 24,200 tons of cargo and 1.3 million critical and routine requisition transactions for classes II (clothing and individual equipment), IV (construction and barrier materials), VII (major end items), and IX (repair parts), valued in excess of $35 million.

One person in the brigade S–3, an Army National Guard officer from Puerto Rico, was responsible for completing and managing most of the mobilization extension packets and assisting the 7th Sustainment Brigade in mobilizing Reserve component Soldiers for its own provisional command.

Two of the retiree recalls were born during the Eisenhower administration and had more than 30 years of service. These Soldiers met Fort Bragg standards, participating in daily physical training, competing in brigade and corps 4-mile runs, and setting an example for Soldiers half their age. Task Force Provider was also fortunate to have talented junior officers. Three from the National Guard had just returned from a deployment in Iraq with the 30th BCT.

In addition to Task Force Provider's varied experiences, the Soldiers' contacts with local Army National Guard and Army Reserve units proved useful. This was demonstrated when the 546th Transportation Company received a short-notice deployment order to perform a heavy equipment transporter mission to Kuwait. Since the brigade did not have this type of vehicle, Reserve officers assigned to Task Force Provider coordinated with their contacts in the North Carolina Army National Guard for the trainers and equipment needed to certify 120 drivers.

Through the combination of General Abrams' principles and Colonel O'Neil's vision, the 82d Sustainment Brigade rear provisional headquarters successfully integrated Active and Reserve component Soldiers. The varied knowledge and experience of the Active and Reserve component Soldiers served them well in fulfilling the mission of the headquarters.

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Not Your Father's BCS3

by Captain John D. Lamkin

The Battle Command Sustainment Support System (BCS3) has evolved considerably over the past few years. Increased command emphasis and system improvements have made it the system of record for logistics tracking.

Brigade combat teams (BCTs) rotating through the National Training Center (NTC) at Fort Irwin, California, use BCS3 to track their logistics statuses (LOGSTATs). While commands consciously decide to use BCS3, planners overlook certain aspects when preparing for NTC. They often do not fully appreciate the complexity of the system, the time required to properly train BCS3 operators, and the numerous technical issues that can occur if the boxes are not configured properly. This article provides suggestions for units that want to use BCS3 to its full potential.

Focus on BCS3 before going to NTC. Many units virtually ignore BCS3 until they arrive at NTC. Operators are hastily trained during the reception, staging, onward movement, and integration (RSOI) week and, even with assistance from the field service representatives (FSRs), barely understand how to execute simple tasks by the end of the rotation.

Often, units have not previously networked BCS3 boxes together and properly tested them. Valuable training days are wasted while operators and FSRs try to make BCS3 boxes operational.

Train BCS3 operators before NTC rotations. Most major installations have a BCS3 team that can provide collective training, initial individual training, and refresher classes. If training is unavailable at the installation, contact the FSRs at NTC and inquire about having operators trained during the Leader's Training Program week. Focus BCS3 training on capabilities your BCT needs for its operations.

Ensure that BCS3 systems are networked and tested during command post exercises and field training exercises in garrison, and repeat the BCS3 gunnery during the RSOI week at NTC. This will help minimize issues with the BCS3 systems once the rotation begins. Units should consider continuously operating the system on their garrison local area network (LANs). While connecting to the LAN can be tedious, it allows units to track readiness and in-transit visibility while maintaining operators' perishable skills.

Maintain continuity for operators. BCS3 has many capabilities; however, it is also very complicated. Operators need to work with the system for a significant period before they become proficient. Every time a BCS3 operator is replaced, the efficiency of BCS3 suffers. Units, especially at the battalion level, should designate capable operators who will remain in the position throughout most of an upcoming deployment.

Train the managers. Support operations officers (SPOs) and BCT and battalion S–4s often know little about BCS3. Most battalion S–4s are not logisticians, and while logisticians receive some BCS3 training at the Combined Logistics Captains Career Course, their proficiency is perishable. Logistics managers also fail to take advantage of additional training opportunities in garrison or at NTC. Those who do not understand how BCS3 works cannot properly supervise BCS3 operators or ensure that the system's capabilities are fully used. Schedule key logistics managers to receive BCS3 training. If a manager is unavailable for formal training, then informal BCS3 instruction from trained personnel is needed.

Facilitate accurate reporting. Inaccurate LOGSTAT reporting at the battalion level is the number one logistics issue BCTs face. Headcounts are frequently incorrect; battalions report almost no meals ready-to-eat on hand when they have hundreds of cases distributed among their line companies; battalion S–4s do not use ammunition expenditure reports, which makes ammunition on-hand estimates inaccurate; and future ammunition projections do not account for upcoming operations.

Battalion S–4s and the BCT S–4 and SPO need to perform their BCS3 data roles. Battalion S–4s need to send accurate reports in a standardized format to maintain situational awareness of LOGSTAT throughout the BCT and allow the BCT S–4 and SPO to conduct logistics forecasting. The SPO needs to relate reporting requirements clearly to battalions and work with the battalion and BCT executive officers to ensure that standards are enforced.

Units that arrive at NTC with trained BCS3 operators and managers and that emphasize accurate logistics reporting generally have fewer logistics shortfalls and emergency resupplies during their rotations. A command that emphasizes these areas will experience smoother logistics operations, both at NTC and when deployed.

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A Financial Management Support Operations Team's Deployment to Kuwait

by Lieutenant Colonel Lawrence M. Seward,
Major Jonathan G. Westfield, and Master Sergeant James E. Combs

The 1st Sustainment Brigade (the "Durable Brigade") deployed to Kuwait in April 2010 to support the responsible drawdown of forces and equipment from Iraq and the transition to Operation New Dawn. This mission provided our unit, the brigade's financial management support operations (FM SPO) team, with many valuable experiences and lessons learned.

Our journey to Kuwait began at our home station, Fort Riley, Kansas, where the FM SPO concept of support for the upcoming mission was, at first, ambiguous. We had little to guide us in our preparations except doctrine. As we developed an initial picture of what our niche was going to be for the drawdown, we recognized that we would have to be both proactive and creative.

Directed Mission-Essential Task List

Before the predeployment site survey (PDSS) in January 2010, we sought lessons learned from previous FM SPOs' deployment experiences. But such information was scant. The lessons learned from one FM SPO's experience might not apply to our situation; however, these lessons, along with doctrine, did allow us to begin developing our FM SPO directed mission-essential task list (DMETL). The 1st Sustainment Brigade emphasized the development of the DMETL to prepare for the command post exercise–sustainment and subsequently for the deployment.

From an FM SPO point of view, the development and refinement of the DMETL was a value-added task. It helped us to anticipate what we thought we might be doing based on doctrine, the tactics, techniques, and procedures used by the FM SPO already in Kuwait (part of the 593d Sustainment Brigade), our mission, our commander's intent, our FM SPO structure and skill sets, and our own creative input. The FM SPO DMETL was a living document, and we modified it throughout our deployment.

The development of the FM SPO DMETL, coupled with working and consulting with our 593d Sustainment Brigade counterparts, helped us to visualize the future.

Predeployment Site Survey

Our journey took us to Arifjan, Kuwait, in January 2010 to better grasp how our FM SPO team would function in terms of battle rhythm and future operations. This visit also provided us with a picture of the logistics footprint and capabilities in Kuwait.

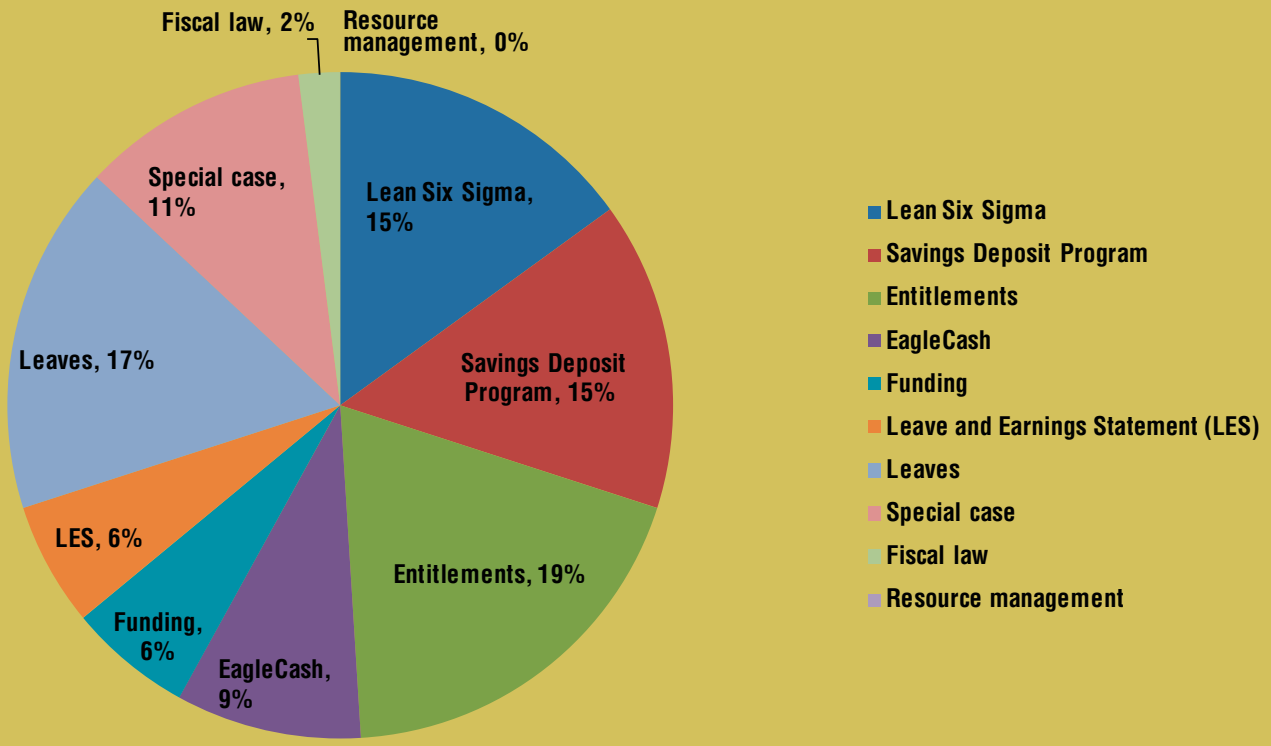
We learned that finance operations in Kuwait were relatively static. However, the drawdown of personnel and equipment from Iraq would require proactive finance operations to anticipate future finance support requirements throughout Kuwait and Iraq. Increased oversight of finance operations and an effective internal control program would also be crucial to ensuring that funds and equipment were properly safeguarded.

The primary focus for the 1st Sustainment Brigade's commander during the drawdown would be the rapid withdrawal and distribution of equipment. FM operations, therefore, had to appear seamless to the commanders of the 1st Sustainment Brigade and the 1st Special Troops Battalion so that FM concerns did not detract attention from the main effort—the drawdown.

During the PDSS, we attended key FM meetings and events, including the technical update brief and the FM SPO and FM company synchronization meeting, and we also met with key FM stakeholders to establish initial relationships.

From an operational perspective, we learned several things. The future disposition of FM units in Kuwait, based on the drawdown of forces in Iraq, was crucial. To support future disposition of FM EagleCash card kiosks, an EagleCash card depot was being set up in Arifjan; this depot would be manned by two personnel from the Defense Finance and Accounting Service, who would fix, refurbish, and relocate machines as necessary.

The recent turnover of FM units in Kuwait would make it necessary for the FM SPO to continue to work closely with the financial management center's (FMC's) internal control section and the FM company to ensure that policies, procedures, and processes were standardized across the finance detachments. Finally, the ongoing effort to reduce the use of cash, initiated by Third U.S. Army and U.S. Army Central (ARCENT) in



This chart shows the percentage of different issues reflected in calls to the FM SPO Fiscal Fitness Hotline.

a fragmentary order, had been successful.

We concluded that the brigade's FM SPO team would have to work closely with other 1st Sustainment Brigade elements to synchronize FM support in Kuwait. We would also have to develop a mutually supporting flow of information among the FM SPO team, the 326th FMC (the incoming FMC), and the 210th FM Company. Our priorities of effort would be maintaining optimal finance support for Soldiers in Kuwait, stringent accountability of FM resources, and overall support of the responsible drawdown as it related to FM operations in Kuwait.

FM SPO attendance at the PDSS was crucial in solidifying our role and helping us to establish priorities. It also helped us to refine our DMETL, our concept of support, and our quest for opportunities to improve operations. Most notably, it helped us to begin establishing a sound working relationship with the FM units in Kuwait, including the 326th FMC, the 210th FM Company, and the ARCENT resource managers.

FM SPO Concept of Support

With the PDSS behind us, our team began to develop our FM SPO concept of support. The final concept was the result of 4 months of predeployment preparation. Because the 1st Sustainment Brigade's commander included FM support as a key task for our upcoming mission, the concept of support laid the foundation for combining all of the knowledge we had gained and exploiting it to support our purpose and to allow us to take the initiative.

Our concept of support focused on establishing the needed flow of information between the 1st Sustainment Brigade and the FM community, ensuring that EagleCash card machines and FM units were correctly located to accommodate projected changes in Kuwait, and providing capabilities that met both FM and sustainment principles (most notably economy, responsiveness, integration, and anticipation).

We briefed our concept twice before our deployment. These briefings were designed to educate ourselves as well as the 1st Sustainment Brigade commander, the SPO, and the traditional "Napoleonic" staff (personnel, intelligence, and so forth). The development and communication of our FM concept of support helped us to establish credibility as valued members of the 1st Sustainment Brigade team, provided a picture of our role in the responsible drawdown and beyond, and energized us to begin thinking about how to tackle the first 60 days of our deployment.

Strategy for Success

When the brigade deployed to Kuwait in April 2010, we immediately developed a philosophy and vision to guide our actions. We established the mutually supporting flow of information we knew we needed. To educate the finance and sustainment communities, we also established a strategic communications plan to tell our story.

We learned that establishing an "FM SPO Philosophy and Vision" allowed us to anticipate events, maximize creativity, broaden our area of influence, and increase

our relevance in the sustainment community.

Sustainment and FM principles are virtually the same. If integration is the most crucial principle in sustainment and coordination is the most crucial factor in achieving integration, then coordination is arguably the fundamental requirement for mission success for sustainment. Our focus on the commander's intent and coordination with the entire FM community, the 1st Sustainment Brigade staff, and force providers helped us to achieve our desired goals of maintaining combat readiness and providing proactive mission support.

Our vision and philosophy as a team also led us to create an FM SPO website to share knowledge with all FM SPOs in the Army and to develop an initiative to provide logistics case studies, based on real challenges during the responsible drawdown, to academic researchers like the Massachusetts Institute of Technology.

Our initial strategy for success included meeting with all key stakeholders in the FM community and establishing mutually supporting relationships that would last throughout the deployment. This allowed the FM SPO team to assess the situation, establish a common operating picture, and visualize opportunities. The Fiscal Fitness Hotline, for example, was established to fill a visible gap in support that we had the capability to fill.

Fiscal Fitness Hotline

The Fiscal Fitness Hotline created by the FM SPO team was designed to keep the brigade and its subordinate battalions fiscally healthy and to support comprehensive Soldier financial fitness. The hotline provided battalion commanders with a way to receive feedback on fiscal law, resource management, and funding issues so they could make resource-informed decisions. If the fiscal triad (finance, resource management, and contracting) is a legally binding process governing the procurement process, then the hotline was a coordination process to ensure that commanders were making resource-informed decisions to, as the brigade commander put it, "support first, as long as [it is] not illegal, unethical, or immoral."

The hotline—

- ❑ Provided combat readiness and mission direct support.
- ❑ Enhanced our operational reach outside of our area of operations.
- ❑ Fostered better integration of FM operations into sustainment operations.
- ❑ Ensured that 1st Sustainment Brigade Soldiers received everything to which they were ethically and statutorily entitled.

The hotline allowed us to address questions or concerns on EagleCash cards, pay entitlements, and theater finance policies. This initiative permitted the 1st Sustainment Brigade to adopt a proactive stance in maintaining fiscal discipline while supporting the customer and readiness. It also demonstrated the implementation of sustainment and financial principles, specifically anticipation and stewardship, and helped the FM SPO team to stay relevant. It also allowed the FM SPO to act as a coordinating and analysis cell and permitted effective collaboration to overcome the FM SPO team's collective lack of resource management experience.

Through the hotline, we helped over 100 Soldiers and their families with various fiscal issues. The concept of this hotline has the potential to be used in other sustainment brigades.

Lines of Effort

The FM SPO strategic communications efforts synchronized all brigade efforts to achieve specific results in all tactical, operational, and strategic lines of operation. Of these lines of operation, the FM SPO developed specific lines of effort to reach intended audiences of the FM and sustainment communities.

Our strategic line of effort was the reduction of U.S. currency in use throughout the U.S. Central Command (CENTCOM) area of responsibility. Our operational lines of effort included finance operations, resource management, planning and operations, funding the force, banking and disbursing operations, pay support, internal control, accounting support, and cost management. Our effects campaigns were designed to inspire, educate, and inform.

Our relief in place/transfer of authority with the 593d Sustainment Brigade's FM SPO team highlighted our challenges and opportunities. It demonstrated that FM SPOs were being used in many capacities. One was taking the lead in the contracting cell; another was splitting the team into core competencies, with one officer serving as the operational finance expert, another managing brigade contracts, and the last serving as the resource management expert.

In our case, our entire FM SPO team focused on operational finance and had no direct responsibility for contracting or resource management. The resource management function was managed by the brigade S–4, and the contracting function was managed by our host-nation cell.

The reality is that each FM SPO's experience will be unique based on the strategy, structure, skill sets, culture, and mission that each commander faces or establishes. It is feasible that the sustainment brigade replacing us will use their FM SPO team differently than our brigade did.

Strategic Communications Activities

The FM SPO team consistently had a proactive role in public affairs and strategic communications through the publication of articles. To date, our team has

published five information papers, participated in four key leader engagements, and drafted articles for *Army Sustainment, The 1st Infantry Division Post, Army Times, The Gryphon* (the monthly newsletter of the Army Financial Management School), *Running Times* magazine, the Defense Video and Imagery Distribution System, the 1st Sustainment Brigade's *Sustainment Times*, and Third Army's *Desert Voice*. Our intent was to add to the collective body of knowledge and experiences of an FM SPO and to contribute our talents to 1st Sustainment Brigade events.

One such event was the brigade 9/11 Remembrance Run. This event attracted over 1,600 participants, including champion ultrarunner Scott Jurek. Another event was a showing of the Army-Navy football game video, which played in front of 60,000 spectators in December 2010.

Our publications have reached the American people, the entire Finance Corps, 1st Sustainment Brigade Soldiers and their families, and the sustainment community. With the development of our FM SPO website, which has been networked to other FM SPOs, FMCs, and senior leaders, we provided an opportunity for those interested to access lessons learned and view a comprehensive picture of our deployment.

Managing EagleCash Card Kiosks

As the 1st Sustainment Brigade conducted its critical role in the responsible drawdown from Iraq and set the conditions for Operation New Dawn, the FM community was making its own crucial contribution through the refurbishment and redistribution of EagleCash card kiosks to support the fight in Afghanistan. In August 2010, the FM SPO team visited the Kuwaiti Equipment Depot to understand the process of retrograding EagleCash card kiosks.

In concert with the 326th FMC, the 138th FM Company, the Federal Reserve Bank of Boston, the Defense Finance and Accounting Service, and the Kuwaiti Equipment Depot, the FM SPO team supported CENTCOM's Near Cashless Campaign to decrease the amount of cash on the battlefield.

The process of refurbishing and redistributing EagleCash card kiosks during the responsible drawdown began when a base in Iraq closed, which triggered coordination with the Federal Reserve Bank of Boston. The kiosks then were sent to the Joint Military Mail Terminal in Kuwait. The terminal called the Kuwaiti Equipment Depot at Camp Arifjan, Kuwait, to coordinate the pickup of the kiosks. The depot recovered the files from the kiosks, and if they were functioning properly, the kiosks were refurbished as required for redistribution to various locations in the world. Kiosks that were not functioning properly were sent back to the Federal Reserve Bank of Boston for further disposition. This process took about 2 weeks.

The FM SPO monitored trends in the use of Eagle Cash cards, educated Soldiers on the benefits of using EagleCash, and supported the 1st Sustainment Brigade in addressing any EagleCash card issues through the Fiscal Fitness Hotline. In Kuwait and Qatar alone, the use of EagleCash removed on average $1 million dollars of cash every month in transactions.

The design of the Durable Resiliency Center supported comprehensive Soldier fitness. Our team developed the idea of placing an EagleCash card kiosk in the chaplain's work area in the center to facilitate Soldiers' access to their funds and support e-commerce. It was also a great training opportunity for the Soldier who installed the kiosk.

As our FM SPO team ended its deployment, we planned for our transition and reintegration through two lines of effort: transition and FM operations. Our next step in our vision was to build an FM SPO concept of support for FM garrison support at Fort Riley in addition to the initial products we developed before deploying. Because the 1st Sustainment Brigade has established a sustainment operations center, we sought to integrate FM operations into the center's operations. (See an article on the sustainment operations center in the July–August 2011 of *Army Sustainment*.)

We also looked to establish working relationships and collaborate with the 1st Infantry Division resource managers and the Fort Riley resource management office. Our concept will provide the building blocks on which the next FM SPO at Fort Riley can capitalize.

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Master Sergeant James E. Combs is the financial management support operations noncommissioned officer for the 1st Sustainment Brigade at Fort Riley, Kansas. He has served in many financial management positions throughout his career of over 20 years and recently received the Major General Nathan Towson Medallion for exceptional service in Army financial management.

The Component Repair Company

BY CAPTAIN CARL S. MILLER

The component repair company enables units to make timely repairs to equipment without having a large logistics footprint.

A Soldier from B Battery, 2d Battalion, 319th Airborne Field Artillery Regiment, changes out components on a group of Raven unmanned aerial vehicles. (Photo by SFC John Laughter)

The changing mission requirements of today's Army create a need for responsive and flexible integrated logistics that does not compromise maneuverability. The component repair company (CRC) enhances both responsiveness and flexibility in logistics support at the operational level and allows for a leaner support structure at the tactical level.

CRCs augment the depot repair concept by moving component repairs closer to the forward line of troops, thereby reducing the number of components that have to travel between the customer and the component repair depot. By extending the lifespan of repair parts that are already in the Army system, CRCs reduce the number of components the Army needs to purchase each year.

The mission of a CRC is to perform sustainment maintenance repairs on equipment components (off-system repair and return to supply system). The CRC can traditionally be found at either the corps or theater level, but it occasionally attaches platoons to lower echelons.

CRC Concept

The CRC is a product of Army modularization under the "fix forward/repair rear" concept and operates with an increasing number of Government civilians and contractors. The primary focus of the CRC is the repair of electronic systems, but the unit also has repair sections that support component restoration for fuel equipment, armament and artillery systems, automotive equipment, ground support equipment, chemical systems, and engineer equipment.

Equipment component repairs at the tactical level under the Army of Excellence model created a large logistics footprint and limited the maneuverability of combat arms units. One of the solutions to improve mobility was to move component repairs off the battlefield, thus eliminating heavy component repair sections from tactical-level maneuver. However, detaching the component repair capability from the tactical level would reduce logistics responsiveness, so the Army formed CRCs from general support units to close the gaps created by modularization.

CRC Organization

CRCs generally contain between 140 and 180 personnel. All 19 CRCs belong to the Army National Guard. A CRC is composed of a headquarters section, a maintenance control section, and a service and recovery section. Specialized modules are then attached to the CRC depending on the mission. A typical CRC will contain an automotive repair platoon, a ground support equipment repair platoon, an armament repair platoon, an electronic repair platoon, a component repair platoon, and possibly a test, measurement, and diagnostic equipment support team.

All CRC modules are certified by the National Maintenance Training Center at Camp Dodge, Iowa. In rare instances, a collection and classification platoon will be attached to the CRC to reduce some of the distribution required in returning parts to the supply system.

Acquiring Parts

Army acquisition agents use calculations to predict the number of parts needed each year, based on the mission set and historical data. After forecasting the number of parts needed for the year, the Army negotiates contracts to purchase the parts from civilian companies. Contracts for parts take months to develop, process, and award to contractors, and the predictions often are inaccurate.

Changing mission requirements and other variables make it difficult for an Army acquisition agent to practice proper supply discipline and predict Army needs accurately, so the CRC acts as a buffer between theory and reality by making unserviceable parts that are already in the supply system available through repairs. Without the CRC, the Army would receive only the number of parts contracted for the year and requests for parts above that number would not be filled until the next contract year.

The CRC's objective is to reduce part back-order times that are caused by having too few serviceable parts available in the system. The CRC offers flexibility to Army acquisition agents by reducing the amount of accuracy required in estimating the number of items that the Army needs to purchase each year. The CRC backfills shortfalls by repairing parts already in the system.

Getting Components to the CRC

As noted by John R. Folkeson and Marygail K. Brauner in their report, "Improving the Army's Management of Reparable Spare Parts," one problem in component repair is that the backhaul of unserviceable parts is the lowest priority for movement in the distribution system. If the end-user battalion has a part on hand in its combat spares or at the supporting supply support activity (SSA), the equipment is repaired and the unit has no incentive to return the unserviceable component to the supply system rapidly. The unit has months to return the unserviceable part to the SSA under exchange pricing before the Army enforces penalties.

Once the unserviceable part is returned to the SSA, the part becomes the lowest priority for movement to a collection and classification company for sorting. After sorting, the unserviceable part once again becomes low priority for movement to a CRC. Most repairs on parts at the CRC only take one or two shifts to complete.

Most of the time that a part is unavailable for use is spent not in the shop for repairs but awaiting movement in the distribution system or at the unit of origin awaiting turn-in. To remedy the situation and reduce backorder times, the Army should adjust the exchange pricing system by reducing timelines for recoverable parts turn-in. Unserviceable parts for pacing items should also receive a higher priority for retrograde.

Utility equipment repair technicians from the 632d Maintenance Company, 110th Combat Sustainment Support Battalion, 224th Sustainment Brigade, 13th Sustainment Command (Expeditionary), repair an air-conditioning component in a vehicle at Contingency Operating Base Adder, Iraq. *(Photo by SGT Kimberly Johnson)*

Budget difficulties and changing mission requirements create a need for integrated logistics responsiveness and flexibility. The CRC helps provide this at the operational level, allowing for a leaner support structure at the tactical level. CRCs move component repairs closer to the forward line of troops, reduce the number of components that have to travel between the unit and the component repair depot, and reduce the number of components the Army needs to purchase.

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MRAPs in the Brigade Combat Team

by Major Rodney H. Lipscomb II

Mine-resistant ambush-protected vehicles have served the Army well for the past 4 years, but the author believes that, because of their limitations, their acquisition should end.

In 2007, the Department of Defense initiated a major procurement initiative to replace all up-armored high-mobility multipurpose wheeled vehicles (HMMWVs) in Iraq with the mine-resistant ambush-protected (MRAP) family of vehicles. The design of the MRAP's v-shaped hull protects Soldiers from improvised explosive devices (IEDs), which account for over 70 percent of U.S. casualties in Iraq.

The Department of Defense (DOD) accelerated the MRAP program and allowed 12 separate vendors to produce different versions of the vehicle to ensure faster distribution to the field. It was the right decision given the circumstances of the surge for Operation Iraqi Freedom and the IED attack rates. However, now that Operation Iraqi Freedom has transitioned to Operation New Dawn and the military has withdrawn from combat operations and reduced the number of U.S. Soldiers in Iraq to 50,000, what should become of the 23,000 MRAPs that have been fielded?

Program Problems

The MRAP was designed as an interim solution to the need to increase the Soldier survivability rate over that of the HMMWV. The joint light tactical vehicle (JLTV) will replace the aging HMMWV family of vehicles, which is over 25 years old, but it is not expected to be fielded until fiscal year 2015. The design of the JLTV is similar to the MRAP's. It incorporates a v-shaped hull, but it is smaller with better mobility and will enable Soldiers to have better maneuverability in a constrained environment.

Incorporating the MRAP into brigade combat teams (BCTs) is detrimental to the future expeditionary concept because the overall cost of fielding MRAPs could cause the JLTV program to be suspended. The MRAP is also too large and unwieldy to operate in a constrained environment, and it does not allow the BCT to be expeditionary because of logistics requirements.

The fear of the MRAP program suspending or ending other major programs is a real concern. The MRAP program has been the third largest acquisition program for the past 3 years, behind missile defense and the joint strike fighter. The MRAP program has already killed the Future Combat System (FCS) manned ground vehicles acquisition program.

Secretary of Defense Robert M. Gates made major adjustments to the FCS program last year, and those decisions had a significant impact on the FCS-centric modernization effort and led to the termination of the manned ground vehicle portion of the program. He noted that "DOD lacked a clear role in the modernization plan for the MRAP vehicles which are saving so many lives in Afghanistan and Iraq."

Secretary Gates' intent for these bold adjustments was "to better reflect the lessons that we were learning from ongoing operations and better posture Army forces for a broader range of future challenges." With that, the decision was to field MRAPs into all BCT formations as a capability package. But the answer for the BCT model is not developing capability packages; the answer is to maintain the MRAPs the Army has on hand and to increase production of the JLTV and move up its 2015 fielding date. The JLTV is the best vehicle for all the environments that BCTs may encounter in the future.

Design Problems

The MRAP is a much safer vehicle than the HMMWV for driving up and down Main Supply Route (MSR) Tampa in Iraq. However, the minute it is off road on uneven terrain, it becomes cumbersome and susceptible to rollovers. According to the Marine Corps Center for Lessons Learned, more than 230 MRAP rollovers occurred between November 2007 and January 2010, resulting in 13 fatalities. During the surge in Iraq, MSR Tampa, a six-lane road running north to south through Iraq, experienced more IED attacks than any other road. However, not all MRAP operations occurred on MSR Tampa. Much of the surge's success was due to the Soldiers getting out and partnering with the Iraqi security forces. This required them to take their MRAPs on narrow dirt roads.

The MRAP requires only a 25-degree angle to begin to roll over. If the shoulder of the road has a significant dropoff, then the MRAP will tilt back and forth. The MRAP is so top heavy that the smallest bump sends it bouncing and swaying from side to side. It is a delicate vehicle to operate and requires a fine touch in han-

Soldiers from the 1483d Transportation Company, 541st Combat Sustainment Support Battalion, an Ohio Army National Guard unit operating in Taji, Iraq, prepare to transport mine-resistant ambush-protected vehicles to Joint Base Balad. *(Photo by SGT Jason Stewart)*

dling. As Soldiers are engaging the enemy, the thought to keep that fine touch is lost in the adrenaline of the moment, especially in Afghanistan where the terrain is rougher.

The MRAP is also extremely tall and wide and is therefore very difficult to take into an urban environment with low-hanging wires and narrow streets. To fix that problem, the Army distributed overhead wire mitigation kits (which include wooden boards and PVC pipes) that direct wires up and over the vehicle. The JLTV avoids all of these problems while maintaining enhanced survivability for the Soldiers.

Acquisition, Maintenance, and Fielding Problems

Operating, maintaining, and sustaining the MRAP has many problems, which are mostly caused by its rapid acquisition and multiple vendors. Secretary Gates noted that DOD did not ensure "that the supply line was full before we deployed them," and he also made reference to the MRAP's fire extinguisher system problems, suspension problems, and axle vulnerability. Another concern is that, at present, much MRAP maintenance is being performed by contractors as DOD adjusts its long-term maintenance strategy so that military personnel will eventually perform maintenance.

It was reported in 2008 that one in five MRAPs in Iraq was out of service (which correlates to an 80-percent readiness rate) primarily because of a lack of repair parts. The logistics requirements for the MRAP are extensive, and DOD still has not caught up with the supply system. MRAPs consistently require replacements of heavy-duty transmissions, engines, axles, and tires, which hinder a unit's readiness rates and take up a lot of time.

The design and purpose of the BCT is to be expeditionary with the ability to be plugged into any higher headquarters. Having MRAPs in the BCTs drastically hinders their ability to move expeditiously, and the logistics units within the BCTs were not designed to maintain such a large inventory. The problem has been exacerbated in Afghanistan because of the lack of a ground resupply system and the need to resupply by air transport. Before any vehicle is fielded, DOD must ensure that it does not replicate the problem of "playing catchup" with the supply system. The maintenance an MRAP requires is just too great for a BCT to handle.

The biggest impact of incorporating the MRAP into BCTs is that it is detrimental to the future expeditionary concept. Because the overall cost of fielding MRAPs in BCTs could suspend the JLTV project, they are too large and unwieldy to operate in a constrained environment, and they do not allow the BCT to be expeditionary because of their logistics requirements, MRAPs should not continue to be fielded. However, the MRAP is a good vehicle for defeating IEDs on an MSR, so it should be maintained and incorporated into the Army's pre-positioned stockpiles for future mission capability package needs.

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Adding MRAPs to Transportation Companies

BY MAJOR EVERETT LACROIX

The author contends that transportation companies should add mine-resistant ambush-protected vehicles to their MTOEs to enhance convoy security.

Since the onset of Operation Iraqi Freedom (OIF), the Army Transportation Corps has progressed greatly in modernizing its tactical truck companies into robust fleets of up-armored vehicles. However, the Transportation Corps should persist in transforming its tactical truck companies' modified tables of organization and equipment (MTOEs) to include mine-resistant ambush-protected vehicles (MRAPs), which allow for more efficient convoy operations. The MRAP survivability rate is 94 percent, compared to the high-mobility multipurpose wheeled vehicle (HMMWV) survivability rate of 78 percent.

Leading up to OIF, the M998 HMMWV was the most common tactical vehicle used in the Army and the only tactical vehicle that tactical truck companies used as mission command vehicles. Because of the high mobility requirements for the M998, the Army never intended it to function as an armored vehicle. Not until operations in Somalia in 1993 did the Army begin delivering an up-armored version of the HMMWV, the MX1109.

As early as 1994, the Army started procuring M1114 up-armored HMMWVs for mounted scouts and military police. These vehicles, however, lack adequate levels of protection for the current battlefields. The M1114 can withstand only 8 pounds of explosives beneath the engine and 4 pounds in the cargo area and has limited ballistic windows and steel plate reinforcement to protect the vehicle's occupants.

Vehicles Up-Armored by Soldiers

As stability and support operations increased in Iraq, so did the insurgents' use of improvised explosive devices (IEDs). Because of this, Army transporters could no longer conduct business as they did before OIF 1. As they did in past engagements, such as World War II, the Korean War, the Vietnam War, and the Persian Gulf War, transportation Soldiers had to modify their vehicles in order to protect personnel.

These innovations included sandbags on floorboards and steel fabrications on the sides of vehicles. For the Soldiers in Iraq and Afghanistan, these modifications

A mine-resistant ambush-protected vehicle from D Company, 3d Special Troops Battalion, 3d Sustainment Brigade, 102d Sustainment Command (Expeditionary), moves out on a convoy escort mission. Having MRAPs as part of tactical truck companies would enhance the companies' ability to securely transport supplies.

became known as "mad-max" or "hillbilly" armor. Soldiers often modified cargo vehicles into gun trucks and constructed steel enclosures, or "doghouses," to protect gunners.

During OIF 1, the 181st Transportation Battalion started transforming cargo trucks into gun trucks in order to provide security for its convoys. The 181st started using "tiger teams," which consisted of multiple HMMWVs traveling ahead of and adjacent to convoys, to provide route reconnaissance, rapid route clearance, and increased reaction times for convoy commanders. According to the Transportation Corps historian, Richard Killblane, during a telephone interview, "Nearly every unit in Kuwait and Iraq that ran convoys experimented with armor and developed convoy security doctrine."

External Convoy Security

Tactical transportation units now have to rely on external units to provide convoy security support. However, this is not an effective use of forces, and Army training doctrine requires the tactical transportation company to be proficient in defending its own convoy elements.

Using external units to secure tactical transportation convoys causes deterioration in mission command. This deterioration occurs when two separate units combine to form one convoy. Commanders from both units want and have a sense of ownership in the overall mission; however, only one unit can have mission command. Individual units spend months training before a deployment, allowing Soldiers to learn each other's strengths and weaknesses. Using external units to perform security thus leads to an uneasy unfamiliarity with the capabilities of each unit.

Training is key to a successful deployment. Tactical transportation units train in all areas of convoy operations, including convoy security. Therefore, relying on external convoy security support should no longer be the status quo.

Internal Convoy Security

With a great deal of focus and resources going into the Global War on Terrorism, coupled with the inability of M1114s to withstand IED attacks in Iraq and Afghanistan, Secretary of Defense Robert M. Gates in 2007 ordered the Department of Defense to start buying MRAPs.

The Transportation Corps should capitalize on the available resources and integrate those resources into its tactical truck company fleets. Such integration occurred in April 2009 when the 32d Transportation Company, a palletized load system company from Fort Carson, Colorado, deployed to Afghanistan. Just weeks before deploying, the company leaders learned that their unit would receive 18 MRAPs in Afghanistan and would have to reorganize in order to provide internal security for its convoys. In doing so, the 32d Transportation Company became the first purely tactical truck company since the start of OIF 1 to conduct its own internal convoy security.

Because the 32d Transportation Company secured its own convoys, it was able to maintain higher levels of efficiency. In addition to being more effective at conducting convoys, adding MRAPs to the tactical transportation company's MTOE allows for—

- Better unity of command within the convoy.
- Better training at home station.
- Better proficiency in battle drills within convoy elements.
- Greater crew familiarity.

The Army should also make personnel changes in the MTOE to add personnel to the tactical truck companies to provide security.

The Army will always have a requirement to conduct convoys, and those convoys require security protection. Having Soldiers who can conduct convoys and Soldiers who can perform convoy security residing in the same company is a win-win scenario for the Transportation Corps and the Army. The MRAP is a proven lifesaver and has reduced casualties in both Iraq and Afghanistan.

By adding the MRAP to tactical truck companies, the Army will enhance its ability to secure and transport supplies across the battlefield. The Army should transform its tactical truck companies to include MRAP vehicles because they allow for more efficient convoy operations.

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Incorporating MRAPs Into the Army Force Structure

BY MAJOR RAYMOND M. LONGABAUGH

In 2007, the Department of Defense (DOD) began the rapid acquisition of thousands of mine-resistant ambush-protected (MRAP) vehicles in response to the numerous casualties caused by improvised explosive devices (IEDs) on the roads of Iraq. By the end of 2008, DOD had acquired and fielded approximately 12,000 MRAPs.

In late 2009, DOD began acquiring and fielding an additional 5,244 lighter and more mobile MRAP all-terrain vehicles (M–ATVs) to counter the growing IED threat in Afghanistan. However, since the drawdown of forces in Iraq, thousands of first-generation MRAPs now sit in southwest Asia and are not part of the Army's documented force structure.

The Army needs the MRAPs to maintain a high level of IED protection until DOD fields the joint light tactical vehicle (JLTV) in 2015. As of this year, DOD has invested $35 billion in acquiring MRAPs to bridge the counter-IED protection gap. The Army should take full advantage of that investment and incorporate MRAPs and M–ATVs into its force structure for current and future operations.

Types of MRAPs

Army MRAPs fall into three categories. Category I vehicles hold up to six occupants and are intended to provide units with the ability to maneuver in urban and restricted terrain while conducting patrol, reconnaissance, security, and convoy operations.

Category II vehicles hold up to 10 occupants and are designed to provide a protected maneuver and transportation capability for infantry squads, combat engineers, explosive ordnance disposal Soldiers, and casualty evacuation.

Category III vehicles hold up to six occupants and are primarily for route clearance and IED and mine disposal operations.

The M–ATV holds up to five occupants and is for combat operations in complex and highly restricted terrain. The M–ATV provides greater maneuverability than other MRAPs but offers the same level of survivability and protection.

Limitations of Initial MRAPs

One of the most significant limitations of the first-generation MRAPs is their mobility and deployability. Most of the MRAPs that were sent to Iraq are too large and too heavy for the more challenging physical environment in Afghanistan. Their size, weight, and high center of gravity severely limit their urban and cross-country maneuverability.

The weight of most MRAPs, which varies from 19 to 37 tons, makes them too heavy to go over 72 percent of the world's bridges. Their weight also makes them unsuitable for transportation by C–130 Hercules aircraft, CH–47 and CH–53 Chinook helicopters, and most amphibious ships. These size and weight limitations were the main reason that DOD began acquiring the lighter and more mobile M–ATV.

MRAP Costs and Maintenance

The cost and sustainment issues involved with MRAPs place other serious restraints on their long-term viability as an Army light tactical vehicle (LTV). The cost of MRAPs varies from $600,000 to $1 million each, which makes them a cost-prohibitive alternative for replacing 110,000 Army high-mobility multipurpose wheeled vehicles (HMMWVs). Each JLTV, by comparison, costs approximately $300,000. However, MRAPs and M–ATVs were intended not to replace HMMWVs but to serve as an interim until the JLTV is fielded.

A lack of commonality between MRAPs and existing DOD vehicles greatly complicates the delivery of maintenance services, acquisition and distribution of parts, and training of Army vehicle mechanics. The Army's 19,000 MRAPs consist of 19 different variants produced by 5 different manufacturers, each using unique designs that require "specific operating procedures and maintenance," according to a report by the Government Accountability Office in 2008 titled, "Rapid Acquisition of Mine Resistant Ambush Protected Vehicles."

To help address this maintenance complexity, the TACOM Life Cycle Management Command established four regional MRAP facilities in Iraq, four in Afghanistan, and one in Kuwait. The Joint MRAP Vehicle Program established a Joint Support Solutions Center in Afghanistan to facilitate the distribution of parts and critical enablers to units in theater. MRAP and M–ATV manufacturers also had to send large numbers of contracted maintenance personnel to sustain the rapid fielding of vehicles there. U.S. Forces–Afghanistan has had to provide facilities and life support for these additional contract personnel, adding to its already difficult logistics burden.

Other issues complicate MRAP fielding and sustainment. More than 500 combinations of Government-furnished equipment (GFE) exist for MRAPs, and the installation of GFE often creates a fielding bottleneck in theater. MRAPs are also only half as fuel efficient as HMMWVs, which could significantly increase fuel requirements. These sustainment problems complicate and increase the demands on the logistics force structure and the size of the logistics footprint in any given theater of operations.

MRAP Benefits

Despite their drawbacks, MRAPs performed well in Iraq and saved many lives. They provided the Army and Marine Corps with an important counter-IED capability. DOD officials have stated that the casualty rate for personnel using MRAPs is 6 percent, compared to 22 percent for personnel in up-armored HMMWVs. In the *Joint Force Quarterly* article, "MRAPs, Irregular Warfare, and Pentagon Reform," by Christopher Lamb, Matthew Schmidt, and Berit Fitzsimmons (published in the 4th quarter 2009 issue), the authors reported that Marine Corps General Robert Magnus testified before Congress that MRAPs are "up to 400 percent more effective than the up-armored Humvees [HMMWVs] in reducing injuries and deaths."

According to the March 2008 *Seapower* article, "Re-evaluating MRAP," by Matt Hillburn, then Brigadier General Lawrence Nicholson, deputy commander at the Marine Corps Combat Development Command, stated, "I've seen MRAPs . . . taking hits that no Humvee or no Amtrak would've survived."

The MRAP vehicle capability decreases costs, reduces casualties, and buys time for a commander's counterinsurgency strategy to work. Lamb, Schmidt, and Fitzsimmons noted that winning the long war requires "sustained support from the U.S. public, which is more likely to offer that support when costs, including American casualties, remain low in comparison with perceived national interests and discernible progress."

Protecting the lives of Soldiers and Marines is not only the right thing to do; it is also less expensive than the alternative. Although each MRAP costs $600,000 to $1 million depending on the model, the cost of replacing a Soldier varies from $500,000 to $2 million depending on grade and military occupation.

The Need for Protection

DOD expects the near future to be one of persistent conflict and irregular warfare. Therefore, we cannot expect the requirement for IED protection to go away anytime soon. However, the force protection requirements will vary from one conflict to another, and the balance of survivability and mobility are difficult to determine in advance. The Army has 110,000 HMMWVs in its inventory, and the vehicle remains the Army's primary LTV. The HMMWV's replacement, the JLTV, will not begin production until 2015 and will not completely replace the HMMWV until 2025.

MRAPs can be included in the force structure with a variety of other vehicles, such as up-armored HMMWVs, family of medium tactical vehicle trucks, and JLTVs. However, DOD should cease acquisition of expensive MRAPs and M–ATVs as soon as practical and focus on the long-term LTV solution: the lighter, more versatile JLTV.

The 19,000 MRAPs already acquired by the Army are sufficient to fill the demand for heavy IED protection now and in the future. They are effective for route-clearance operations, mine and explosive ordnance disposal, casualty evacuation, and convoy protection. Units conducting those missions should have MRAPs incorporated into their modified tables of organization and equipment (MTOEs).

A 2010 Congressional Research Service report states that the Army intends to create an effective mix of wheeled vehicle systems by adding thousands of MRAPs into unit MTOEs: 5,570 MRAPs in infantry brigade combat teams (BCTs), 1,700 in heavy BCTs, 165 into Stryker BCTs, 5,350 in support units, 1,000 in training sets, and 1,000 in war reserves.

The remaining MRAPs can go into Army pre-positioned stocks. The Army intends to place MRAPs in as many as 20 BCT sets in Kuwait; Charleston, South Carolina; and Sierra Army Depot, California. These MRAPs will remain available for future operations in which protection is more important than maneuverability.

Additional MRAPs can be transferred to allied and partner-nation forces critical to operations in Iraq and Afghanistan. In fact, Secretary of Defense Robert M. Gates promised on 5 February 2011 to "sell, loan, or donate surplus U.S. bomb-detecting equipment, including MRAPs," to our allies.

Incorporating the MRAP capability into the Army force structure provides a capability that the Army needs now and until the JLTV fielding is complete. This will ensure that it is not 2 years too late protecting Soldiers from IEDs in the next conflict, as it was in Iraq.

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Filling the MRAP Gaps

BY MAJOR ERIC A. MCCOY

Equipping the Army with mine-resistant ambush-protected vehicles in a short timeframe left us with doctrine, training, and sustainment gaps that now must be filled.

Mine-resistant ambush-protected vehicles drive onto a large, medium-speed roll-on-roll-off vessel operated by the Military Sealift Command. *(Photo by MAJ Christopher Lecron)*

Fielding is providing a piece of equipment for the entire Army, generally through materiel acquisition processes as defined by the Army Acquisition Executive. Equipping, on the other hand, is providing equipment to a single unit for a single mission. While equipping is generally a much faster process than fielding, doctrine, training, and sustainment integration often does not occur concurrently with receipt of the system in the field. For some equipment, this is acceptable (metal-detecting wands for security checkpoints, for example), but sometimes it creates problems, especially in the long term.

As an example, the Department of Defense rapidly acquired mine-resistant ambush-protected vehicles (MRAPs) under non-program of record funding, out of urgency, without the accompanying integration. Training, maintenance, and doctrine development for MRAP use occurred on the fly after their issue.

The Secretary of Defense asked the Army to include MRAPs as part of its new modernization program, requiring a much greater "reverse-integration" effort. As a result, Army leaders must focus their efforts on developing doctrine, training, and sustainment strategies to support the successful integration of MRAPs into Army brigade combat teams (BCTs) and their supporting brigades.

Doctrine

First, we must rapidly develop doctrine for the inclusion of MRAPs in the Army inventory. Field Manual (FM) 3–0, Operations, defines doctrine as "a body of thought on how Army forces intend to operate as an integral part of a joint force." Doctrine development is an important first step in the force management process and drives the development of materiel and nonmateriel solutions to address the needs of the warfighter. If MRAPs are to be fielded throughout the Army as a possible bridging strategy to our next ground combat platform, we must better define how MRAPs are intended to be used by military forces beyond counterinsurgency and stability operations.

Moreover, the use of the MRAP as a force protection mechanism may conflict with tactical operations that require interaction among the populace and exposure to the enemy. In a March 2006 report, the Defense Science Board argued—

> Force protection must not interfere with the accomplishment of the mission or negatively impact on the political ties that bind the American people to their military. Above all, it must not lead to a garrison mentality or to a belief that hunkering down behind concertina wire and armor represents a serious effort to achieve mission comple-

tion. To do so would invariably rob U.S. forces of the ability to shape their battle space and understand how the enemy is operating. It would rob them of the capacity to perform effective counterinsurgency operations, which inevitably must involve operating in close contact with the civilian population.

In developing doctrine that incorporates MRAPs into the Army force structure, planners must ensure that they address the possible imbalance between force protection and mission accomplishment.

There are inherent problems in fielding an off-the-shelf vehicle that is not tied to operational concepts rooted in doctrine. For example, a high-mobility multipurpose wheeled vehicle (HMMWV) carries four troops. The MRAP carries six or more depending on its configuration. Accordingly, commanders and staff must develop tactical-level plans for using MRAPs instead of applying typical unit employment concepts based on HMMWV use.

If manning documents are tied to a four-man fire team plus a driver, those documents may need to be adjusted and Army forces may need to be rebalanced to increase end strength to support doctrine built around MRAP use. Sustainment planners would need to adjust estimates and plans to reflect a potential doubling of fuel use based on MRAP fuel consumption rates. MRAPs also generally exceed the cargo bay dimensions and payload ratings of a C–130 Hercules and must therefore be carried by a C–17 Globemaster aircraft or deployed by maritime transport.

Therefore, for future conflicts not in the U.S. Central Command area of responsibility, planners must ensure that doctrine addresses adjustments in force projection capability based on the additional transportation requirements imposed by a fleet that includes MRAPs or else depend more heavily on pre-positioned stocks.

Training

We must also continue to develop plans for individual and collective training for the MRAP that consider doctrine and tactics, techniques, and procedures being used in current overseas contingency operations. Rapidly equipping Soldiers in theater with MRAPs had drawbacks because the Soldiers had little time to train on the vehicles. While MRAPs have proven their worth by enhancing Soldier survivability against improvised explosive devices in Iraq and Afghanistan, the debate continues about if, when, and how to incorporate them formally into the operational Army structure.

However, in the interim, Army leaders must develop plans for incorporating MRAPs into our BCT structure. Analyses from major Army commands, feedback from our training centers, and input from deployed Soldiers indicate that earlier opportunities to train on the MRAP will reduce the number of tactical vehicle accidents in theater as well as improve Soldier proficiency in operating the vehicle.

In 2008, Lieutenant General Stephen Speakes (who was the Army Deputy Chief of Staff, G–8, at the time) said that we were faced with "putting MRAPs into the hands of Soldiers and not having the time to develop a robust training infrastructure or the ability to put substantial numbers of Soldiers through a training operation back home."

Now the Army is beginning to implement formal MRAP training along with specific tactics, techniques, and procedures designed to cut down on rollovers. Army commanders are getting their first surrogate trainers so Soldiers can train on MRAPs with the same characteristics as those they will use in combat.

The Army's MRAP University at Red River Army Depot, Texas, provides instruction for MRAP operators, sustainers, and master drivers in temporary duty and return status, allowing units to incorporate MRAPs into home-station training programs. We must continue to capture lessons learned and provide as many opportunities as possible for units to conduct training on MRAPs and how to employ them before the units' periods of availability in the Army Force Generation cycle.

Sustainment

The rapid acquisition of over 15,000 MRAPs has presented challenges to the maintenance and sustainment of the vehicles in theater. Despite the fact that MRAPs have been present in Southwest Asia for several years, the vehicles have not yet become part of the armed services' force structure.

To counter this challenge, the military has collaborated with its MRAP suppliers and other contractors to establish an effective maintenance and sustainment framework in theater. This has involved a hybrid approach similar to the strategies employed during the fielding of the Stryker combat vehicle, in which contractors worked in tandem with uniformed mechanics. Stryker maintenance eventually evolved to place greater emphasis on organic military capabilities.

To simplify early MRAP maintenance and sustainment challenges, the MRAP's original equipment manufacturers tried to design vehicles with readily available replacement parts. For example, the MRAP all-terrain vehicle is built on the Marine Corps' medium tactical vehicle replacement chassis.

The Army TACOM Life Cycle Management Command maintains four regional sustainment centers at forward locations in Iraq and five in Afghanistan. A full-service facility also exists in Kuwait to reset vehicles taken out of the fight for more than 30 days.

In the near future, program managers will develop technical and operational manuals and generate parts catalogs for the MRAPs. The cataloging effort will focus on standardizing the parts nomenclature and

"On April 6, 2009, Secretary [of Defense Robert M.] Gates announced his adjustments to the defense program as part of the President's budget proposal for Fiscal Year 2010. The Secretary's decisions had an immediate and major impact on our FCS [Future Combat Systems]-centric Army modernization effort. He terminated the Manned Ground Vehicle (MGV) portion of FCS, directing that we 'reevaluate the requirements, technology, and approach—and then relaunch the Army's vehicle modernization program....' He further directed the Army to 'accelerate the initial increment of the program to spin out technology enhancements to all combat brigades,' and retain and deliver software and network development program in increments, and incorporate MRAP into our force structure."

—2010 Army Posture Statement, "Two Critical Challenges"

numbers for various MRAP variants. A repair and sustainment facility for MRAPs will be established in the continental United States as part of the Army and Marine Corps Force Integration Strategy.

The Army needs to review its force structure to incorporate additional assets to support MRAP maintenance operations. A notable force structure gap exists for recovery assets. Units must be equipped or fielded with the interim Stryker recovery system, which is an M983A2 or M983A4 light equipment transporter pulling a modified fifth-wheel towing recovery device (FWTRD) and a high-mobility recovery trailer (HMRT). The HMRT has a 30-ton payload carrying capacity and is pulled by the FWTRD, which has a 16-ton lift capacity.

Currently, this system is not a program of record; the Army is procuring it in accordance with a December 2006 Army Resource and Requirements Board (AR2B) decision. The AR2B-approved requirement is for a system with the capability to lift, tow, and transport Strykers damaged beyond the current recovery capability of the Stryker BCTs. The AR2B authorized further procurement of this system in February 2009 to support MRAP vehicle recovery within the U.S. Army Central area of operations.

A large portion of the MRAP family of vehicles, including the MRAP all-terrain vehicle, will supplement light tactical vehicle requirements either as a bridge to fill critical combat roles or as a permanent enduring capability. The Army is continuing to analyze and adjust its strategies as the development of the joint light tactical vehicle continues.

The Army has spent an average of close to $6 billion per year on its tactical wheeled vehicles (not including MRAPs) since fiscal year 2003, compared to less than $1 billion per year in the 6 preceding years. As a result, the Army now possesses greater tactical wheeled vehicle capability than at any time in recent history. However, capability gaps remain, and the adaptable nature of our enemies continues to stress and challenge these capabilities, necessitating further investment.

We are at a strategic crossroads. Our Army must provide its Soldiers with the appropriate platforms to meet the threats of today and tomorrow, but we cannot afford to sustain and modernize a fleet of the current size given future budget expectations. Therefore, we must examine and develop at the first opportunity the requisite doctrine, training, and sustainment strategies that support the incorporation of MRAPs into the heavy, Stryker, and infantry BCTs, all enabled with an enhanced network and packages of relevant capabilities to conduct full-spectrum operations in support of our Nation's security strategies.

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Container Management in the EUCOM and AFRICOM Theaters

BY ERIC J. GORDON-JONES

The U.S. European Command (EUCOM) and U.S. Africa Command (AFRICOM) Container Management Program, run by the Transportation Integration Branch (TIB), Distribution Management Center, 21st Theater Sustainment Command (TSC), is a renowned success story. It has had numerous achievements since Operation Desert Storm and the end of the Cold War, and some initiatives that originated within the program have been copied by combatant commands (COCOMs) and Army service component commands (ASCCs) throughout the Department of Defense (DOD).

EUCOM and AFRICOM Container Management

TIB runs container management missions supporting predeployment, deployment, left-behind equipment (LBE), sustainment, redeployment, recapitalization, reset, excess-equipment recovery, and retrograde operations in support of EUCOM and AFRICOM. The container management retrograde mission includes the COCOM and ASCC class V (ammunition) call forward, realignment, and retrograde programs. TIB has combined these class V programs into a seamless operation that is analyzed constantly for process-improvement opportunities.

The keys to the success of EUCOM's and AFRICOM's many container management missions are a robust movement control system and contingency operations container storage facilities, including hubs for on-call general cargo and ammunition-grade containers, common-user land-transport military trucking capabilities, and commercial contracts to handle overflow requirements using all modes of transportation (barge, rail, truck) and materials-handling equipment.

Programs important to mission success are the Diplomatic Clearance Program, the International Convention for Safe Container inspection program, the container maintenance program for bicon, tricon, quadcon, 20-foot, and 40-foot DOD common-user general cargo containers, and DOD common-user containerized ammunition distribution system military-owned demountable containers.

Transloading facilities for class I (subsistence), class II (clothing and individual equipment), class IIIP (packaged petroleum, oils, and lubricants), class IV (construction and barrier materials), and class IX (repair parts) and the use of radio frequency identification (RFID) tagging also play key roles in mission accomplishment.

No Contracted Container Required

On 19 August 2010, EUCOM, AFRICOM, and U.S. Army Europe (USAREUR) became the first COCOMs and ASCC within DOD to have zero containers on lease supporting contingency operations.

This initiative is one of many that the 21st TSC Distribution Management Center is using to advance the EUCOM and AFRICOM container and platform distribution management programs and enhance their lead over other COCOMs within DOD. Two more initiatives being used by the container management program are the Equipment Deployment Storage Systems Maintenance Program and usage of general and special service tenders for inland movements of break-bulk cargo.

Equipment Deployment Storage Systems Maintenance Program. By having its own container maintenance facility, the 21st TSC has lowered the cost of purchasing containers and eliminated unnecessary detention costs for EUCOM, AFRICOM, and USAREUR. The financial benefits of this initiative include a USAREUR cost avoidance of $5.023 million annually and $39.675 million across the program objective memorandum (POM) cycle. The total DOD cost avoidance is estimated to be $124.367 million annually and $981.914 million across the POM cycle.

Usage of general and special service tenders for inland movement of break-bulk cargo. The 21st TSC TIB has proposed the use of general and special service agreements for inland movement of break-bulk cargo to counteract excessive Universal Service Contract 6 break-bulk carrier line-haul rates. The initiative was briefed to the Distribution Steering Group, composed of representatives from the Office of the Secretary of Defense, the Joint Staff, combatant commands, the military services, Defense agencies, and the transportation component command, and was positively received. The U.S. Transportation Command has directed further staffing of the proposal.

The 21st TSC, its Distribution Management Center, and TIB are constantly looking for new ways to reduce and minimize associated theater costs. We are confident that through our joint efforts we can minimize costs and provide quality service to both the European and African theaters. EUCOM and AFRICOM continue to make remarkable progress in the container management arena.

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The 563d Aviation Support Battalion's Off-Post Training Exercise

by Major Eric R. Peterson

The 563d Aviation Support Battalion provided logistics support for the 159th Combat Aviation Brigade during a predeployment training event.

The 159th Combat Aviation Brigade (CAB) conducted an off-post training exercise (OPT) near Fort Bliss, Texas, from 29 September through 18 November 2010. The primary focus of the exercise was to ensure that the brigade was ready for its deployment to Afghanistan in 2011. Over 1,300 Soldiers from the "Thunder Brigade" participated in this exercise.

The battalions' training rotations lasted approximately 20 days each, with a relief in place/transfer of authority (RIP/TOA) conducted at the end of each rotation. In addition to 2,600 Soldiers deploying from Fort Campbell, Kentucky, 53 of the brigade's aircraft self-deployed to Fort Bliss, 230 pieces of rolling equipment were line-hauled there, and 159 vehicles were drawn from the Fort Bliss left-behind equipment and prepare-to-deploy equipment yards. At the end of the exercise, the brigade was ready to conduct combat operations in Afghanistan.

The support battalion for this exercise was the 563d Aviation Support Battalion (ASB), the 159th CAB's support battalion.

Establishing the Exercise

Elements from the 563d ASB and the brigade torch party were the first Soldiers on the ground at Fort Bliss to begin the exercise on 29 September.

The torch party's focus was to coordinate with the Fort Bliss contracting office, establish the initial life-support locations, and build the brigade's footprint. The 563d ASB's missions were to establish operations for all classes of supply and ensure that Fort Bliss had the appropriate Department of the Army Form 1687, Notice of Delegation of Authority–Receipt for Supplies, and funds centers for the General Fund Enterprise Business System.

Within 3 days, all of the accounts were established and support agreements were in place to welcome the brigade's advance party (ADVON). The 563d ADVON was tasked with establishing a forward arming and refueling point (FARP), an ammunition transfer and holding point (ATHP), a brigade retransmission site, and a class I (subsistence) site for the containerized kitchen.

The ADVON worked feverishly for 2 days to establish all of the support areas and ensure that they were ready for the main body to arrive on 6 October. When the main body arrived, it went through the reception, staging, onward movement, and integration process and quickly went into the fight.

Task Force Fighting

Key to sustaining the fight and momentum of the operation were the FARP and ATHP operated by the Soldiers of the 563d ASB, also called "Task Force Fighting." In addition to manning the FARP and ATHP, Task Force Fighting conducted daily runs to the Fort Bliss installation supply support activity (SSA) to pick up both air and ground class IX (repair parts). The Soldiers also performed numerous ground recovery operations of the brigade's equipment, supervised the brigade aid station, and ran fuel samples to Holloman Air Force Base in New Mexico.

Task Force Fighting provided communication support through the Joint Network Node (JNN) and battalion Command Post Nodes (CPNs), provided both aviation unit-level maintenance (AVUM) and aviation intermediate-level maintenance (AVIM), conducted tactical logistics convoys in support of the FARP and ATHP, and delivered ammunition to the individual ranges. The 563d ASB ensured that no mission was dropped and that the brigade was fully supported in all training events.

The 563d ASB's Headquarters Support Company

A CH–47 Chinook helicopter approaches an AH–1 Cobra helicopter that will be sling-loaded out of the Fort Bliss, Texas, training area by 563d Aviation Support Battalion Soldiers.

(HSC) "Renegades" provided the mission command for the battalion and were responsible for the maintenance and recovery of the brigade's ground fleet. Twelve ground recovery operations had to be performed during the OPT. Other maintenance tasks performed included replacing a transfer case on an M978 heavy expanded-mobility tactical truck (HEMTT) and numerous brake repairs on M969 5,000-gallon semitrailers and M149 water trailers.

The battalion support operations (SPO) section was instrumental in the brigade-wide tracking of all classes of supply. In coordination with the brigade S–4 section, the SPO section conducted nightly logistics synchronization meetings to ensure that the required support was always provided. Through these missions, the Soldiers of the 563d ASB adhered to their unit motto, "Keep Them Fighting."

Devil FARP

The 563d ASB's A Company "Devils" were responsible for the operations at Devil FARP, which was located on Wiley Benton Airstrip. Devil FARP's primary mission was to refuel the aircraft that were being used for high-altitude mountain environmental training strategy training in New Mexico.

Fourteen Soldiers operated Devil FARP, which was a self-sustaining location. Devil FARP Soldiers lived, ate, and conducted their daily operations at the FARP, which was 45 minutes from McGregor Range Base Camp, the location of the battalion and brigade tactical operations centers (TOCs) and the main cantonment area for the exercise.

The Devil Soldiers faced harsh desert terrain, winds, and wildlife while executing their daily duties at the FARP. Devil FARP issued a total of 9,786 gallons of JP8 throughout the exercise and fed over 50 flight crews as they conducted their crew change-over briefs at the FARP.

Devil FARP was a four-point FARP that could refuel four CH–47 Chinook helicopters simultaneously. The refueling points were 200 feet apart and received fuel from four HEMTT tankers. The company's transportation platoon conducted daily fuel pushes from Biggs Army Airfield using M969 5,000-gallon semitrailers.

Shell FARP

Because of operational requirements and the distance from the aerial gunnery ranges, ammunition was not stored at Devil FARP. The ammunition for the aerial gunnery ranges was stored at "Shell FARP," operated by E Troop, 7th Squadron, 17th Cavalry Regiment. Shell FARP's primary mission was to support the aerial gunnery ranges.

The FARP included a 30-foot by 50-foot festival tent that served as sleeping quarters and living space. The FARP had its own power generation provided by civilian contractors, a 40-foot reefer van that kept perishables and water cold, and an M149 water trailer for bulk water. Latrines and a dumpster were provided and maintained through civilian contracts.

Task Force Ammo

The brigade ATHP was operated by Soldiers of the 563d ASB's A Company and HSC and E Company, 3d Battalion, 101st Aviation Regiment. The group was termed "Task Force Ammo."

Task Force Ammo conducted 24-hour class V (ammunition) support, with two shifts that did not live or sleep at the ATHP. Seven Soldiers worked 12-hour shifts, which included breaking the class V down by unit and range requirements and loading it on load-handling system (LHS) flatracks or HEMTTs with heavy expanded-mobility ammunition trailers.

All class V movements were conducted through tactical logistics convoys that were initiated by submitting a transportation movement release through the battalion TOC. The convoys were escorted by mine-resistant ambush-protected vehicles (MRAPs) and tracked by Blue Force Tracker. The battalion TOC monitored all class V movements through Blue Force Tracker and Command Post of the Future (CPOF). The ATHP received 670,633 rounds of small-arms ammunition, 5,528 2¾-inch rockets, 76 canisters of assorted smoke, and 28 Hellfire missiles.

Maintenance Support

The 563d ASB's B Company "Bandits" provided both AVUM and AVIM maintenance support for the entire exercise. The aviation maintenance facility was established at McGregor Range Base Camp. The facility had two clamshell-type shelters that were capable of housing any of the brigade's aircraft. Maintenance activities performed during the OPT included—

- ❑ Nose gear box changes.
- ❑ Generator seal changes.
- ❑ Engine removal and installation.
- ❑ Engine mount repair.
- ❑ Sheet metal repair.
- ❑ Bushing repair.
- ❑ Night-vision goggle repair.
- ❑ Avionics systems troubleshooting.
- ❑ Fuel lines fabrication.
- ❑ Scheduled services.
- ❑ Boroscope inspections.
- ❑ Maintenance test pilot support.
- ❑ Technical supply support.
- ❑ FARP operations for all gunnery ranges.
- ❑ Downed aircraft recovery team (DART) exercises.
- ❑ Special tooling supply.
- ❑ Instrument and transducer installation.
- ❑ Aircraft weapon systems and services troubleshooting.

Above, Soldiers from A Company, 563d Aviation Support Battalion, receive a convoy commander's briefing before departing on a mission. Below, 563d Aviation Support Battalion Soldiers use the crane on a heavy expanded-mobility tactical truck wrecker during a downed aircraft recovery team exercise.

A CH–47 Chinook helicopter flies overhead as 563d Aviation Support Battalion Soldiers in mine-resistant ambush-protected vehicles secure the area.

- ❑ Aircraft flight control correction.
- ❑ Main rotor and tail rotor replacement.
- ❑ Engine, gearbox, and transmission seals replacement.
- ❑ Landing gear servicing.
- ❑ Pedal housing repair.
- ❑ Retorques.
- ❑ Estimated cost of damage calculation.
- ❑ Jettisoned rocket pod recovery.
- ❑ Bearing reaming.
- ❑ Injector spring replacement.
- ❑ Skid shoe repair.
- ❑ Nondestructive inspection.
- ❑ Nut plate repair.

Signal Support

The 563d ASB's C Company "Chargers" deployed to McGregor Range Base Camp to provide signal support for the OPT in preparation for the deployment. C Company provided strategic and tactical communications support to hundreds of Soldiers by way of its JNN, CPN, and FM radio retransmission team. The JNN supported full-spectrum aviation operations for the brigade by providing Non-Secure Internet Protocol Router Network (NIPRNET) and Secure Internet Protocol Router Network (SIPRNET) voice and data for the brigade commander and staff.

C Company's use of electronic systems, such as CPOF, the Advanced Field Artillery Tactical Data System, Tactical Airspace Integration System, and Distributed Common Ground System–Army, provided the brigade with vital mission command assets to manage the battlespace. The CPN provided essential NIPRNET and SIPRNET voice and data capabilities to the ASB and their numerous support sections, including the battalion TOC, command group, operations cell, staff sections, company command posts, and SPO section.

The FM retransmission team provided a critical FM communications link between the battalion and brigade TOCs and the FARP located at Wiley Benton Airstrip, bridging a 43-kilometer gap and allowing for effective mission command at the battalion and brigade levels.

DART Training Preparation

The 563d ASB Soldiers conducted both ground and aerial DART training during the OPT. The DART team was composed of Soldiers from all four of the battalion's companies. Each company provided a unique or required skill set or piece of equipment that was essential to a safe and effective DART mission. The Soldiers from A Company provided the MRAPs for convoy security and the LHS that was used to execute the ground recovery mission.

The B Company Bandits provided most of the personnel for the DART team. The AVIM Soldiers from B Company had the special knowledge and tools required to prepare the downed aircraft for both ground and aerial evacuation, which included certifying the sling-load configuration for air movement.

The HSC Soldiers primarily provided mission command in the battalion TOC and also provided wheeled-vehicle recovery using the HSC's HEMTT wrecker. C Company personnel assisted in ensuring that the convoy was able to communicate with battalion and brigade TOCs through Blue Force Tracker, satellite communication, and two-way radios.

The first DART mission conducted at Fort Bliss for the OPT was a ground mission. The downed aircraft was an AH–1 Cobra helicopter that had been taken from the Defense reutilization and marketing office yard at McGregor Range Base Camp and transported to Stewart Drop Zone in preparation for the mission. The AH–1 Cobra was in two pieces; the cockpit and tail were separated.

A Company picked up the helicopter from the scrap yard and transported it to Stewart Drop Zone using the LHS. The B Company first sergeant and DART noncommissioned officer-in-charge were present to ensure that the aircraft was laid down in a manner that would best represent an actual downed aircraft.

The second DART mission was an aerial mission that used two CH–47s as the lift mechanism. The tail boom section of the AH–1 Cobra was secured inside one of the CH–47s while the other sling-loaded the fuselage section. Because of the low weight of the fuselage section, the CH–47s traveled at approximately 10 knots per hour to transport the aircraft safely to its next location, which was on the convoy live-fire range that the battalion would use a few days later.

An hour after leaving Stewart Drop Zone, the Cobra was dropped off and the fuselage section was scattered around the site in preparation for another ground DART exercise that would be conducted in conjunction with the convoy live-fire exercise.

DART Execution

Both DART exercises were coordinated through the brigade TOC with either the ASB commander or executive officer initiating the exercise with a staff inject. Once the brigade made the radio call reporting a downed aircraft, the 563d ASB TOC quickly went to work. Within an hour, a hasty military decisionmaking process (MDMP) session was conducted, companies were notified, and initial planning began.

At the 1-hour mark of each exercise, a course-of-action brief was presented to the 563d ASB commander and executive officer. Based on the brief, the commander decided on the method of extraction: air, ground, or destruction. This brief also established the timeline for the DART team and ground or air convoy movement team. The timeline included rehearsals, precombat checks and inspections, and a full sand table exercise that was overseen by the 563d ASB command team. The battalion staff in the TOC provided the mission command for all exercises, tracked the progress of the missions through Blue Force Tracker, and sent the information to the brigade TOC using feeds from CPOF.

The 563d ASB DART teams executed the missions in an outstanding manner. Although each DART mission was unique in its posture and extraction mode, the highly motivated Soldiers of the 563d ASB executed their mission to standard and, in keeping with the battalion motto, kept the brigade fighting.

Effects on the Mission in Afghanistan

While executing its support role, the 563d ASB ensured that it kept the 159th CAB fighting and thus continued its proud heritage of world-class support to its supported units. The capstone training event for the battalion's OPT was a combat live-fire exercise that incorporated MRAP operations, weapons training, air-ground interaction, 9-line medevac reporting, aircraft coordination, reacting to an improvised explosive device strike, and DART missions.

The valuable experience gained through the tough and realistic OPT at Fort Bliss greatly enhanced the unit's readiness and preparation for operations in Afghanistan. The 563d ASB, Task Force Fighting, has surpassed 100 days of combat operations in Afghanistan while serving as the sustainment support for the Aviation Task Force assigned to Regional Command South. In Afghanistan, the unit conducted numerous DART missions and was well prepared for them because of the OPT.

The battalion greatly enhanced sustainment operations by relocating two SSAs without any degradation of support to its customers. It also moved the arrival/departure airfield control group twice with no loss of service or negative operational impact. The battalion initiated numerous cost-saving measures that saved more than $63 million in the identification and accountability of mountains of excess supplies and equipment.

Because of the OPT, the 563d ASB was ready to conduct combat operations in support of its wartime mission and was ready to deploy to Afghanistan. The battalion trained to be ready to support the 159th CAB and "Keep Them Fighting."

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A New Dawn for BCS3

BY MAJOR JOHN J. COIRO, USAR

Conceptualizing, developing, and building are in some ways the easiest part of introducing a new system. Fielding and implementing it can be much more challenging. Designed to complement a robust suite of systems known as the Army Battle Command System, the Battle Command Sustainment Support System (BCS3) draws information from various diverse systems, tools, and applications to provide a common operating picture (COP) to leaders. In theory, it works flawlessly. However, in practice, it fell short of the mark when it was first fielded. After nearly 4 years in development and 7 years of multiple fielding attempts, BCS3 in Iraq has become a story of deploying a long-resisted information system to modernize the Army and venture into the 21st century.

BCS3 Beginnings

Conceptualized early in 2003 and first fielded in 2004, BCS3 provides the commander on the ground with an immediate snapshot of the logistics picture, which was known then as the logistics COP but is now simply called the COP. The COP provides actionable logistics information on in-transit and commodity visibility and equipment readiness status. It also allows unit-level logistics reporting and monitoring of related commander's critical information requirements.

To achieve the COP, BCS3 draws data from a host of systems, applications, and tools, such as Standard Army Management Information Systems, the Integrated Logistics Analysis Program, the Logistics Information Warehouse, the Global Transportation Network, and the Standard Installation/Division Personnel System. These systems all feed directly into the national server and are distributed out to various data-forwarding gateways worldwide.

When the network is without issue, the transmission of this information from source to server to data-forwarding gateway to workstation takes no more time than sending an email to somebody halfway around the globe. BCS3's operational flexibility comes from its ability to work on both the classified and unclassified networks since certain Army systems, like Blue Force Tracker, have only classified data feeds.

Despite the awesome potential of having a multi-sourced system display a single COP, its reception by Soldiers was, at best, lukewarm. BCS3, in its earliest configuration, frustrated many Soldiers with its complex and unfamiliar interface. It developed a reputation of unreliability because of constant system crashes and, worst of all, inaccurate data. To their credit, the Product Manager BCS3 (PM–BCS3) and the Army Training and Doctrine Command Capability Manager (TCM) quickly rectified many of the early issues by releasing several enhancements and upgrades to the application.

The latest product, rolled out in 2008, was called the "Ease of Use" upgrade, which improved the user's experience by introducing several enhancements, including a more intuitive graphical interface and redesigned database. However, with the damage done, the first generation of users—Soldiers and commanders who experienced the earliest versions of BCS3—actively resisted the introduction of this automation system into their tactical operations centers. The consequence was a seemingly never-ending fielding attempt and, most discouragingly, the delay of modernizing the sustainment community with a system capable of presenting a single COP for commanders to use.

LOGSTAR

Resourceful Soldiers requiring a method to easily capture and manage logistics data turned to the path of least resistance and commandeered applications already found on their workstations. In that way, the logistics status report (LOGSTAR), otherwise known as the logistics status (LOGSTAT), came into existence. A LOGSTAR is nothing more than a common Microsoft Excel spreadsheet with a series of rigid and complex formulas that allow sustainers to track, store, and, most importantly, use the data to forecast requirements, shortfalls, and overages.

Soldiers readily use LOGSTARs instead of BCS3 because they already understand how to use Excel. A LOGSTAR does not require an understanding of unit connections or the administration of a client-server relationship. Transmitting a LOGSTAR is straightforward: merely open up an email, attach the LOGSTAR, and send it to the next higher echelon.

Regrettably, a LOGSTAR allows the manipulation of data by granting Soldiers access to change the data found in each cell. In this way, resourceful staffs can "shape" the picture of the battlefield to suit their expectations. These habits have developed a staff culture that permits the common practice of adjusting a LOGSTAR to a desired rather than an actual status.

LOGSTARs have other drawbacks. First, a LOGSTAR is a single-dimensional, glorified Excel spreadsheet. Second, fragile and complex formulas reside within this spreadsheet. Easily manipulated as they are, people often break formulas, which requires countless hours to repair. Units often inherit a LOGSTAR

from the preceding unit and have no understanding of the data entered into the cells. Updating LOGSTARs became a rote task that devolved from the staff actively managing their commodities to merely filling in the blanks. For example, units would often fail to adjust their LOGSTAR to fit their modified tables of organization and equipment and their Property Book Unit Supply Enhanced (PBUSE) systems information.

From data entry to the very last level of review, the data in a LOGSTAR, which were held sacrosanct by the Army Sustainment Command, were completely unreliable. And since LOGSTARs deliver their information from a logistics viewpoint rather than from a tactical perspective, staffs must work for hours to reconfigure the information into reports that will be accepted by higher echelons. Nevertheless, LOGSTARs have become the favored method because they are easy to use and flexible enough to fit the needs of nearly every kind of unit in theater. However, one cannot effectively manage logistics by using a spreadsheet, glorified or otherwise.

> "Of course, when all parties are using BCS3, reports are not necessary since relevant information is populated in BCS3. Everyone on the network can see and utilize the reported information. One of the fundamental principles of the modular force logistics concept is 'centralized EAB [echelons above brigade] logistics C2,' which will enable the most efficient and effective end-to-end distribution process."
>
> —Field Manual Interim 4–93.2, The Sustainment Brigade

Seeking User Input

In 2006, PM–BCS3 sent a data collection team to interview the troops on the ground and discover why they preferred LOGSTARs to BCS3. In late 2006, the 13th Sustainment Command (Expeditionary) (ESC), in conjunction with TCM and PM–BCS3, identified the need for a better logistics reporting capability in the Iraq joint operations area (IJOA). This capability needed to focus on the big money-making commodities: class I (subsistence), IIIB (bulk petroleum, oils, and lubricants), and V (ammunition).

PM–BCS3 developed a hybrid Web-service client LOGSTAR prototype in early 2007, mimicking PBUSE's move to a web-based application. In mid-2007, PM–BCS3, in conjunction with the 13th ESC, conducted a limited-user evaluation to test the LOGSTAR Web-service client.

After more testing and development, PM–BCS3 and TCM conducted another limited-user evaluation with the 316th ESC, a Pennsylvania Army Reserve unit, using a more developed Logistics Reporting Tool (LRT) prototype. The purpose of the second limited-user evaluation was to determine if the capabilities of the LRT prototype met the IJOA's minimum requirements for use in supply-point reporting of classes I, IIIB, and V and to identify the final modification needed for unit-level reporting.

Change Process

The following is a basic explanation of how requested changes travel through the acquisition process. First, the warfighter identifies a change and submits a mission needs statement, or operational needs statement, to the combat developer or TCM.

Next, TCM vets the request against both Army doctrine and joint requirements. Once TCM approves the change, it transfers the action to the materiel developer or project manager (PM). Generally, but not always, a modification to the contract accompanies the change request. After that, the PM delivers the project to a team of developers.

The developers then take the change request and modify the content, conduct preliminary testing, and refine the product as necessary. In theory, the users who requested the change would conduct the final test. Unfortunately, because of the unit rotation cycle in the IJOA, the unit requesting the changes has usually been replaced by a new unit before PM–BCS3 completes any modifications.

LRT

In 2009, PM–BCS3 fielded LRT, best described as an automated spreadsheet. PM–BCS3's goal was

to provide Soldiers with a familiar interface, namely LOGSTAR.

LRT is an extension of the "ease of use" enhancements released in 2008. It is the tool of choice for the Soldier because of its many advantages over both the BCS3 workstation and LOGSTARs. Primarily, it is an installed application on the Soldier's workstation, which is not only convenient but eliminates the need for having an additional laptop cluttering the workspace (which BCS3 requires). The interface is intuitive and straightforward; any Soldier who can enter data into a spreadsheet can operate LRT.

LRT also is a no-cost application. This allows units to field BCS3 capabilities down to the lowest echelons in their organizations, which coincidently are first-line data-entry personnel. Moreover, the LRT contains predefined reports known as "roll-ups" that generate information at the click of a mouse. These reports provide leaders at all echelons with an immediate snapshot of their logistics footprint without having to transfer the data into secondary documents or presentations. Finally, the LRT can capture nondoctrinal data from supply points.

Leaders with keen foresight who saw LRT presentations delivered by the BCS3 demonstration lab immediately saw the value of this logistics tool.

Introducing the New and Improved BCS3

Leaders with keen foresight who saw LRT presentations delivered by the BCS3 demonstration lab immediately saw the value of this logistics tool. However, earlier iterations of BCS3 had caused Soldiers to be hesitant to use the system, and major operations in Iraq had created an environment that made introducing a new management system difficult. Nevertheless, a grassroots movement of sorts developed among a few forward-thinking units and dedicated field service representatives despite these obstacles and challenges.

The journey began in late 2009 with the first fragmentary order (FRAGO) issued by the commander of the 287th Sustainment Brigade, a Kansas National Guard unit. Although the effort failed to get traction from the unit's headquarters and support staff, the 732d Combat Sustainment Support Battalion (CSSB), a Wisconsin National Guard unit, supported the FRAGO directives. Guided by its support operations officer (SPO), the 732d CSSB, located at Contingency Operating Base (COB) Adder, performed the first proof of principal in the IJOA and set the stage for everything that followed.

In December 2009, the 732d CSSB SPO invited the 36th Sustainment Brigade Sustainment Automation Support Management Office to attend a BCS3/LRT commanders' demonstration.

Soon after replacing the 287th Sustainment Brigade at COB Adder, the 36th Sustainment Brigade, a Texas National Guard unit, discovered that LOGSTARs were susceptible to error because authorized fields were not locked and, therefore, permitted flagrant data corruption. The 732d CSSB introduced the idea of using LRT and found the 36th Sustainment Brigade willing to transition from using LOGSTARs to LRT. With both units on board, their efforts to promote BCS3/LRT turned to U.S. Division–South (USD–S), the 1st Infantry Division, out of Fort Riley, Kansas.

In January 2010, the 36th Sustainment Brigade hosted the USD–S Logistics Conference, which was attended by logisticians from its subordinate units and the 1st Infantry Division. The centerpiece of the conference was the process for implementing LRT. The subordinate units were in agreement, which influenced the 1st Infantry Division's decision to publish a FRAGO in February 2010 that implemented LRT throughout all of USD–S.

This was the first time that both a maneuver unit and a sustainment unit used LRT to report commodities. Their united effort should have led the way for the remainder of the IJOA to adopt LRT as the system of choice. However, without the sustainment command adopting LRT, the IJOA continued to use LOGSTARs to report commodities.

We Did Not Know Any Better

PM–BCS3 started fielding the Dell M6300 for the upgraded BCS3 to Reserve units in 2008. All Reserve units in rotation for deployment had priority to receive the BCS3 workstations. The 103d ESC, a Reserve unit out of Iowa, received its BCS3 workstations late in 2008, complete with support by field service representatives and the extra bonus of sending two Soldiers to Tapestry Solutions' 6-week administrator course.

After visiting several Army Reserve units in Iraq, the commander of the 103d ESC sought to emulate a fusion cell, found in Iraq, back at home station in Des Moines, Iowa. The 103d ESC SPO converted its area in the Reserve center into a mini-fusion cell by removing all cubicles and replacing them with tables, and the G–6 built an "exercise net" to allow the BCS3 operators to train on their machines.

The 103d ESC continued to train Soldiers to use

BCS3, constantly seeking training opportunities (such as the courses offered at Camp Dodge, Iowa) and holding a comprehensive training event that was centered on BCS3 use. In fact, an internal competition emerged among several sections within the ESC to test the system under a variety of different circumstances.

During the 103d's predeployment training events, planners incorporated BCS3 use by injecting simulated events into training during the command post exercise–sustainment (CPX–S) at Fort Lee, Virginia, and the mission rehearsal exercise (MRX) at Fort Hood, Texas. Both exercises challenged and prepared the ESC for its mission in Iraq. For the MRX, the 103d ESC and the 224th Sustainment Brigade, a California National Guard unit, participated in Unified Endeavor 11–1. Unified Endeavor 11–1 was part of a larger exercise networked with the 4th Infantry Division at Fort Carson, Colorado (also conducting its MRX), and the XVIII Airborne Corps at Fort Bragg, North Carolina (acting as the U.S. Forces-Iraq higher command).

The Army Combined Arms Support Command (CASCOM) commander challenged the 103d ESC commander to finally implement BCS3 in the IJOA. To facilitate implementation, CASCOM sent a TCM representative to Fort Hood. While the 103d was going through the MRX, the TCM representative worked with the SPO redistribution officer-in-charge on preliminary planning to implement BCS3 in the IJOA. In fact, the TCM representative traveled to Iraq and introduced BCS3 to the outgoing unit, the 13th ESC, and acted as the BCS3 knowledge continuity subject-matter expert while the 103d ESC completed its deployment preparations.

Proof of Principle

The 13th ESC transferred its authority to the 103d ESC on 1 July 2010. With the 103d at the sustainment helm for the IJOA, and following the guidance of the ESC commander, the SPO sought to implement BCS3 to manage commodities. The plan was to field the LRT as a replacement to LOGSTAR and provide units with a familiar interface while tapping into the dynamic and near-real-time reporting capability of the BCS3 architecture.

As the ESC BCS3 program manager, I met with the BCS3 team in late July 2010 to discuss the implementation plan and proposed glide path. Emphasis and theater support to field BCS3 came from the U.S. Forces–Iraq (USF–I) J–4 logistics automation officer, who had received a directive from the USF–I J–4 to either implement BCS3 and its application variant, the LRT, or descope the theater contract by returning the field service representatives to the continental United States. The timeline to conduct a proof of principle and present a decision point rested on two major factors: the USF–I J–4's redeployment and the J–8's fiscal deadline. Therefore, the final decision point was due on 15 October.

I chaired a meeting on 1 August 2010 to set in motion the efforts to implement BCS3. In order to convert a "critical" population, we placed the emphasis on promoting LRT because it was an easier application to learn and adapt for use in managing commodities. The commodities we chose to manage with LRT were classes I, IIIB, and V because all three used LOGSTAR as a management tool. The plan involved a grassroots movement that would compel all the commands in the IJOA to adopt LRT or risk losing sustainment visibility and support.

A critical component for success was the involvement and support of senior leaders. Momentum gained by the team translated into support, first by the ESC SPO and then by the ESC commanding general. The final proof-of-principle test began on 15 September and culminated on 12 October. The primary players in the test were the 103d ESC, the 3d Sustainment Brigade, and the 224th Sustainment Brigade.

To facilitate LRT implementation, the sustainment brigades, emulating the ESC, designated their own PM's. The 224th Sustainment Brigade had the benefit of operating in a BCS3-friendly environment because of USD–S's LRT implementation 9 months earlier. Although wary of adopting a new reporting tool, the 3d Sustainment Brigade immediately saw the benefit of using LRT. Ultimately, the findings indicated that the system was reliable, effective, and efficient. In fact, units originally opposed to BCS3 came to appreciate, and even like, LRT.

The ESC's successful proof-of-principle testing provided the required fidelity for USF–I to retain funding for the BCS3 program and to direct a further test encompassing all of the IJOA. The remaining zones (Center and North), in anticipation of USF–I's FRAGO directing LRT testing, published their implementation FRAGOs. On 15 December, management for IJOA class I, IIIB, and V commodities transitioned from LOGSTAR to LRT.

Lessons Learned

Resolving set-up problems. Fielding the LRT was more than merely installing the client on Soldiers' workstations or setting up a local BCS3 system at each battalion or above. Before publishing the ESC proof-of-principle FRAGO, the ESC BCS3 project team spent weeks ensuring that all ESC subordinates had either BCS3 or LRT and that all network connectivity issues, including appropriate firewall exemptions, were resolved. LRT lent itself to simple over-the-shoulder instructions and quick refresher training because of its similarity to common spreadsheets, making it easy to transition from LOGSTAR to LRT.

Roll-up reports. Out of necessity, Soldiers had

created third-party applications to extract data from LOGSTAR in order to forecast and retain historical data. Contained within LRT are premade reports known as roll-ups. Since these roll-ups displayed data differently than the third-party applications, it took a great deal of effort to shift users' and managers' fundamental thought processes and get them to accept the new layout. Even so, LRT could not produce certain critical roll-ups, such as class IIIB bag data. PM–BCS3 must incorporate these fields and reports into LRT; otherwise, units will have to develop additional customized reports.

In the short term, because of the lengthy process needed to effect change in BCS3/LRT, users are compelled to use third-party applications. Fortunately, several of these applications (such as Microsoft Access) feed off spreadsheets and LRT can export to Microsoft Excel, so the fix was a simple procedure of reformatting the import process.

Reporting delay. Inherent to LOGSTAR was a reporting delay. LOGSTAR created a natural delay when units added data and emailed them to their next higher echelons. This allowed each echelon to verify the data, and if it discovered any inaccuracies, it could request clarification or correction from the reporting echelon. LRT operates in near-real time. Data entered at the data input echelon immediately populate everywhere. Each echelon had little or no time to verify its data before several higher echelons viewed them. Therefore, commodity managers established artificial time hacks that mimicked the time delay inherent in LOGSTAR. This provided a level of comfort for each echelon to verify its information long before the higher command received it.

Unit task organization. A critical lesson learned was the management of the unit task organization (UTO). BCS3/LRT operates a customized database, and for every unit identification code reported within the system, one can view that unit's data. The UTO acts like a filter (and to some degree the location within the hierarchy) that permits the customization of different views based on requirements. However, although the data are in the system, if the UTO does not have the correct unit identification codes, that echelon cannot see the data. The UTO requires some maintenance, but no more maintenance than the time it takes to check a vehicle's oil.

The proof of principle determined that the process works best if the following are instituted: assign an operator to each BCS3 workstation, establish a UTO manager for every unit with a BCS3 workstation, and initiate all changes to the UTO from the lowest echelon possible. The bottom-up method of UTO management was the most accurate and easiest to manage. The additional roles created by necessity simplified the process and provided a single point of contact for any UTO issue. The UTO manager is an additional duty, much like the safety officer or food-service inspection noncommissioned officer. The UTO manager can be a BCS3 operator or in another staff section, like G/S–3 or G/S–6.

BCS3/LRT shortcoming. Even with all the system enhancements and the development of LRT, BCS3 remains a tactical system rooted in the present. A sustainment command needs a system that operates on an operational level and can perform trend analysis and forecasting. The sustainment brigade's system needs to live in both the past and the future. PM–BCS3 is looking at future enhancements to provide this capability, but to bridge the deficit, the ESC is compelled to use third-party software, such as Microsoft Access. This has the making of another potential LOGSTAR-type application, which reintroduces data corruption because of human intervention and defeats the purpose of an automated information management system.

The story of deploying BCS3 is a testament to leader involvement and staff collaboration and acceptance. It is also a caution against the legacy attitudes prevalent in the Army sustainment community. All the events described above occurred in parallel and culminated in the efforts of a few units and individuals who were determined to truly manage their logistics.

BCS3 provides operational flexibility and creates a commonality of information that becomes a combat multiplier. Units no longer have to manage or customize commercial off-the-shelf systems and relearn the unique attributes of all iterations of a custom application found in a theater. With BCS3, units can train during their reset phase and incorporate the system during their predeployment activities. Then, when units hit the ground, they will fall in on a common system with which they are familiar, which increases the effectiveness of the transfer of authority and over-all logistics management.

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Aerial ISR Inside an ESC

BY CAPTAIN JONAH E. KRAUSE

The 103d Sustainment Command (Expeditionary) took over an aerial intelligence, surveillance, and reconnaissance program from its predecessor and increased the capabilities of that program through persistence and cooperation.

An MQ–1 Predator unmanned aircraft system awaits its next mission at Balad Air Base, Iraq. The Predator is used for armed reconnaissance, airborne surveillance, and target acquisition. *(Photo by A1C Jonathan Steffen)*

When the 103d Sustainment Command (Expeditionary) (ESC) arrived at Joint Base Balad, Iraq, the intelligence section, or G–2, learned that its predecessor, the 13th ESC G–2, had recently developed and implemented an aerial intelligence, surveillance, and reconnaissance (ISR) program.

The 13th ESC G–2 section had created, resourced, and institutionalized a program of systematically requesting unmanned aircraft systems and other types of reconnaissance aircraft to patrol the skies over areas with identified threats to convoy escort teams. Video from the aircraft was streamed in through a computer for the section to monitor. The 13th ESC G–2 had the capability to communicate with the aircraft, directing it to any suspicious activity it witnessed during a mission. The 103d ESC decided to continue its predecessor's aerial ISR mission when it replaced the 13th ESC.

Recognizing the ISR Requirement

Logistics operations need to be supported by an ISR program. ESC convoys constantly traverse dangerous areas of operations and represent a critical link in the supply chain, which could have a significant impact on operations if disrupted. With finite route possibilities, known destinations, and limited movement times, convoys are regularly targeted by the enemy.

Supply lines are the lifeblood of any military force, and history shows that protecting them is vital to mission success. The primary threats to sustainment in Iraq are the enemy's improvised explosive devices (IEDs) and explosively-formed penetrators. These threats can be mitigated by protective armor to shield personnel and cargo, but that is only one part of the defense. Another layer of defense is a trained set of eyes using technology to provide overwatch for the vehicles moving the beans, batteries, and bullets.

Every division and major subordinate command in the Army except for the ESC has ISR assets. In Iraq, the ESC's "eyes in the sky" belong to U.S. Forces–Iraq (USF–I) and are located throughout the country. USF–I allocates these assets to the divisions, which in turn share them among their subordinate brigades and retain a few platforms at their headquarters for their own requirements.

Because each level possesses its own platforms, each has created its own system of requesting, processing, documenting, and tracking internal requests for ISR coverage. Any attempt to coordinate ISR coverage over a considerable stretch of a main or alternate supply route requires synchronization through multiple operational environment owners (OEOs), each with its own unique way of doing things.

Force reductions and equipment reallocations to Afghanistan have reduced the availability of fixed-site force protection and other operational requirements. Affecting ISR efforts even further, division G–2 and USF–I J–2 staffs are many times the size of an ESC G–2 section.

Performing With Limitations

The 13th ESC ISR program was fully functional but was limited in its scope and ability to add protection to the force. While the U.S. Division–Center (USD–C) in the Baghdad area readily provided the 13th ESC with priority of effort for ISR aircraft, the ESC rarely received approved requests from the other U.S. divisions throughout Iraq.

Furthermore, the section's small size allowed only one Soldier to be used in the role of ISR manager. Some other concerns were the section's lack of training on imagery skills, reduced bandwidth, and insufficient computing power for the robust needs of full-motion video (FMV) feeds.

In the 6 months before the 103d ESC's arrival, the 13th ESC experienced more than 100 IED attacks on convoys. Those attacks made up roughly 7 percent of all attacks against U.S. troops and Iraqi Security Forces along the routes regularly used.

Taking Over the ISR Mission

Although the 13th ESC G–2 section built a strong foundation for conducting ISR operations and had a sound, systematic approach, the program required growth. To maintain or even consider expanding the existing ISR program, the 103d ESC would face the same challenges that its predecessor had endured.

The 103d ESC's G–2 section was not trained in collection management or imagery analysis. Resourcing normal day-to-day operations spanning a 24-hour period proved to be difficult for the small staff. But the section had one advantage: The ESC commander and G–2 leaders recognized the importance of having an organic ISR program.

The commander mandated that the 103d ESC seek all seven capabilities of protection: synchronization of route clearance, presence, close air support, air weapons teams, airborne electronic attack, civil engagement, and the G–2's priority, ISR. Despite the section's constraints, it formulated an aggressive approach with the end state of expanding the ISR program it inherited. With ISR as both a G–2 and command goal, the G–2 reprioritized and redistributed the workload among the team, freeing up time and energy.

The first focus was on maintaining the existing relationships the 13th ESC fostered in creating the program. It was apparent from the beginning that both the USD–C commanding general and the collection team were highly receptive to ISR needs. With most of the attacks occurring in the Baghdad province, this allowed the G–2 to preserve the existing effort within the most probable area of concern. The G–2 dedicated one Soldier to ISR at night, when most activity occurred, and initially focused on USD–C.

While sustaining the ESC's inherited program, the G–2 brainstormed new methods to expand and improve the program. The team communicated with its sustainment brigades, the USF–I headquarters, and the collection management teams at each of the divisions in an effort to understand all of the systems in place throughout the area of operations and to gather best practices. Objectives were explained and discussed, as were the named areas of interest (NAIs), to every senior leader and resource manager who was available to listen.

The G–2 section came to the consensus that employing economy of force by taking a three-pronged strategy was the best solution. First, the ESC continued to request ISR for areas where coverage of its enduring NAIs was already provided through USD–C. Second, the ESC identified when and where OEOs and divisions allocated their ISR platforms along routes of interest. This allowed the ESC to tune in to equally relevant missions conducted by other elements and piggyback off of their FMV feeds when ESC missions were scrubbed.

Finally, based on recommendations from both the USD–C and U.S. Division–North, the ESC G–2 employed the sometimes underused counter-IED platform technologies that are held at the division level. These platforms use technologies beyond FMV and reach

back to dedicated analysts who report suspicious activity in real time.

Cooperating for Greater Force Protection

The 103d ESC G–2 worked to shape a close professional relationship with the engineer brigade responsible for route clearance teams (RCTs) on most of the routes that the ESC's convoys traveled. Within 30 days of the ESC's arrival, engineer and ESC elements began a cooperative endeavor that included sharing intelligence, a common operating picture, and NAIs and their criteria, such as geographical and attack-level parameters. They also exchanged ideas about synchronizing RCTs, ISR, and convoy movements.

Instead of trying to convince asset managers to permanently dedicate an ISR platform specifically to the 103d ESC, the ESC pursued ISR assets that already covered its logistics areas of interest and requested access to the mission results. The ESC's ISR situation was communicated to anyone who would listen to inform them of the ESC's mission and needs.

A last-minute meeting with a sympathetic USF–I asset manager and a contract lead resulted in the ESC's hiring of two contracted ISR analysts. Shortly after, the ESC received two Persistent Surveillance and Dissemination System of Systems and a field service representative who helped the ESC to expand the number of ISR FMV feeds and better monitor and analyze them.

Within 60 days of arrival, the 103d ESC's ISR program had grown from being the additional duty of one individual to being the responsibility of four dedicated personnel with the capacity to improve the force protection of ESC activities. With two ISR analysts on the job, the G–2 was able to monitor the ESC's day and night operations. The battle rhythm and products were refined to ensure that subordinate and sister units knew the details of the ESC's missions and how to contact the G–2 for any reason.

The increasingly comprehensive program required procedures for notifying RCTs and operations staff after identifying suspicious activity on a route. Both the operations and G–2 staffs worked concurrently to inform personnel about hazards.

Specifically, the chief of operations worked with the appropriate divisions to ensure that RCTs reacted to threats and that convoy escort teams in the immediate vicinity were notified. In turn, ESC analysts in the joint operations center provided updates on situations, worked with their OEO counterparts to validate hazards, and worked to bring in more assets to help. The ISR system also provided situational awareness to the commander and staff about specific convoys with respect to attacks, traffic congestion, and accidents.

Implementing the ISR Mission

The added synergy and knowledge inherent in having trained ISR personnel allowed the 103d ESC to create depth by initiating a standard collection request for national-level imagery over areas in which the ESC had an ongoing interest. This allowed for coverage of immediate threat areas derived from human intelligence and other sources. The expansion also required the development of an ISR operational summary that was distributed daily throughout the command to ensure operations, support operations, mobility, and intelligence staffs had visibility of when, where, and what the G–2 team was covering.

Throughout the deployment, improvements continued to be made from the ESC foxhole, creating initiatives that built efficiency and effectiveness and further expanded the 103d ESC's ISR abilities. One member of the G–2 staff modified the NAI criteria, moving away from a model that originally encompassed only active main and alternate supply routes and enemy activity within a geographical area. This initiative also incorporated data on convoy activity and route clearance times and locations, resulting in prioritized NAIs.

An ISR analyst developed an ISR management system that organized asset scheduling, mapping, and mission requests into one user-friendly interface. As a shop, the 103d ESC G–2 aggressively pursued access to additional ISR feeds, coordinated their use with other sections and subordinates, revalidated requirements, and refined processes to enhance the counter-IED, RCT, and quick-reaction force efforts.

A number of lessons learned were developed from this mission. First, the ISR effort should not cause competition between tactical and sustainment operations. The U.S. divisions and ESCs are all too often targeted on the same routes and have the same goal of interdicting enemy activity.

Likewise, communication through partnerships, networking, and relationships often compensates for shortfalls in staff. Collaboration is impossible inside a vacuum, and using resources and maximizing economy of force can provide great results.

Finally, through conversations at every level, the 103d ESC discovered that sustainers, when dealing with operational partners and higher headquarters, must articulate their needs before they will receive the resources they require. Only when the cohorts and personnel within the intelligence hierarchy were educated did the G–2 section gain access to the assets they needed.

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Developing a Fuel Management Information System in Iraq

by First Lieutenant Larry L. Motley, Jr.

An expeditionary sustainment command in Iraq found that forecasting, ordering, and monitoring the distribution of fuel was a laborious, time-consuming process. A new system for theater fuel management was needed.

When the 103d Sustainment Command (Expeditionary) (ESC) assumed operational sustainment responsibility in Iraq from the 13th ESC during the summer of 2010, fuel management for the theater of operations presented a daunting mission.

At the time of the ESCs' transfer of authority, the scorching summer months were already well underway and the initial responsible drawdown of forces had begun. Fuel requirements had been growing, and they continued to grow until early October. During the peak of the drawdown, the ESC sustained more than 125,000 personnel and supporting equipment with three separate fuels. JP8, the Army's single fuel on the battlefield, constituted most of class IIIB (bulk petroleum, oils, and lubricants) in the Iraq joint operations area. During the summer and into the fall, the average weekly consumption was approximately 1 million gallons.

Timely and accurate forecasting, ordering, and distribution monitoring of this fuel is the job of the ESC fuel section. At the transfer of authority, Microsoft Excel served as the primary management information system. Because of the breadth and depth of data collected, an intricate system of spreadsheets and methodologies had been adopted and had evolved from rotation to rotation. This system, although effective, was fragile and labor intensive. Each 13-person ESC fuel section spent 70 percent of its personnel hours simply maintaining the system and conducting quality checks. Nearly all reporting and analysis required manual data entry, calculation, and quality checks.

The strategic inflection point came in the first days of the relief in place. The 103d ESC fuel section deployed with six personnel, of whom only two were qualified in their military occupational specialties. This significant decrease in staff, coupled with an outmoded system (Microsoft Excel), demanded immediate transformation of the current information management methodologies. The fact that the fuel data management function was unsustainable forced innovation. Successfully overhauling a real-world operational system while simultaneously continuing combat operations required an innovative approach and a strong change agent.

Using Expertise in the Ranks

Major Thomas G. Lewis, the class IIIB officer-in-charge, immediately looked to his noncommissioned officers for their unique skill sets. "As an Army Reservist myself, I am keenly aware of the additional competencies and talents Reserve Soldiers often bring to the fight," observed Major Lewis. One such Soldier was Staff Sergeant Jacob A. Clos, whose civilian experience included inventory process control and information management in manufacturing.

As a supply chain professional for Emerson Process Management–Fisher Division in Marshalltown, Iowa, Staff Sergeant Clos had worked with Microsoft Access and Excel for the past 6 years analyzing data and process improvements. "Over my career," he noted, "I have learned the importance of accurate data through the entire supply chain cycle, and data accuracy was my main focus of the fuel management project. The skill sets I advanced during this project [developing a new fuel data management system] will be carried over to my civilian career, so it was a win-win situation."

After an initial assessment and research into available resources and preliminary system architecture, Staff Sergeant Clos began the arduous task of building, testing, and validating a completely new fuel management system for the Iraq theater.

The objectives of the proposed fuel management system included—

- ❑ Reducing spreadsheet links and reliance on Microsoft Excel.
- ❑ Significantly decreasing personnel hours devoted to system maintenance and quality checks on data.
- ❑ Improving forecast analysis times.
- ❑ Creating a highly responsive and flexible ordering process.
- ❑ Establishing an intuitive and user-friendly interface.

Another Program Offers a Solution

The solution was using Microsoft Access, a relational database already in the Army's software inventory. This program comes as standard software with the Microsoft Office Suite on most Army computers.

Continued from page 2

At a time of funding constraints, CASCOM is using new technologies and strategies to maximize institutional training for the Guard and Reserve. Innovations resulting from the new Army Leader Development Strategy, Army Learning Concept, and Army Training Concept hold great promise for the Reserve component. Increased use of distance learning, digital applications, and skills-based training will facilitate instruction that reaches Guard and Reserve sustainment Soldiers more efficiently and effectively.

Delivering training directly to the point of need, testing Soldiers before their training, and tailoring their learning based on the results of those tests will improve the quality of training provided to Reserve component Soldiers and help to reduce the time they spend away from their civilian jobs. Funding and careful integration of the Reserve component into CASCOM's overall strategy will remain vital, but these new strategies hold the promise of enhanced institutional training for the Reserve component in the future.

The Army cannot retain its dominance in the future without a ready, operational Reserve component. The last 10 years have demonstrated that the Reserve component is fully up to all challenges. As the Army faces a new, more resource-constrained environment, CASCOM is dedicated to ensuring that its support of the Reserve component does not falter. Challenges remain, but the Reserve component will be ready when called and, through them, so will the sustainment community.

Major General James L. Hodge is the commanding general of the Army Combined Arms Support Command and Sustainment Center of Excellence at Fort Lee, Virginia.

The transition from Excel to Access accomplished all proposed objectives established during the initial assessment phase.

Access garners its power from queries rather than links. The links created in Excel are often broken unless the operator pays careful attention to fixing them. The more links there are in a system, the higher the probability of errors and the subsequent need for expending personnel hours to troubleshoot the problem. The prime cause of problems with Excel is a lack of training or experience on its advanced functions. Most personnel understand basic software capabilities. However, at the ESC level, advanced training and knowledge is required to properly manage the volume of data being processed.

By switching to Access queries, the speed of data retrieval increased with few, if any, of the linkage issues so often produced by operator error in Excel. Significant improvements in system efficiencies resulted in an 80-percent reduction in personnel hours required for data entry, quality checks, and subsequent corrections. In addition, the custom-built queries shortened the time horizon from receipt of data to actionable changes by two-thirds. What required 2½ months could now be done in approximately 30 days.

Prebuilt custom queries in Access make it possible to use an intuitive graphical user interface instead of Excel's spreadsheet architecture. This lends itself to smoother transitions with follow-on units and less-computer-savvy users, as the interface is familiar and significantly less arduous to navigate. Access permits a point-and-click interface familiar to all users of Microsoft Windows. Soldiers who may not be familiar with information management, fuel operations, or data analysis can quickly learn this system, creating a longer-term, more robust tool.

With the use of query architecture, the storage capacity of Access is significantly larger than that of Excel, making it a better long-term approach to fuel management not just in Iraq but in any theater of operations that implements it. The sheer volume of daily data received at the ESC level requires the ability to archive data for future retrieval during trend analysis and seasonal forecasting. Access has the added advantage of allowing the user to extract and export data into Excel.

Access is also being used to help streamline the implementation of the Battle Command Sustainment Support System (BCS3) in Iraq through its large storage capacity and query functions. Reporting errors can be quickly identified and remedied by using BCS3. The previous fuel system would have required 2 to 3 Soldiers to spend a full 2 weeks remapping the approximate 19,000 Excel links. With Access, one Soldier can integrate BCS3 fuel reporting directly into the new fuel management database in just under 2 hours.

After completing the relief in place, Brigadier General Mark W. Corson, the commanding general of the 103d ESC, delivered his charge to the unit: "Add value and do no harm. Add value by making improvements where necessary and where available. Do not break existing systems or processes while implementing change."

This attitude guided the 103d ESC fuel section. The intent in developing and implementing a completely new fuel management system for Iraq is rooted in that charge. Through unique civilian experiences and skill sets, innovative approaches streamlined fuel management processes and will favorably impact the next ESC coming to Iraq.

First Lieutenant Larry L. Motley, Jr., is the deputy branch chief, support operations, 103d Sustainment Command (Expeditionary).

The Battalion Command Centralized Selection List and the Logistics Corps

BY LIEUTENANT COLONEL KENNETH W. LETCHER
AND LIEUTENANT COLONEL MICHELLE M. LETCHER

For logisticians, battalion command is a discriminator for continued promotion and service. Does the current process for battalion command selection best serve the Army's, and the logistics officers', needs?

Many Logistics Corps officers who endured the reduction in force and the lowered promotion rates of the post-Operation Desert Storm Army from 1991 to 1995 equated success to promotion to lieutenant colonel and the completion of 20 years of service. Today, after several years of increased promotion rates to major and lieutenant colonel, many Logistics Corps officers have changed their perception of success to mean a successful battalion command and promotion to colonel.

The Logistics Corps today is at a crossroads in terms of selecting the best qualified officers—the ones who possess the right skills and experiences—to lead Army professionals, prepare them to fight our Nation's wars, manage the Army's resources, and support the many organizations that comprise our warfighting force. To this end, the centralized selection list (CSL) process serves to meet the leadership and management needs of the Army and the Department of Defense.

The Chief of Staff of the Army, General Martin E. Dempsey, in his February 2011 *Armed Forces Journal* article, "Building Critical Thinkers," makes the assertion that "the experiences of the last 10 years reinforces the need [for the Army] to develop leaders who are both accomplished . . . at the tactical level and competent and capable . . . at the operational and strategic level."

By selecting officers who have best demonstrated leadership, effectiveness, and potential for service at the tactical level, is the Army's Logistics Corps choosing the right officers to shape the future of our Army for the next 10 to 15 years? Is success at the tactical level the right measuring stick for a future strategic leader? Is it the right measurement for a professional logistician?

In order to look at this problem, it is important to review how the battalion command CSL process works, which positions are centrally selected, how the process has changed and is changing, and how selection affects future promotion. Then we can recommend areas of consideration for change. This article will attempt to explain the CSL in terms of battalion-level logistics commands while answering the question: Is the battalion command CSL process creating the future leaders that the Army Logistics Corps needs?

The Battalion Command CSL Process

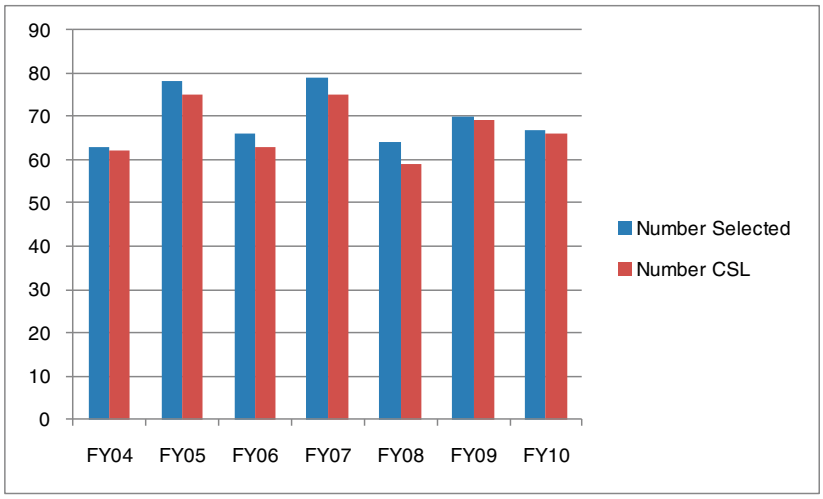
The selection of battalion commanders is a 9-month process that begins with guidance from the Chief of Staff of the Army to the selection board. The process ends with the publication of a centrally selected list of officers to serve as battalion commanders and in designated key billets deemed so critical that a board must centrally select those leaders. The Chief of Staff's guidance to the selection board is significant. The CSL is the Chief of Staff's process, and the board members select the officers they believe are best qualified to command our tactical formations and lead our Army for the next 10 to 15 years.

Before the board convenes, multiple steps occur behind the scenes. The Command Management Branch at the Army Human Resources Command (HRC), in conjunction with the Department of the Army G–1, produces a list of available commands and available officers. The assignment officers then scrub both lists in an effort to eliminate any errors caused by shifting change-of-command dates and to identify any officers who may have an error in their files that either precludes them from competing or should lead to their inclusion on the list.

After both lists are verified, the eligible commands and officers are loaded into the Command Preference Designation (CPD), which is a web-based program that captures officers' preferences. Once an officer receives notification, he can log into CPD and can choose to compete for any or all categories of command. CPD is also the place where an officer will rank the order of his preferences.

It is this ranking that HRC ultimately will use, along with skills, experience, and other personal and professional factors, during the slating process to help determine where a selected officer will be slated for a

Logistics Colonel Promotion Trends



	FY04	FY05	FY06	FY07	FY08	FY09	FY10
Number Selected	63	78	66	79	64	70	67
Number CSL	62	75	63	75	59	69	66

The blue bar shows the number of promotions to colonel, and the red bar red shows battle command CSL selections.

command or key billet. However, officers might not prioritize categories. It is strongly recommended that officers call or email their assignment officer and ensure that the assignment officer can see their preferences in CPD. Errors sometimes occur in the system so that it does not capture all preferences.

At the same time that CPD is populated, assignment officers begin scrubbing and reviewing the eligible officers' files. The assignment officer reviews the officer record brief and photo for the eligible officer and sends him an email detailing whether or not his file has deficiencies. The officer is able to fix any errors and certify his file before the MyBoardFile portal closes for the board.

In the case of Logistics Corps officers, the Department of the Army secretariat hosts the Force Sustainment Battalion Command CSL Board. The board comprises a general officer as the board president and colonels who represent the whole of Army sustainment (quartermaster, ordnance, transportation, medical service, finance, and adjutant general). Separate battalion command CSL boards are held for operations support and for maneuver, fires, and effects.

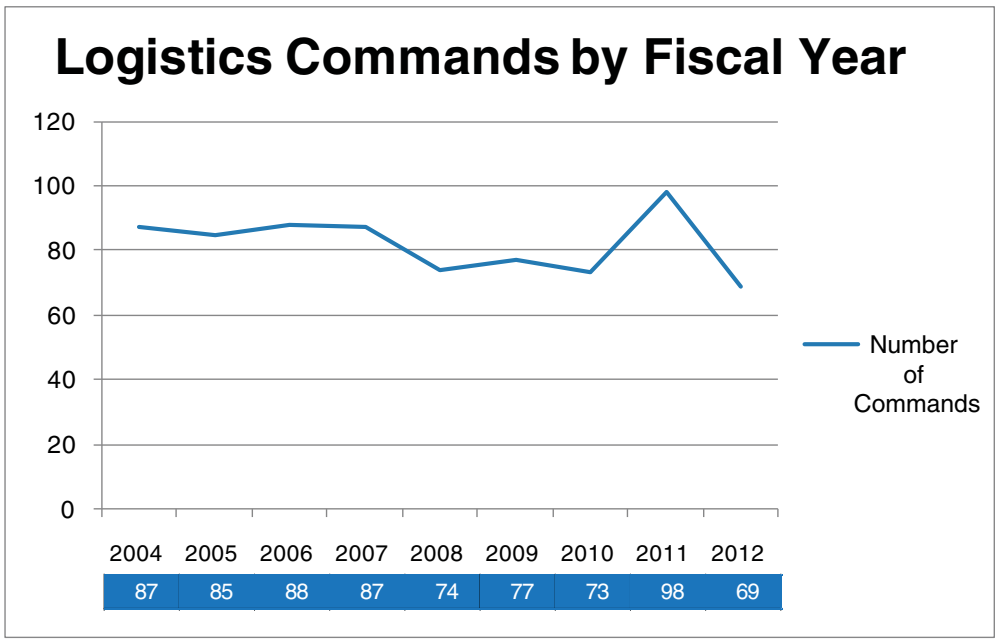
It is critical to note that the Force Sustainment Battalion Command CSL Board is composed of sustainment leaders while the Lieutenant Colonel Active Competitive Category Promotion Board has roughly 20 members (colonels and brigadier generals) drawn from most of the branches and functional areas in the Army.

Another interesting note about the CSL board is that it does not verify any skills or experience matches for the commands available, except for explosive ordnance disposal. In other words, if seven Military Surface Deployment and Distribution Command (SDDC) ports are available for command, the board does not ensure that it has selected seven Transportation Corps officers or seven officers with SDDC experience. The board's mandate from the Chief of Staff of the Army, as published in the board guidance available on the HRC website, is to "select agile leaders capable of leading those forces in combat and running the Army." (The HRC website is available at https://www.hrcapps.army.mil/site/protect/active/select/ltcacccmd11.htm).

Once the board has closed, the principal and alternate selection lists are passed to the Command Management Branch and then to HRC's Force Sustainment Division (FSD). Once FSD receives the list, FSD's Logistics Branch, in accordance with the Chief of Staff's and the proponent's slating guidance, slates the selected officers. Once the slating is completed, the slate is briefed for information purposes at several levels (HRC, G–1, and the Vice Chief of Staff of the Army) and to the Chief of Staff for approval. At no time is the slate briefed to senior logistics leaders before it is released to the force.

Battalion Command CSL Commands and Key Billets

Since the inception of the Logistics Corps in January 2008, the Army has continued to formally develop broadly skilled, experienced, and multifunctional



The number of commands available to logisticians in recent fiscal years.

officers capable of serving in any assigned area of concentration 90A, multifunctional logistics, position. As an unintended consequence of this move to multifunctionality, the Logistics Corps has reduced its technical depth.

Interestingly enough, as this was occurring in the logistics community, several changes occurred in the logistics battalion command CSL categories: The command categories decreased to three, centrally selected multifunctional commands increased, functional commands were opened to all Logistics Corps officers, and the number of functional commands in the Army decreased.

It is certainly easy to correlate the reduced capacity for command to the lack of functional expertise in certain areas of the Logistics Corps. An officer might ask why he needs to develop functional skills if there are fewer command opportunities (and ultimately promotion opportunities) down a certain career path. The answer is that if there are few functional commands, then functional expertise may actually be a disadvantage to an officer's selection for a battalion command CSL.

Although the Logistics Corps is a multifunctional branch that requires functional expertise, officers may compete in any and all categories, regardless of previous skills and experiences. In fact, there has been a change in command categories from fiscal year 2011 to fiscal year 2012 to support an officer's ability to serve as a multifunctional logistician. Fiscal year 2011 had a myriad of categories available, as shown in the chart above right.

The fiscal year 2012 CSL had only commands—no key billets—and only three competitive categories: logistics operations (multifunctional and functional), strategic support, and training. Within these three categories, 69 battalion command opportunities were available for Logistics Corps officers.

The commands that constitute the strategic support category are worth discussion. The number of these commands, which are responsible for synchronizing distribution and sustainment operations at the operational and strategic levels of the Army, has increased. However, the key and developmental opportunities within those commands have not. This phenomenon does not always allow junior officers to develop in a strategic support organization. Ultimately, anyone selected can serve and succeed in command, but is it reasonable for a profession to ask an officer to serve for the first time in a critical strategic support position—not only in terms of the current assignment and its responsibilities but also in terms of its effect on his future promotion potential?

In the past 3 to 5 years, as the number of commands available in the strategic category has in-creased, officers have voiced concern over being selected for strategic commands. Since the matter of performance in a job is probably more critical than the actual job itself, why then does the Logistics Corps not routinely groom strategic support battalion commanders by forcing officers to complete assignments in nontactical units? This development would seem to allow an officer to be ready to command any unit: strategic, tactical, or training.

Fewer commands are now available overall to Logistics Corps officers because of the increased inactivation of functional battalions. But the question still needs to be asked, does the Logistics Corps still have too many commands?

CSL: The Gateway to Colonel

The battalion command CSL has become synonymous with selection to the rank of colonel since there is little room for those who do not make the battalion command CSL to become colonels. This is especially true when one considers that the colonel's promotion board, just like the lieutenant colonel's promotion

board, is a combined arms board. So it makes sense that easily identifiable discriminators and comparable positions (such as battalion commander) would play a prominent role in promotions.

By creating this de facto gate for promotion to colonel, logisticians theoretically may not be promoting those best suited to positions of increased responsibility outside of the tactical realm. It is, however, important to note that the "crucible of command" may strengthen and hone an officer's leadership capability and ability to succeed in positions of increased responsibility.

Does the Logistics Corps Have It Right?

As it stands today, the battalion command CSL is a discriminator for logisticians for continued promotion and service. The Logistics Corps allows officers to develop and serve in either functional or multifunctional positions or units; however, rare is the officer with demonstrated successful service in both. The CSL selection board also does not select individuals based on skills and experience matches with specific commands. Rather, as previously discussed, the selection board identifies the best people regardless of skills and experience.

The bottom line is that the Army's Logistics Corps must continue readdressing talent management and must fully prepare future leaders for success at its highest ranks. In addition to this dialog, several changes to the leader development process should be considered with respect to the battalion command CSL:

- ❑ Mandate that all officers competing for the battalion command CSL "opt in" during the CPD process rather than "in" being the default.
- ❑ Redistribute the number of commands available in a given fiscal year more equitably across fiscal years. As one can see from the chart above left, the number of commands has tilted decidedly in recent odd fiscal years. This disadvantages officers in an even year group, forcing them to command later than their peers.
- ❑ Redesign the officer professional development model for Logistics Corps officers to stress functional and multifunctional assignments as broadening experience. Limit the number of officers serving in O1A (branch generalist) billets and maximize 90A, 88 (transportation), 91 (ordnance), and 92 (quartermaster) service.
- ❑ Develop a career track for those officers who are not battalion command CSL-selected.

If the battalion command CSL is the gateway to promotion to colonel in the Army, then the Logistics Corps owes it to itself, as a profession, to ensure that the methods used to select future leaders continue to select those best qualified to be those future leaders of our Army.

Commands	Key Billets
Transportation operations	Defense Logistics Agency depots
Explosive ordnance disposal operations	Ammunition plants/depots
Logistics operations	Defense fuel offices
Ordnance operations (ammunition)	
Quartermaster operations	
Transportation strategic support	
Logistics strategic support	
Ordnance strategic support	
Logistics training	

Command categories available in fiscal year 2011.

There must be a transparent system supported by leaders through the mentoring, coaching, and development of junior officers. The Army CSL process is dynamic and capable of change. It will prove capable of transformation in support of future Army and logistics requirements if the profession ensures that the process is given the due diligence of dialog required of a profession.

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Lieutenant Colonel Michelle M. Letcher is currently assigned to the 18th Combat Sustainment Support Battalion. She was previously assigned to the Army Human Resources Command and served as the support operations officer for the 189th Combat Sustainment Support Battalion and the logistics planner for the XVIII Airborne Corps. She holds a bachelor's degree from Illinois State University and master's degrees from the School of Advanced Military Studies and Kansas State University. She is a graduate of the Air Defense Artillery Officer Basic Course, the Ordnance Corps Officer Transition Course, the Combined Logistics Captains Career Course, and the Army Command and General Staff College.

Financial Improvement and Audit Readiness at the Department of Defense

BY PEGGY JOHNSON

What is the financial improvement and audit readiness (FIAR) mission? The fiscal year (FY) 2010 FIAR Guidance states that the FIAR mission is "to improve the financial information most often used by DOD [Department of Defense] decision makers" so that it is accurate, reliable, and relevant and DOD entities are ready to be audited.

Considering that DOD has 3 million employees, FIAR is a very important role for the Department's accountants, budget and financial analysts, and disbursing, certifying, and accountable officials. What might be surprising is that the people who are responsible for the success of FIAR may include you.

Why FIAR?

Regardless of your background or functional area in DOD, FIAR should be easy to comprehend because most of us have a basic sense of good business practices and use them in our everyday lives. We plan, budget, expend, and prepare for and pay taxes.

If our bank information is unreliable, if we make a mistake entering our deposit amount, or if we draw a check prior to making a deposit, it will probably result in an account overdraft. This is true unless we have overdraft protection, which is an internal control mechanism to reduce risk. When we have faulty processes that cause bank overdrafts, we almost certainly will plan to correct the problem. You can think of this as "financial improvement."

Also as part of our everyday lives, we have to account for our financial data each year for tax purposes. For the most part, we are not allowed to guess but instead must keep accurate documentation for tax preparation and for a possible audit. Internal Revenue Service rules require that we collect original source documentation as proof and retain the information for at least 3 years after filing the return. You can think of this as "audit readiness."

DOD must annually produce financial statements because of the Chief Financial Officers Act of 1990. Audit readiness occurs when management asserts that the financial statements are ready for audit. This management assertion is necessary to comply with Section 1008 of the National Defense Authorization Act for FY 2002, which limits auditing to ensure the cost benefit to the public. The legislation mandates that financial statement audits be performed only when management asserts that its financial statements are reliable.

The FIAR responsibility extends to DOD business operations everywhere in the Department, including overseas and in deployment areas. This responsibility is also for processes and systems that include or affect financial data for business operations in areas such as acquisition, logistics, programming, contracting, medicine, depots, and personnel.

You May Be Responsible

People important to accomplishing the FIAR mission include contracting officials, resource managers, automated information system administrators, receiving officials, personnel officers, employee supervisors, commanders and supervisors of military personnel, and others listed in the DOD Financial Management Regulation (DOD FMR), which states—

> The centralization of disbursing processes and the increased use of automated systems, coupled with the volume and complexity of business processes, reduces the ability of [DOD] disbursing officials to exercise direct personal control over all aspects of each business transaction. Accordingly, DOD recognizes that it is extremely difficult for any single official personally to ensure the accuracy, propriety, and legality of every payment. [Disbursing officers] must depend on certifying officers to ensure that a transaction has been processed through all designated responsible and authorized officials; is properly documented, is computed correctly according to source documents; and is not improper, unreasonable, or fraudulent according to the information available.

If your work includes any of the following operations as part of making decisions or conducting work, you are essential to accomplishing the FIAR mission:

- ❑ Implementing, executing, or overseeing the purchase card or individual or centrally-billed travel card programs.
- ❑ Operating or maintaining automated systems used to support an entitlement.
- ❑ Certifying or disbursing processes.
- ❑ Providing timely and accurate contract data.
- ❑ Preparing contracts, modifications, or other documents that support payments.
- ❑ Providing receipt data.
- ❑ Assigning proper funding.
- ❑ Maintaining a system of funds controls.
- ❑ Updating personnel data to support payments.

- ❑ Supervising time and attendance clerks.
- ❑ Designating the proper accounting classification on an obligation document.
- ❑ Inputting military personnel data for payments.
- ❑ Supervising military members with responsibility for inputting data such as leave slips.
- ❑ Ensuring personnel perform according to travel orders.

If you provide information to certifying officials, you are accountable and face pecuniary liability. The DOD FMR states, "To ensure that a payment is correct, personnel who provide information to certifying officers shall provide accurate information, data and services, and be held accountable for their actions, to include possible pecuniary liability."

Those providing information to certifying officials must ensure that the original document is retained according to DOD FMR guidance, which requires us to keep original disbursing office records, associated papers, and supporting documentation for 6 years and 3 months. Examples of these records are invoices, receiving reports, purchase orders or contracts, and lodging receipts. One of the biggest hindrances to achieving and sustaining audit readiness is that the original documentation is lost or is not retained according to DOD requirements.

We can return to our income tax example for comparison: Not having documentation that is adequate to support your tax return may cause you an additional tax assessment. This is a type of pecuniary liability in your everyday life and an example of the importance of document retention.

DOD Financial Management

Congress requires Federal agencies to produce auditable financial statements annually. This has its origins in the Constitution, which states, "A regular statement and account of the receipts and expenditures of all public money shall be published from time to time."

More recently, Congress enacted Section 1003 of the National Defense Authorization Act for FY 2010, which requires DOD to produce for Congress a FIAR Plan Status Report, indicating a schedule of actions for accomplishing audit readiness. Clearly, Congress expects DOD to accomplish FIAR.

Every 2 years, the Government Accountability Office prepares a report to Congress about its High-Risk Program. The program focuses on major Government programs that are at high risk for waste, fraud, abuse, or mismanagement or are in need of broad reform. The GAO High-Risk Program report for 2009 included DOD financial management on its High-Risk list, stating—

> GAO first designated DOD financial management as high risk in 1995 due to pervasive financial and business management and system deficiencies that adversely affect the department's ability to control costs and ensure basic accountability to taxpayers, anticipate future costs and claims on budgetary resources, and prevent and detect fraud, abuse, waste, and mismanagement.

The DOD Inspector General (IG) reported DOD's financial management as a challenge in the FY 2009 DOD Agency Financial Report, stating, "Since the 1990s, DOD IG has identified financial management as a challenge area. The DOD's financial management problems are so significant they constitute the single largest and most challenging impediment to the U.S. Government's ability to obtain an unqualified opinion on its consolidated financial statements."

The Benefits of Enhancing FIAR

Obviously, the benefit of doing nothing to enhance FIAR would save any additional costs necessary to prepare for audit readiness and ultimately an audit. These costs include funds to pay for the performance of the actual audit by a public accountant. They also include any additional manpower costs to prepare for audit readiness and perform the audit.

On the other hand, as budgeted in FY 2010, doing something to enhance FIAR costs less than half a percent of the total Defense budget. "Cleaning up the DOD financial books," being audit ready, and ultimately achieving a favorable audit opinion will benefit DOD in several ways.

Not only will it improve the confidence that Congress, the audit community, and senior leaders have in DOD's financial information, but it will also improve the reliability of our budget justifications, related data for audits, and decisionmaking information in DOD business operations. Improved Congressional, audit community, and senior-leader confidence in our information is a highly desirable state.

Achieving a favorable audit will eventually improve DOD system integrity to the extent that we will be able to rely on timely and accurate data in all DOD business operations. It will also increase public confidence in DOD's use of taxpayer dollars.

Less than half of 1 percent of DOD's total budget seems worth the price for achieving confidence, integrity, and trust in the Department's financial information and business operations.

When you conduct any business for DOD, please be diligent in retaining original documents according to the procedures of your military service or DOD component. If you have a question, let us know by commenting on the FIAR blog at https://www.milsuite.mil/book/groups/fiar. Making FIAR work is everybody's business!

Peggy Johnson is an accountant in the Office of the Under Secretary of Defense (Comptroller), Financial Improvement and Audit Readiness. She has a B.S. degree from the University of Tennessee and an M.B.A. degree from Columbus College. She is a graduate of the Professional Military Comptroller School and is a recipient of the Secretary of Defense Medal for Meritorious Civilian Service.

Explosive Ordnance Disposal Stateside Missions

BY CAPTAIN ARIANNA D. MORELL

Explosive ordnance disposal (EOD) is a military occupational specialty (MOS) held by all branches of service except the Coast Guard. EOD technicians from all services are trained at the Naval School Explosive Ordnance Disposal (NAVSCOLEOD) at Eglin Air Force Base, Florida. After EOD technicians graduate from NAVSCOLEOD and join operational units within their specific services, their experiences begin to differ because each service has its own unique EOD mission. This article focuses on the Army's EOD mission, specifically its stateside mission.

EOD Missions

Army EOD is best known for locating, identifying, evaluating, rendering safe, recovering, and determining the final disposition of all explosive items, including chemical, biological, radiological, and nuclear ordnance, improvised explosive devices, unexploded ordnance, and previously unknown ordnance. But Army EOD also has the stateside responsibilities of response, Department of State support under the Very Important Persons Protection Support Activity (VIPPSA), international subject-matter expert exchanges, and humanitarian missions, such as demining instruction and supervision.

Army EOD units maintain response teams that are available 24 hours a day, 7 days a week, to respond to bomb threats or explosive hazards in designated response areas. A company's designated response area can encompass thousands of square miles, and it can take response teams many hours to reach the site of an incident. This is primarily because of the Army's restructuring of EOD unit locations to include them in the overall Army modular organization plan and colocate them with units they will support during their deployed missions.

Army EOD units were previously scattered across the country in a variety of unusual locations specifically to be able to perform their stateside mission. Now they are located in a comparatively small number of locations. The modular organization and concept of support is not proving to be functional for the Army's stateside mission or its deployed mission. It detracts from the Army's stateside mission by causing severely delayed response times for stateside incidents.

Modularity also detracts from both missions because mission command of EOD (a highly specialized field) and its unique resources are removed from EOD leaders and placed in the hands of non-EOD leaders who have a limited understanding of EOD methods, capabilities, and joint, interagency, and international roles.

Stateside EOD Mission

When responding to a continental United States incident, an EOD team has 30 minutes during duty hours and 60 minutes during off-duty hours to be ready to travel to the site of the incident. Teams rotate on response, usually on a weekly basis. Companies typically assign one response team and one backup team per week. Team leaders keep a response cell phone with them at all times, and the team must remain in the local area.

The response truck is a Government-owned vehicle, such as a Chevrolet Suburban, with specific capabilities. The truck contains the tools and equipment that a team anticipates it might need when responding to an incident. The duty uniform for the response team is the Army combat uniform.

EOD teams respond to stateside incidents because, in addition to being subject-matter experts in the rendering safe and disposal of improvised explosive devices, military EOD technicians are the only bomb technicians authorized to render safe and dispose of military ordnance. This is primarily why NAVSCOLEOD consists of 143 training days, while the Federal Bureau of Investigation's Hazardous Devices School (HDS), the training program attended by civilian bomb technicians, is only 35 training days.

HDS is conducted at the Army's installation at Redstone Arsenal, Alabama, and it is jointly taught by civilian bomb technicians and military EOD technicians. NAVSCOLEOD and HDS are the only recognized certification programs for bomb technicians in the United States.

Questions have been raised about the legality of a military unit responding within the United States to a civilian incident because of the Posse Comitatus Act, which limits the participation of the military in domestic law enforcement. However, EOD's performance of its stateside missions is legal because the rendering safe of a hazardous item is a public safety issue that is not related to the enforcement of laws. EOD technicians are not pursuing bomb makers, nor are they armed or participating in any law enforcement activities while performing stateside duties.

A well-known example of stateside EOD response is the Unabomber bombings, which occurred from 25 May 1978 to 24 April 1995. The Unabomber was Ted Kaczynski, and most of his devices were functioned by victims receiving or finding the items. However, some of the items were identified as potential explosive devices before they could explode and authorities responded and disposed of them.

In 1981, an Army EOD team responded to a device found in Milton Bennion Hall at the University of Utah. Army EOD support was also requested by the FBI when Kaczynski's cabin in Montana was located. The responding EOD team rendered safe and cleared the cabin, which was booby-trapped and contained numerous devices.

VIPPSA Support

Another important part of EOD's stateside mission is VIPPSA support. VIPPSA support is EOD support provided in coordination with the U.S. Secret Service. VIPPSA support can be provided for the President of the United States, the Vice President, cabinet members, foreign dignitaries, and others as directed by the Department of State.

The need for EOD support provided to the Secret Service has grown in recent years because of increasing force protection threats around the world. Recent Presidential decision directives have designated certain major events (the Olympics, World Trade Organization meetings, the Super Bowl, and others) as National Special Security Events and directed EOD teams to support them.

When engaged in a VIPPSA mission, EOD technicians are supposed to blend in with other personnel at the event. They wear civilian clothing and are under the operational control of Department of State security personnel and the Secret Service. They are responsible for searching for hazardous devices in areas or vehicles that will be occupied by the very important persons.

During these missions, EOD technicians do not travel with their EOD response truck; they bring a limited selection of tools used primarily to execute searching techniques. If an item is found, the EOD team will usually notify local bomb squad personnel or the closest EOD response team and work with them to render the item safe. VIPPSA missions can last anywhere from a day to more than a month and can take place anywhere in the world.

International Support

EOD technicians also engage in numerous subject-matter expert exchanges throughout the year to enhance dialog with partner nations' EOD forces in support of U.S. Army Pacific and U.S. Pacific Command theater security cooperation program objectives. Further support is also provided to the Department of Defense and Department of State through humanitarian demining operations. These missions promote U.S. foreign policy interests by training host-nation deminers and providing landmine awareness training in accordance with United Nations standards.

Explosive ordnance disposal response team Soldiers conduct robot training at their company headquarters.

Because its stateside mission is as active and crucial as its deployed mission, EOD has unique mission requirements. Recent changes in location, organization, and command structure caused by the Army's modular force restructuring have hampered the Army EOD community's ability to efficiently accomplish its mission. Leaders within the sustainment community need to understand EOD's stateside mission because, as long as EOD continues to fall under the Ordnance Corps, those leaders will eventually be in positions to contribute to decisions that can either hinder or enable EOD mission accomplishment.

Captain Arianna D. Morell is the commander of an explosive ordnance disposal company. She holds a bachelor's degree in psychology from the University of Hawaii and is a graduate of the Joint Asymmetric Threat Awareness Counter Improvised Explosive Device Training Program, the Global Anti-Terrorism Operational Readiness Course, the Combined Logistics Captains Career Course, and the Naval School Explosive Ordnance Disposal.

Decentralizing Strategic-to-Tactical Maintenance Operations

BY MAJOR ANDREW J. AIELLO III

What is the Army Sustainment Command, and how can it supervise maintenance operations halfway around the world?

The Army transformed to a modular force structure to create a more adaptable and sustainable brigade combat team (BCT)-focused force. At the same time, the Army Materiel Command's (AMC's) life cycle management commands (LCMCs) faced a series of problems in sustaining the Army's heavily used, aging fleets during high operating tempo operations. AMC's solution was centralized control by the Army Sustainment Command (ASC) and decentralized execution through the Army field support brigades.

This system has greatly improved the efficiency of Army sustainment operations, and readiness rates are higher than ever. However, to improve operational sustainment operations, a more decentralized approach must be taken. The key to decentralizing is the operational link and the logistics mission command capabilities inherent in U.S. Army Central and the theater sustainment command or expeditionary sustainment command beyond the joint reception, staging, onward movement, and integration mission.

That's Not My Problem—AMC Will Fix It

The Defense Acquisition Guidebook states that single-point accountability and performance-based logistics that focus on performance outcomes with segmented functional support will enable total life-cycle systems management. This language, translated to a warfighter, could be interpreted to mean that AMC through the respective LCMCs retains ownership of systems readiness and that readiness is on its report card.

Previously, local commanders at the tactical level retained the readiness ownership of their own systems and the theater Army retained oversight of operational sustainment. With the new two-level maintenance system, the unit replaces forward and AMC fixes rear. The ability to draw most combat equipment in theater changed this mindset.

Just imagine if Ford Motor Company decided to assume ownership of all local dealer maintenance. The dealers would become customers instead of partners. This approach has both pros and cons. Velocity-based logistics and strategic logistics response times in the Army have improved overall.

However, commanders have lost the ability to control operational maintenance focused on a main effort BCT. Specifically, commanders at the operational level need to have oversight with the appropriate data analysis and knowledge to make decisions that could increase in-theater component repair and refurbishment production. These decisions could be based on anticipated system or component failures due to changes in missions or operations. The overall centralized life-cycle management and operational sustainment system works because the sustainment community shares the common goal of taking care of the Soldier.

Decentralized Oversight

Optimizing efficiency and decreasing waste in operations seems like a good thing, but increasing efficiency too much may actually decrease performance. Pushing field-level maintenance down to the unit motor pools definitely increased efficiency. However, maintaining mission command over sustainment-level maintenance and certain component repair functions has hampered the ability of young, adaptive, and innovative leaders to fix systems faster and keep them in the fight.

The difference between forward and rear is relatively small anyway in today's full-spectrum operational environment. AMC brigade logistics support teams located in every BCT relay innovative ideas and field maintenance issues straight to the LCMCs in a streamlined reporting system. However, without a collaborative operational-level hub, these ideas are slow to spread throughout the sustainment community.

The real operational sustainment issue lies in the location and availability of the data analysts. A decentralized and closer commingled partnership should exist at the theater Army and theater sustainment command or expeditionary sustainment command levels to be more effective. Data analysis provides the "so what" that is desperately needed for operational sustainment leaders to make decisions on production goals, facilities, locations, support contract oversight, and cost-to-benefit efficiency.

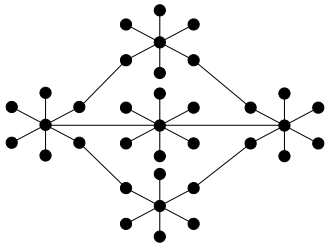
The Army has recently realigned contracting operations under AMC with a decentralized control structure, the Army Expeditionary Contracting Command. Army Expeditionary Contracting Command support brigades

The Starfish and the Spider Concept

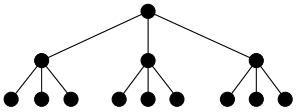
In their book, *The Starfish and the Spider: the Unstoppable Power of Leaderless Organizations*, Ori Brafman and Rod A. Beckstrom compare the functioning of decentralized and centralized networks to a starfish and a spider. They describe how a starfish functions as a decentralized network. If a starfish loses an arm, it will grow a new one, and one type of starfish can completely regenerate from just a portion of one of its arms. The starfish has no brain to control all of its systems. If one limb wants to go somewhere, it has to convince the other four to go along with it. Thus, the authors compare a decentralized organization with a starfish.

The authors compare a centralized organization to a spider, which has a body, a head with eight eyes, and eight legs. A spider can live without one of its legs, but will die if someone cuts off its head. This they compare to an organization that has a central leader who makes decisions for the entire organization.

Starfish (Decentralized)



Spider (Centralized)



are each aligned to a theater Army and provide decentralized expert guidance and oversight directly to units in the field. Contracting is not a single-point accountability process and is better managed as a decentralized "starfish" organization rather than the previous "spider" structure. (See sidebar.) This restructure is definitely a step toward decentralizing contracting operations and may be a future model for further decentralizing operational sustainment maintenance operations under the theater Army and Army field support brigades.

Define the Problem and Find the "So What"

Regardless of structure, operational sustainment maintenance leaders can make a difference. The tactical level is where the action is, and operational and strategic leaders frequently fall back to this comfort zone.

Tracking and reporting the status of fleet readiness at the "corporate" level only leads to more questions that do not address the problems. This creates a significant duplication of effort since LCMCs also track daily fleet readiness, even without a tracking system in place other than daily not-mission-capable reports. Using Army Materiel Status System reporting provides a better picture for senior leaders, and daily reporting by exception can keep senior leaders informed. The first step in defining the problem is to focus on linking the operational requirements, capabilities, capacities, and shortfalls with the needs of the Soldiers through analysis over time.

To provide senior leaders with a comprehensive understanding of this readiness problem, LCMCs and the Logistics Support Activity (LOGSA) should closely partner themselves with the theater sustainment command and focus more on the operational readiness gap. This gap consists of the over-time metrics and analysis that can provide senior leaders and operational planners with more information than raw data can. For example, component mean time between failure (MTBF) or repair part customer wait time, over time by origin, mode of travel segment, and supported routing identifier code, are examples of better data metrics at the operational level. These data can then be turned into real, actionable knowledge.

A short MTBF for a component may require a review of preventive maintenance policies specific to an operating environment or an increase in component repair production to bridge the gap between the tactical end user and the strategic supply base. These knowledge-focused data analyses over time may also yield faster and cheaper ways of doing business, even if some sustainment-level maintenance is pushed down to field maintenance companies. After all, a forklift hydraulic-lift cylinder rebuild and a fire extinguisher refill are both simple jobs that should be done as far forward as possible. This may be just one of the operational-to-tactical system improvements that can result in reduced cost and decreased equipment downtime.

Major Andrew J. Aiello III is the operations officer for the 82d Brigade Support Battalion, 82d Airborne Division, at Fort Bragg, North Carolina. He holds a bachelor's degree in mechanical engineering from Norwich University and is a graduate of the Ordnance Officer Basic Course, the Combined Logistics Captains Career Course, the Basic and Advanced Airborne Courses, and the Army Command and General Staff College.

Recruiting and Retention in Afghanistan

by Major Christopher Moore

The Army Recruiting and Retention School recently trained a recruiting advisor team so that it could better assist the Afghan National Security Forces with their recruiting missions.

The need to grow the Afghan National Security Forces (ANSF) has taken center stage once again in Afghanistan. In preparation for the 2014 departure of North Atlantic Treaty Organization (NATO) forces, Afghanistan's government has focused its efforts on increasing its number of soldiers and police officers. Personnel assigned to the NATO Training Mission–Afghanistan CJ–1's recruiting advisor team (RAT) are assisting the ANSF as it attempts to recruit more volunteers and re-contract a higher percentage of its eligible personnel to meet the ANSF's growth goals.

The RAT's Mission in Afghanistan

The RAT's mission to advise and assist the fledgling ANSF recruiting and re-contracting directorates has evolved and expanded over the years. Initially, the RAT focused its energy on Afghan National Army (ANA) recruiting efforts. As the ANA Recruiting Directorate began to mature, RAT personnel widened their efforts to include the Afghan National Police (ANP) Recruiting Directorate. Now, with both recruiting directorates in full operation, the RAT has expanded its advising duties to include the ANA and ANP Re-contracting Directorates.

With the ANSF Recruiting and Re-contracting Directorates quickly growing in size and responsibilities, U.S. Navy Commander Katherine McCabe, the RAT officer-in-charge, and Sergeant Major Jeffrey Ingram, the RAT noncommissioned officer-in-charge, found themselves at a crossroads. Although they were excited to see the directorates growing in size and capabilities, both were concerned about the effectiveness of training received by recruiting and re-contracting personnel throughout Afghanistan. During visits to outlying provincial recruiting stations, RAT members began to find discrepancies in how local recruiters were enlisting recruits.

Recruiting and Retention School Assistance

Because of a need to develop and deliver training on ANSF policies and regulations to a large number of recruiting and re-contracting personnel, Commander McCabe and Sergeant Major Ingram contacted Colonel James Comish, the commandant of the Army Recruiting and Retention School (RRS), for assistance. Commander McCabe explained that training materials and a mobile training team from RRS would "exponentially increase [the RAT's] ability to support the ANSF recruiting commands and re-contracting office . . . because it brings in more expertise and a focused effort for 4 weeks." The RRS commandant agreed.

After several weeks of coordination and needs analysis, RRS personnel developed three courses and six personnel were selected to instruct these courses. The three courses were the Basic Afghan Recruiter Course, Afghan Basic Re-Contracting Course, and Afghan Master Trainer Course. The six selected personnel were Major Moore, Sergeant Major Jones, Sergeant First Class Graves, Sergeant First Class Kaplan, Sergeant First Class Kelly, and Sergeant First Class Rhodes.

The RRS instructors linked up with Commander McCabe and her advisers at Camp Eggers, Afghanistan, in January 2011 and discussed the final details of their training mission. They agreed that, to train as many ANSF personnel as possible, the team would separate into three 2-person instructor teams. With supporting RAT personnel, each team focused its efforts on a particular ANSF recruiting or re-contracting directorate at different locations throughout Afghanistan.

The Instructor's Assignments

Sergeant Major Jones and Sergeant First Class Kaplan split their time between training ANA re-contractors to become master trainers, visiting ANA and ANP re-contracting offices, and reviewing ANSF re-contracting policies. During their first 2 weeks, they trained and certified over 40 ANA re-contractors as master trainers. They spent the remainder of their time at the re-contracting offices at the Ministry of Defense and the Ministry of Interior to observe each ministry's re-contracting process.

Based on their observations and discussions with each ministry's re-contracting personnel, the instructors presented recommendations ranging from sustainment training to policy updates to improve ANSF re-contracting processes.

Afghan National Police (ANP) Basic Recruiting Course students attend class at the ANP 606 Zone Headquarters in Herat, Afghanistan.

Sergeant First Class Graves and Sergeant First Class Rhodes focused their efforts on training ANA recruiters to become master trainers. During their time with the ANA Recruiting Directorate, they quickly gained the ANA soldiers' trust and admiration. After they completed their originally scheduled Afghan Master Trainer Course, they were asked to conduct a second course for additional ANA recruiters.

Despite the challenges of securing a second training site and organizing the transportation of ANA recruiters from outlying provinces, and despite being exasperated by inclement weather, this team conducted a second Afghan Master Trainer Course, much to the gratitude of the ANA Recruiting Directorate. Because of their hard work and flexibility, they trained and certified nearly 60 ANA recruiting master trainers.

Major Moore and Sergeant First Class Kelly concentrated their time on ANP recruiting. They began by instructing the Afghan Basic Recruiter Course to a class of more than 40 ANP recruiters from the Kabul area. Of those ANP recruiters, more than 30 were trained to become master trainers. Once the Afghan Master Trainer Course was completed, four graduates were selected to travel with Major Moore and Sergeant First Class Kelly from Kabul to Herat to teach the Afghan Basic Recruiter Course to 40 ANP recruiters from western Afghanistan.

Major Moore and Sergeant First Class Kelly also reviewed and discussed ANP recruiting policies with Colonel Amed Zia, the ANP recruiting policy director. After several days of review and discussion, they worked with the director to update previous ANP recruiting policy and developed an ANP recruiting policy covering the duties and responsibilities of ANP recruiting personnel from local recruiters to the ANP recruiting director.

As the RRS mobile training team prepared to depart Afghanistan, Commander McCabe and Sergeant Major Ingram explained that the future of the ANSF recruiting and re-contracting directorates was very bright. With their newly trained master trainers, each directorate now has the capability to train recruiters and re-contractors locally. This gives local recruiting and re-contracting leaders the flexibility to train their personnel often and on issues facing local areas.

Just as important, Sergeant Major Ingram stated that five master trainers from each directorate will teach at the ANSF Human Resources School. With master trainers at local levels and at the centralized Human Resources School, the ANSF recruiting and re-contracting directorates are on their way to transforming their organizations into professional units capable of meeting their nation's need for a larger security force.

Major Christopher Moore is currently attending Intermediate Level Education at Fort Leavenworth, Kansas. He has a bachelor's degree from Western Kentucky University and a master's degree in human resources development from Webster University. He is a graduate of the Adjutant General Officer Basic Course, Adjutant General Captains Career Course, Staff and Faculty Development Training Course, Recruiting Company Commander Course, and Postal Operations Course.

ABCA: A Coalition That Works

BY THOMAS D. LITTLE

The armies of the United States, the United Kingdom, Canada, Australia, and New Zealand work together to close gaps in their ability to operate together.

The American, British, Canadian, Australian, and New Zealand (ABCA) Armies Program is an organization of five allied armies that work together to optimize coalition interoperability. ABCA is not an alliance; it operates as a coalition in pursuit of common objectives and for specific operations.

The ABCA Armies Program is a product-focused organization. This means that it conducts deliberate analyses of interoperability gaps and then develops the products required by its member armies to close or mitigate those gaps in accordance with top-down direction.

Evolution of ABCA

ABCA traces its history to shortly after World War II. As a result of the close Allied cooperation during that war, the Plan to Effect Standardization was initiated in 1947 among the armies of the United States, the United Kingdom, and Canada (called the "ABC Armies"). In 1954, the Basic Standardization Concept replaced this plan, and in 1963 the Australian Army joined the group. In 1964, the group signed and ratified the Basic Standardization Agreement (BSA 64), which formalized the ABCA Standardization Program. In 1965, the New Zealand Army was granted observer status.

In 2002, the group conducted a major review and reorganization following the terrorist attacks of 11 September 2001. Shortly afterward, the United States, the United Kingdom, Canada, and Australia began coalition operations in Iraq and Afghanistan. In 2004, the U.S. Marine Corps was granted observer status, and in 2006, the New Zealand Army was granted full membership. After the addition of the New Zealand Army, the group decided to retain "ABCA" as its official name.

Mission and Organization

The mission of ABCA is to optimize interoperability among the armies "in order to deliver success on coalition operations." Interoperability is the ability of the allies to train, exercise, and operate together in the execution of assigned missions and tasks. This is achieved by using doctrine, technology, and materiel solutions to close or mitigate gaps in capabilities between the armies.

ABCA has developed a vision that the ABCA Armies Program will achieve the effective integration of the capabilities needed so that the ABCA armies can "conduct the full spectrum of coalition land operations successfully in a joint environment, now and into the future." ABCA has established the following enduring goals to be achieved in all program activities:

- Relevance and responsiveness.
- Standardization, integration, and interoperability.
- Mutual understanding.
- Knowledge sharing.
- Efficiency and effectiveness.

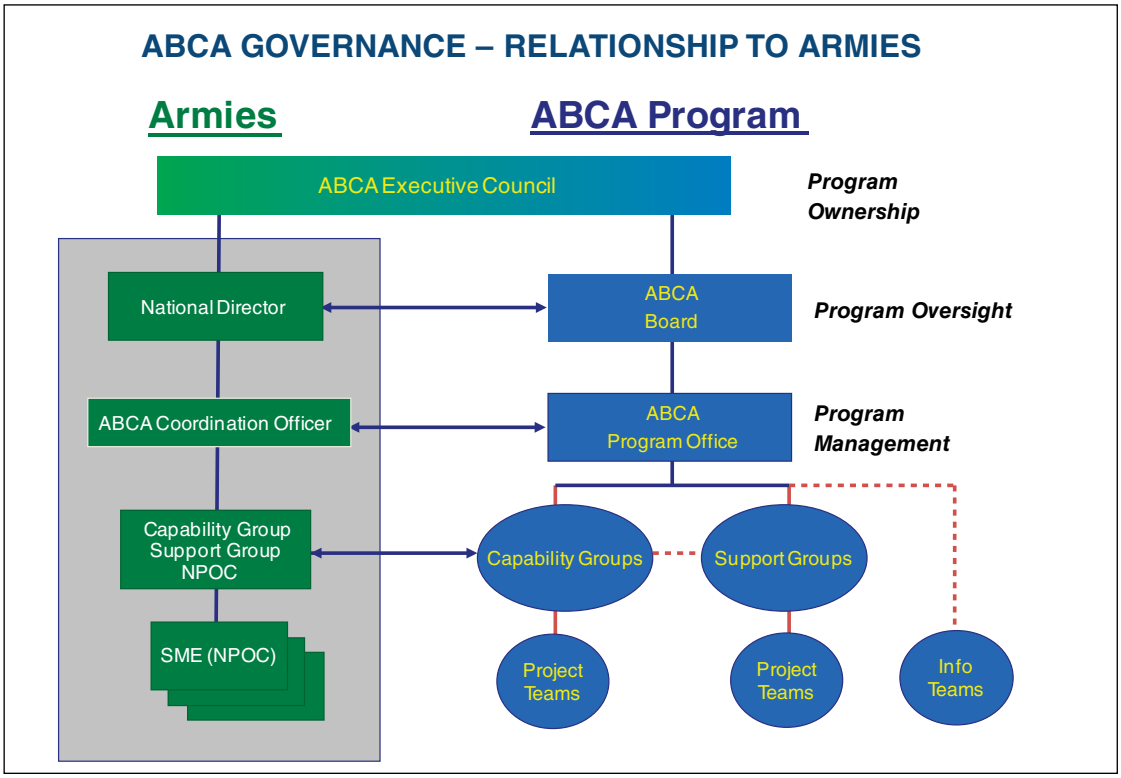
ABCA is managed by three distinct organizations. (See chart at right.) The Executive Council provides ownership of the program by approving strategic direction, articulating priorities, directing national engagement, and supplying the resources needed for success. Its members are general officers from the member armies who are equivalent to the U.S. Army's Vice Chief of Staff.

The Board of Directors provides oversight by initiating, influencing, and monitoring program operations. These national directors, who typically are one-star general officers, formulate strategic guidance and provide operational guidance. They establish objectives and shape the program strategy, validate program performance, and care for the interests of the armies. They also determine program policies, approve resource allocation, and examine management proposals, decisions, and actions.

The ABCA Program Office, located in Rosslyn, Virginia, and administered by the U.S. Army G–3, provides management, direction, and execution. The office conducts strategic planning, drafts and publishes strategic guidance and interoperability objectives, and provides operational direction. It also synchronizes and promotes ABCA activities, facilitates knowledge exploitation, and manages ABCA products.

The program office is staffed by ABCA international personnel who hold the following positions:

- Chief of staff, which is filled by a colonel who is provided rotationally by one of the member armies.
- Executive officer, who is a U.S. Army civilian employee.
- SO1 Combat, who is a U.S. Army lieutenant colonel.
- SO1 Combat Support, who is a British Army lieutenant colonel.
- SO1 Command, Control, Communications, Computers, and Intelligence, who is a Canadian Army lieutenant colonel.



In ABCA's governing structure, each member army appoints a national director to serve on the ABCA Board of Directors and an ABCA coordination officer to serve in the ABCA Program Office, as well as personnel to serve on the various capability and support groups and project and information teams.

CG Sustain Current Working Areas

- ❑ Combat service support (CSS) development of the Security Force Capacity Building.
- ❑ CSS terminology.
- ❑ CSS ABCA product review.
- ❑ Coalition planning governance structure.
- ❑ Coalition support matrix.
- ❑ Contracting and contractor management.
- ❑ Personnel, administrative, and field services.
- ❑ Standardization of requests for logistics support.
- ❑ ABCA nations data input to major end items E-Staff Database.
- ❑ Combat casualty care and training standards for soldiers.
- ❑ Wound profiling and trauma registry.
- ❑ Soldier systems ballistic protection test standards.
- ❑ Ammunition interoperability.
- ❑ Information relative to medical evacuation, treatment and cause of death of ABCA casualties.
- ❑ ABCA patient medevac request standard.
- ❑ Convoy operations.
- ❑ Coalition Casualty Regulating Tool standard.
- ❑ Report on validation of the Coalition Casualty Regulating Tool.
- ❑ Report on ABCA armies' health training standards to assist force preparation and force generation.
- ❑ Logistics command and control.
- ❑ Contract and contractor management on operations.
- ❑ Major end items database for use in Afghanistan.
- ❑ Standardization of requests for logistics support.

- ❑ SO1 Combat Service Support, who is an Australian Army lieutenant colonel.
- ❑ SO1 Coalition Operations, who is a New Zealand Army lieutenant colonel.
- ❑ SO Coordination, who is an Australian Army major.
- ❑ SO Agreements, who is a British civil servant.
- ❑ Chief clerk/webmaster, who is a Canadian Army warrant officer.

Capability Groups

ABCA works through five capability groups (CGs). CGs are composed of national representatives who are knowledgeable in the group's capability area. CGs seek to optimize coalition interoperability within their capability area in accordance with the interoperability objectives identified by the national directors.

The groups conduct interoperability gap analysis, propose tasks to mitigate identified gaps, establish project teams to conduct approved tasks, and manage the program products that belong to ABCA. Leadership of each CG is allocated to one of the armies on a standing basis and typically is assigned to a colonel by that army. The CGs include—

- ❑ CG Command, led by a U.S. Army colonel and coordinated by the SO1 Command, Control, Communications, Computers, and Intelligence.
- ❑ CG Sense, led by a Canadian Army colonel and coordinated by the SO1 Combat.
- ❑ CG Act, led by a British Army colonel and coordinated by the SO1 Combat Support.

- CG Shield, led by a U.S. Army colonel and coordinated by the SO1 Coalition Operations.
- CG Sustain, led by a New Zealand Army colonel and coordinated by the SO1 Combat Service Support.

Capability Group Sustain

CG Sustain was established to standardize logistics and sustainment doctrine, concepts, and policy throughout ABCA. Each nation has logistics subject-matter experts available to ensure that the most up-to-date logistics and sustainment information is available to all ABCA armies. CG Sustain is organized into three subgroups to accomplish its mission:

- Combat Service Support.
- Health Service Support.
- Materiel.

CG Sustain is currently working in the areas listed on page 63.

Support Groups and Project Teams

ABCA also has support groups (SGs), whose members are national representatives knowledgeable in the group's support area. SG leadership is allocated to one of the armies on a standing basis and typically is assigned by that army to a colonel. SGs are primarily focused on providing advice and support to the ABCA Program, especially to the CGs, in relation to their support area. SGs also propose tasks, establish project teams, and manage their program products.

The current three SGs are—

- SG Futures, led by a British Army colonel and coordinated by the SO1 Combat Service Support.
- SG Exercise and Experimentation, led by an Australian Army colonel and coordinated by the SO1 Coalition Operations.
- SG Science and Technology, led by a Canadian Army colonel and coordinated by the SO1 Command, Control, Communications, Computers, and Intelligence.

Project teams (PTs) are established by and respond to CGs and SGs to conduct an approved task, which typically is the development and delivery of an ABCA product. PTs comprise national subject-matter experts who are relevant to the assigned task; often, they are also members of the governing CG or SG. PTs may only meet physically if authorized to do so; otherwise, they carry out their work using virtual means. PTs are disbanded once they have completed their task or if their task is canceled by the national directors.

ABCA's Meeting Schedule

ABCA standardization efforts are scheduled and evaluated on the program cycle. The program year runs from the annual meeting, held each year in March or April, until the annual meeting the next year. A board of directors and executive council meeting is held each November to initiate the strategic process leading to the development of the following year's program plan. This results in the program delivering products to enhance interoperability, facilitating information exchange among armies and subject-matter experts, and fostering trust and understanding in a "common language."

ABCA Handbooks

ABCA has developed handbooks as references for use in several areas:

- Coalition Operations Handbook.
- Coalition Intelligence Handbook.
- Coalition Health Interoperability Handbook.
- Coalition Engineers Handbook.
- ABCA Analysis Handbook.
- Coalition Logistics Handbook (CLH).

The aim of the CLH is to provide a guide to planning and conducting logistics support to an ABCA coalition operation. The target audience is ABCA logistics planners, doctrine writers, and non-ABCA allied and training establishments. The CLH provides ABCA members with details on planning and conducting logistics operations and guidance to ABCA and national commanders and the staff of the national land components on how best to use available logistics resources in multinational operations. The CLH may also be used for ABCA-led operations involving non-ABCA nations.

The focus of the CLH is on logistics command and control and planning at the operational and tactical levels. CG Sustain is responsible for this handbook. It reviews the data every year and makes changes and provides updates when necessary.

ABCA periodically conducts coalition training exercises to validate the doctrine. These exercises include Cooperative Spirit, which is a brigade-level combat training center rotation in Germany, and Agile Alliance, which is a future-focused seminar in the United Kingdom.

The ABCA Armies Program continues to evolve to achieve the defense goals of its five member countries. With its focus on interoperability, ABCA increases the ability of the U.S., British, Canadian, Australian, and New Zealand armies to train, exercise, and perform effectively together.

Thomas D. Little is a retired Army Transportation Corps officer currently serving as the International Military Affairs Specialist at the Sustainment Center of Excellence at Fort Lee, Virginia. He served as the Army Training and Doctrine Command representative to the ABCA Capability Group Sustain and as the vice-chairman of the North Atlantic Treaty Organization Movement and Transport Panel. He holds a master's degree in logistics management from the Florida Institute of Technology and is a graduate of the Army Command and General Staff College.

NATO Conference Works to Improve Logistics Standardization

by George Williams and Adrienne E. Faessler

The Headquarters, Department of the Army (DA), Deputy Chief of Staff, G–4, Lieutenant General Mitchell H. Stevenson, hosted the 10th North Atlantic Treaty Organization (NATO) Combat Service Support Working Group (CSS WG) Conference from 10 to 13 May 2011 in Orlando, Florida. This was the first time that the conference was held in the United States.

Sixty delegates from 17 of the 28 NATO nations attended the conference and worked through the week to update and develop 14 NATO Standard Agreements (STANAGs). The conference completed the revision of NATO documents that are critical in supporting full-spectrum operations, future coalitions, and operations in the joint and multinational environment at large. Key accomplishments included final drafts of the NATO command in Afghanistan, convoy operations, and NATO retrograde doctrine.

The U.S. representation at the conference was led by the DA G–4 with support from the Army Combined Arms Support Command, the Army Materiel Command, and the Marine Corps. The Assistant Deputy Chief of Staff, G–4 (Operations), Major General Robert M. Radin, opened the conference by emphasizing the need to build partnerships within NATO. He underscored the importance of the NATO alliance in supporting over 50,000 European troops in Afghanistan as opposed to roughly 18,000 a few years ago.

Combat Service Support Working Group

The CSS WG is one of nine working groups under the Land Standardization Board of the NATO Standardization Agency. The CSS WG is responsible for developing logistics doctrine and procedures for all NATO land operations.

The 28 member nations of NATO alternate the responsibility of hosting the CSS WG conference, which is held twice a year in May and October. The conference focuses on initiating and developing standardization in CSS doctrine and procedures.

Working Group Panels

Supporting the CSS WG are four panels: Supply, Movement and Transportation, Battlefield Maintenance, and Information Exchange Requirement (IER). The goal of each panel is to ensure that each STANAG enhances interoperability.

With a different task at hand for each panel, delegates worked throughout the week to achieve significant results. The Supply Panel assessed NATO supply STANAGs and interoperability and had the opportunity to exchange information and discuss issues.

The Movement and Transportation Panel reviewed NATO STANAGs and examined and evaluated procedures pertaining to movements across national frontiers, technical aspects of the transport of military materials by railroad, and multimodal movement and transport. All revisions resulting from the panel's work will influence NATO distribution and support operations and link NATO and U.S. standards for multimodal transportation.

The Battlefield Maintenance Panel worked on standardizing maintenance organizations, operations, and repair parts systems at the tactical and technical levels (division level and below) to improve the effectiveness of NATO forces. The panel's focus was on restructuring STANAG 2399, Battlefield Recovery/Evacuation Operations, to reflect current processes for recovery operations.

The IER Panel developed, harmonized, and validated IER proposals in support of operational requirements to improve the effectiveness of NATO forces. Revisions and refinements of IER documents were made to remove all terminology references that were no longer valid. The IER Panel chairman highlighted a requirement to investigate and understand the various national deployable CSS communication and information systems in use across NATO nations. The ultimate aim was to enhance the interoperability of international CSS communication and information systems across NATO nations.

The next CSS WG Conference will take place in Bratislava, Slovakia, from 17 to 21 October 2011. Before then, all necessary STANAGs will be sent to member countries for ratification.

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AUSA Sustainment Symposium Addresses Drawdowns in Southwest Asia

The Association of the United States Army (AUSA) held its Institute of Land Warfare Sustainment Symposium and Exposition from 10 to 12 May at the Greater Richmond Convention Center in Richmond, Virginia. This year, much of the focus was on logistically preparing units to leave Iraq and Afghanistan.

Marine Corps Brigadier General William M. Faulkner, the Vice Director for Logistics, J–4, said that plans are in place to complete a withdrawal from Iraq by 31 December. "The drawdown is complex business," said General Faulkner. "Contrary to what others might have you believe, this is not a static relief in place. This is not necessarily a relief during contact, but to some degree you could make the argument that it is."

Faulkner posited that the drawdown requires precise, ongoing coordination and synchronization with other forces, contractors, and the Department of State. "There's significant interagency planning and coordination that's ongoing right now between DOD [The Department of Defense] and the State Department. It's been ongoing for months to ensure that this transition is seamless."

"The countdown has begun," said Brigadier General Jack R. O'Connor, the Army G–4's Director of Operations and Logistics Readiness. "We went from over 100,000 U.S. forces and civilians. We're down under 50,000, and we're drawing down to about 17,000." General O'Connor noted that 75 percent of the force remaining after 31 December will be contracted, and 25 percent will be U.S. military forces and DOD civilians.

General Faulkner said transition coordination has been "a culture change" for State Department assets, which rely heavily on outsourced support. He explained that the military is providing much support to the State Department, including excess equipment from the services (primarily the Army), temporarily loaned equipment, and $10 million worth of medical equipment.

The Department of State also wants to make use of some contract support currently used by the services, including the Logistics Civil Augmentation Program (LOGCAP). An additional contract has been added to LOGCAP IV in order to continue support for the State Department. The contract covers base life support and theater transportation to support the continued removal of military equipment.

General Faulkner also addressed logistics preparations to leave Afghanistan, saying, "Planning is already ongoing for the eventual drawdown."

"Clearing the clutter must start now," said Brigadier General Philip R. Fisher, commander of the 184th Expeditionary Sustainment Command, Joint Sustainment Command–Afghanistan. "The challenges to this are numerous. As you examine our battlespace you'll understand that although we have a handful of border crossing points coming in, there is currently only one GLOC [ground line of communication] out. Saying that, there are limitations to what we will risk on that GLOC."

General Fisher asked those with influence in theater to encourage cleaning the clutter off forward operating bases. "If you're not using it right now, your replacements won't need it either," said General Fisher. "Get rid of it."

He also said a proof of principle is underway to examine an additional location for the bidirectional flow of supplies and asked that the number of carrier-owned containers be reduced by 50 percent.

Vice Admiral Mark D. Harnitcheck, deputy commander of the U.S. Transportation Command (TRANSCOM), laid out the transportation challenges faced in Afghanistan. "We have plenty of airplanes, plenty of ships," said Admiral Harnitcheck. "What we do lack is access to airspace and permission to transit on the ground. Looking ahead here, 5, 10, 15 years from now, foreign sensitivities to [the] U.S. military presence have been steadily increasing, not decreasing; and frankly, even close allies may be hesitant to grant access for a variety of reasons."

Admiral Harnitcheck said TRANSCOM is addressing the access issue with a brand new unified command plan mission called the Global Distribution Synchronizer for Campaign Planning, in which it will work with the geographic combatant commanders as they construct their theater campaign and theater posture plans to identify access and infrastructure issues.

Army Considers Force Structure Changes and Equipment Management Strategies

Among the issues discussed at the Association of the United States Army Sustainment Symposium and Exposition were force and fleet management.

Major General Raymond V. Mason, the Army Forces Command (FORSCOM) G–4, said that FORSCOM is looking to assign functional companies to combat sustainment support battalions (CSSBs) and CSSBs to sustainment brigades. General Mason explained that this does not put an end to modularity but instead makes the decision to break apart a unit "conscious" one.

Brigadier General Robin B. Akin, the commander of the 3d Expeditionary Sustainment Command, said equipment configuration also plays a role in how modular units operate. "We realized coming out of Haiti that the word 'expeditionary' is a misnomer," said General Akin. "My headquarters cannot self deploy. We do not have the capability to do a lot of our own stuff, so what we've done is we have developed force packages."

PROFESSIONAL DEVELOPMENT

JFCOM Launches Virtual Cultural Awareness Trainer–Afghanistan

The U.S. Joint Forces Command (JFCOM) has launched the Virtual Cultural Awareness Trainer–Afghanistan to better prepare U.S. and North Atlantic Treaty Organization personnel with language and cultural skills they will need in Afghanistan. The trainer is available through Joint Knowledge Online and focuses on working with interpreters, extending culturally appropriate greetings, and building rapport with local populations.

The program consists of five modules focused on addressing local grievances, coordinating humanitarian assistance projects, setting up checkpoint staffing, conducting training with Afghan National Security Forces, and performing home searches.

The program is also available to multinational, intergovernmental, and interagency partners who will be working in Afghanistan.

Force package 1 can deploy in support of a global response force in less than 96 hours. "We had to do that because we never know where we are going to be. . . . We've also provided that capability down to the sustainment brigades."

Colonel David Bassett, the Project Manager, Tactical Vehicles, said the Army needs to learn to manage its fleets for an Army Force Generation cycle and determine storage solutions for accessories, such as b-kit armor, Blue Force Tracker, and driver vision enhancer, that have come back from Afghanistan. "I think that in the long run we may end up having to develop something like deployment-readiness kits that capture what is a good theater capability and make it available to units that are in that available and ready pool," said Colonel Bassett.

How and what the Army modernizes, recapitalizes, and divests will affect the force. Colonel Bassett said that by investing fiscal year 2012 funds, all Army fleets are expected to be well under the Army's target fleet age. Part of this will be accomplished in the next 3 years with a divestiture of legacy high-mobility multipurpose wheeled vehicles over 20 years old that are in excess of the long-term Army requirement.

Family of medium tactical vehicle investments will allow the Army to divest its entire legacy 5-ton fleet much sooner than the current fleet strategy indicates. "We've already begun the process of looking at the maintenance expenditure limits so that we're not investing in legacy 5 tons in a way that is inappropriate given the limited lifespan of that vehicle," said Colonel Bassett.

The Army will continue to recapitalize heavy expanded-mobility tactical trucks and palletized load systems into more current models because that is the most cost-effective option for those platforms.

AMC Completes New Headquarters Building and Base Closure and Realignment Moves

The Army Materiel Command (AMC) held a "touchdown" ribbon cutting on 15 June to recognize the opening of its new headquarters at Redstone Arsenal, Alabama, and the completion of relocating more than 11,000 AMC employees to locations recommended by the 2005 Base Closure and Realignment Commission.

"For the first time in our history, we'll have a shared common operating picture across the command and across the world, giving us the ability to reach out to the commanders in the field and respond to ever-changing requirements in the field from our warfighters," said General Ann E. Dunwoody, AMC's commanding general.

The new headquarters building is colocated with the Army Security Assistance Command and was completed on 15 March.

The new Army Materiel Command and Army Security Assistance Command complex at Redstone Arsenal, Alabama, was completed on 15 March. *(Photo by Cherish Washington, AMC Public Affairs)*

Army Contracting Command and Expeditionary Contracting Command Move to Redstone Arsenal

The Army Contracting Command (ACC) and its subordinate unit, the Expeditionary Contracting Command (ECC), uncased their colors on 22 June to mark their move from Fort Belvoir, Virginia, to their new home at Redstone Arsenal, Alabama.

ACC and ECC will be working in temporary structures until permanent facilities to house them are built. The project is expected to be funded in 2013, and ACC executive director Jeffrey Parsons hopes to be in a new structure within the next 4 years.

ACC was created in 2008 in an effort to improve Army contracting management, particularly in expeditionary operations. Its creation implemented the recommendation of the Commission on Army Acquisition and Program Management in Expeditionary Operations to "restructure organization and restore responsibility to facilitate contracting and contract management in expeditionary and CONUS [continental United States] operations."

The move to Redstone Arsenal fulfills a 2005 Base Closure and Realignment Commission recommendation and locates the command near the new Army Materiel Command headquarters and the Aviation and Missile Life Cycle Management Command.

Stock Readiness Regulation Gets Overhaul

A new Army regulation (AR) and a revised Department of the Army pamphlet (DA Pam) governing the implementation of the Army's portion of the Department of Defense (DOD) Stock Readiness Program are expected to be released this year. The program was established by DOD to ensure that materiel remains in fighting condition between the time an item is procured or released from maintenance and the time that it is needed by the warfighter.

AR 700–32, Packaging of Army Materiel, and the new DA Pam 700–32, Packaging of Army Materiel, will govern the Army's stock readiness operations, which are run by the Packaging, Storage, and Containerization Center, Logistics Support Activity, Army Materiel Command (AMC). The center centrally administers the program, provides technical packaging expertise, and performs audit visits.

The DOD program ensures that the actual condition of materiel in storage is known, reported, and properly recorded and the materiel is provided with adequate packaging protection to prevent degradation. The program performs functions related to the receipt, identification, classification, and preservation of materiel during the receiving process and the care of supplies in storage, including in-storage inspection, the repackaging of damaged or improperly packaged items, and the periodic inspection and sustainment of materiel in long-life reusable containers.

The program's success increases materiel readiness and ensures stock issued to the warfighter is serviceable. Stock readiness also prevents further deterioration of unserviceable items awaiting maintenance induction that otherwise might become nonreparable.

The overall cost of the program is less than 1 percent of the materiel's value, saving the Army substantial amounts of money in the replacement of unprotected assets. Funding is used to purchase packaging materials and tools, pay for labor, and provide installation supply support activity personnel with asset protection instruction and formal military packaging training. Since the program's implementation in 2005 at Army installation supply support activities, over $1.2 billion worth of materiel has been packaged, preserved, and stored.

System Integration Laboratory Measures Base Camp Energy Usage and Provides Solutions

The Product Manager, Force Sustainment Systems, opened a base camp System Integration Laboratory (SIL) at Fort Devens, Massachusetts, on 24 June. The SIL is a 10-acre site that will test units' water, fuel, and power consumption and evaluate technologies to create more energy-efficient base camps.

The technologies that will be tested include energy-efficient shelters, water-filtration and water-reuse systems, and alternative energy sources, such as wind and solar power. A comparison will be done between two sites: one base camp where units are using the new technologies and one where standard Force Provider services are in use.

New technologies that prove effective will be shared with currently deployed and future expeditionary forces as well as with the other services so that the technologies can be implemented.

The new energy-efficient technologies are expected to reduce water demand by up to 75 percent and fuel requirements by 20 percent.

New System Will Train Financial Management Soldiers for Real-World Operations

The Soldier Support Institute has released a new training software package, the Financial Management Training System (FMTS), that will increase individual and unit FM training proficiency by replicating real-world FM operations in a training environment.

With FMTS, FM personnel will have access to the full suite of FM applications resident in the Financial Management Tactical Platform (FMTP). FMTS will provide online training scenarios and exercises that were unavailable in the past, permitting FM Soldiers to "train as they fight" while at home station. FMTS will also give sustainment brigade and special troops battalion commanders the flexibility to train and reinforce the FM critical tasks in a garrison training environment.

FMTS was developed by the Soldier Support Institute; the Software Engineering Center–Fort Lee, Virginia; the Defense Finance and Accounting Service, Indianapolis, Indiana; and the Department of the Treasury. It is scheduled to be fully operational by 30 September 2011.

Questions or comments may be directed to Colonel Roosevelt Corpening at roosevelt.corpening@us.army.mil or (803) 751–8600.

Soldiers from Headquarters and Headquarters Company, 230th Sustainment Brigade, disassemble an M2 .50-caliber machinegun during the 1st Theater Sustainment Command's Sustainer Challenge at Camp Arifjan, Kuwait. *(Photo by SGT John Dedman, 230th Special Troops Battalion)*

1st Theater Sustainment Command Hosts Sustainer Challenge in Kuwait

The 1st Theater Sustainment Command (TSC) hosted the Sustainer Challenge at Camp Arifjan, Kuwait, on 6 and 7 April. The competition, designed to determine the best Soldier within the sustainment command, pitted nine 4-man teams from units subordinate to the 1st TSC against each other in six events: a 10-kilometer road march, a live-fire range, M2 .50-caliber machinegun disassembly and reassembly, the Army physical fitness test, a medical evacuation exercise, and a combatives challenge.

Two teams from the 230th Sustainment Brigade won many honors in the competition. Best male warrior went to Staff Sergeant Michael Taylor from the brigade headquarters and headquarters company and best female warrior went to Staff Sergeant Chrystal Yazzie from Headquarters and Headquarters Company, 553d Combat Sustainment Support Battalion (CSSB). The 553d CSSB also placed first in the team competition.

New President Takes Command of Army Logistics University

John E. Hall, the new president of the Army Logistics University (ALU), passes the ALU guidon to Command Sergeant Major Robert Tolbert, the ALU command sergeant major, during a change of responsibility ceremony on 22 July 2011 at Fort Lee, Virginia. A retired logistics colonel, Hall is a member of the Senior Executive Service and previously served as the deputy director of logistics operations at the Defense Logistics Agency at Fort Belvoir, Virginia. Hall took over the duty of ALU president from Colonel Mark A. McCormick, who assumed the role of ALU commandant/military deputy. *(Photo by Julianne E. Cochran,* Army Sustainment*)*

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