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JULY–AUGUST 2015

# ARMY SUSTAINMENT

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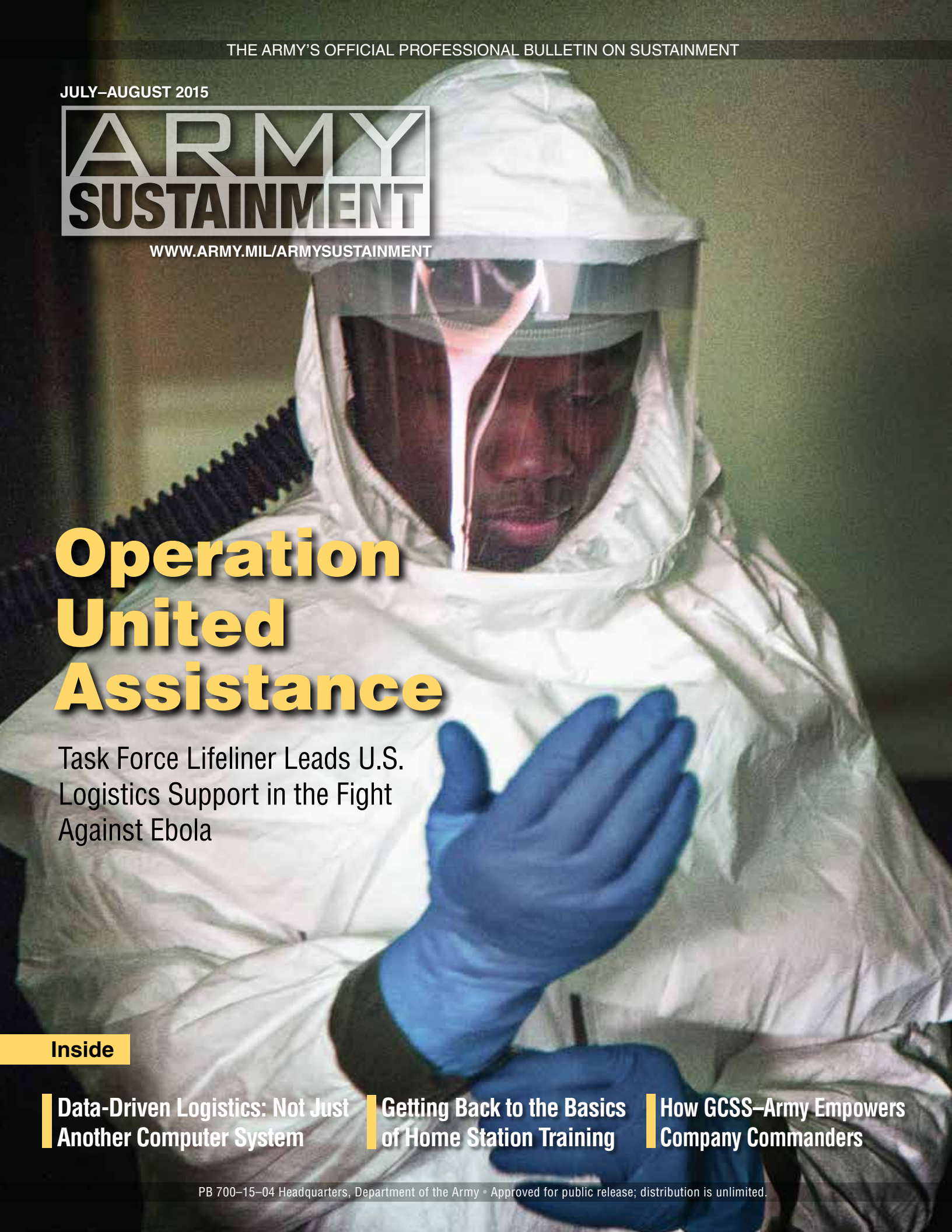

# Operation United Assistance

## Task Force Lifeliner Leads U.S. Logistics Support in the Fight Against Ebola

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Data-Driven Logistics: Not Just Another Computer System

Getting Back to the Basics of Home Station Training

How GCSS–Army Empowers Company Commanders

PB 700–15–04 Headquarters, Department of the Army • Approved for public release; distribution is unlimited.

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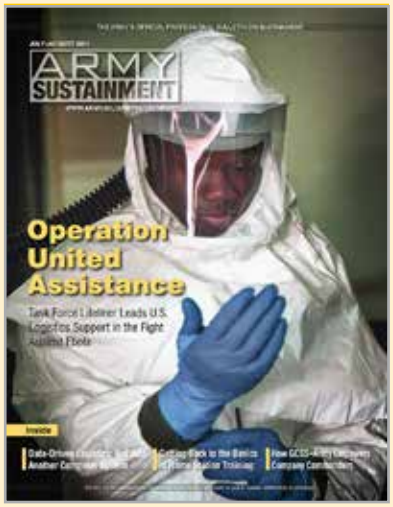


*Spc. Kayoed Ilesanmi, a medical laboratory specialist for the 1st Area Medical Laboratory, demonstrates how to don personal protective equipment at an Army mobile testing laboratory in Tappita, Liberia, Jan. 6, 2015. (Photo by Sgt. Dani Salvatore)*


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# Data-Driven Logistics: Not Just Another Computer System

Merging our supply, maintenance, and property accountability systems into GCSS–Army will give us a consolidated picture that enables better-informed decisions.

■ By Lt. Gen. Gustave "Gus" Perna

With everyone having access to this same centralized data, we will be able to optimize the supply chain and increase operational readiness.

In the next six months, we will be hitting new milestones in the fielding of the biggest game changer this decade for Army logistics: the Global Combat Support System–Army (GCSS–Army). The first wave, which involves fielding in warehouses to replace the Standard Army Retail Supply System, is 75 percent complete.

Even more important, we are starting to ramp up the second wave, which involves replacing Property Book Unit Supply Enhanced and the Standard Army Maintenance System–Enhanced. The second wave is seven times larger, more complex, and will require a team approach because all members of the Army are affected, not just logisticians.

Going from legacy sustainment information systems to GCSS–Army is similar to how the Army went from the Sherman to the Abrams tank. It was a difficult transition and required buy-in from all levels of command, but in the end, where would we be without the centerpiece of ground maneuver?

I used our current legacy logistics systems when I was a company-grade officer growing up in the Army—that is how old they are! They have become a part of a logistician's kit bag and are hard to let go, but it is more than time for an upgrade. GCSS–Army finally gives us our "M1A1" capability, making supply, maintenance, and property accountability available to leaders in one system with one set of data.

Leader development is very important to the implementation and sustainment of the system, and we need to make it a priority. GCSS–Army gives not only logisticians but also leaders in all branches of the Army a factory-to-foxhole view of their formations and provides a single data source to build and maintain readiness.

Both the Ordnance and Quartermaster schools have implemented GCSS–Army training for our Soldiers, noncommissioned officers, warrant officers, and commissioned officers to build the knowledge base we need. Since many of our Soldiers and young officers have been operating computers their whole lives, learning new systems is not hard for them; we will rely on them to learn GCSS–Army and stay up to date with it as they move throughout their careers.

GCSS–Army will not perform miracles, and it is not about replacing people with yet another computer system. Our Soldiers and leaders will still have to execute maintenance and property accountability processes correctly.

But GCSS–Army can follow a piece of military equipment from the time it is purchased until it arrives at the unit. The system then predicts the equipment's required maintenance upkeep and anticipates additional parts or maintenance needed to support the life cycle of the product. With everyone having access to this same centralized data, we will be able to optimize the supply chain and increase operational readiness.

Additionally, we are developing a business intelligence capability that will use information from GCSS–Army and other enterprise resource planning systems to extract critical data for decision-makers at all levels. One thing we have found over the years is that "data overload" can overwhelm leaders and staffs and make it hard to focus on the right information.

Business intelligence will allow users to search massive amounts of data and then quickly receive information essential to building unit readiness. It will also enable us to anticipate maneuver commanders' requirements and, therefore, satisfy them more efficiently and effectively than in the past.

In the future, as the Army becomes more expeditionary and less reliant on forward operating bases, GCSS–Army will play a big role. All users will have the same data from the same source. GCSS–Army is web-enabled, so users will be able to access it from anywhere in the world. Most importantly, it will allow users across the world to see a deployed unit's readiness and be able to provide support at the click of a mouse.

The next 10 years will be even harder than the last 10, when we were engaged in two wars. Linking the global supply chain with multiple operations taking place that could easily grow into contingency operations makes a system like GCSS–Army vital to maintaining our expeditionary force.

I am excited to see what lies ahead as we continue to roll out GCSS–Army and begin merging our supply, maintenance, and property accountability systems into a consolidated picture, enabling better-informed decisions. I also know how hard it is to transition from something comfortable to something new. There will be growing pains, but the train is leaving the station and we need all leaders on board with us.

I am convinced that the single most important contributor to success for fielding and sustaining GCSS–Army will be leaders. The same things that make us the world's preeminent land force—the quality of our leaders and the dedication of our Soldiers—will also be required to ensure success with this game-changing transition.

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*During a maintenance meeting at the Joint Readiness Training Center, Soldiers from the 1st Brigade Combat Team, 82nd Airborne Division, discuss using the Global Combat Support System–Army equipment situation report for near real-time information regarding unit readiness. (Photo by 1st Lt. Jonathon Hecker)*

# The Indiscipline of the Supply Chain and Logistics Management Disciplines

■ By Dr. Christopher R. Paparone and George L. Topic Jr.

Business and public management literature are fraught with "paradigm wars" in which scholars debate the boundaries of the subfields of management studies. The rather porous boundary between supply chain management (SCM) and logistics management (LM) makes for fertile battlegrounds for such discussions—and rightly so.

The terms LM and SCM are often used interchangeably to describe activities central to the support of military operations and commercial activities. Despite that, there are often disagreements and confusion over how these concepts are related. Ambiguities abound, and our intent is to briefly discuss this conceptual divide.

In recent years, in both practitioner and academic literature, in business school programs, and in day-to-day conversations around the defense industrial complex, SCM seems a more prominent descriptor of the discipline than LM. However, in operational and tactical doctrine, LM is the predominant term.

In the 1997 *International Journal of Logistics Management* article, "Supply Chain Management: More Than a New Name for Logistics," Ohio State University professors Martha Cooper, Douglas Lambert, and Janus Pagh describe SCM as, "the integration of business processes from end user through original suppliers that provides products, services and information that add value for customers."

LM, on the other hand, is described in the same article as, "the process of planning, implementing, and controlling the efficient, cost-effective flow of materials, in-process inventory, finished goods, and related information flow from point-of-origin to point-of-consumption for the purpose of conforming to customer requirements."

A key conclusion by the authors is that the "integration of business processes" required in SCM goes well beyond the parameters of LM; hence, they conclude that LM must be subsumed within the disciplinary boundaries of SCM.

In a 2000 *European Journal of Purchasing and Supply Chain Management* article, Simon Croom, Pietro Romano, and Mihalis Giannakis reframe SCM within a wider, interdisciplinary scope that includes materiel, information technology, knowledge management, and human relationships. We would argue that by scoping SCM to this extreme, the definition approaches the exceedingly broad and varied discipline of management itself.

In a 2006 *International Journal of Operations Production* article, John Storey, Caroline Emberson, Janet Godsell, and Alan Harrison made a startling conclusion that the theory and practice of SCM was so big that they could find no evidence of any organization that actually managed or optimized an entire supply chain to the ideal of a fully-networked, integrated socio-technical system.

Given the generally accepted purpose of the discipline—to integrate all business processes both socially and technologically—SCM stands as a concept without complete proof of practice.

We assert that the same can be concluded about the holism desired in our military doctrine. Joint Publication 4–0, Joint Logistics, sees SCM and LM (in this case, referred to as "the joint logistics enterprise") as a "multitiered matrix of key global logistics providers cooperatively structured to achieve a common purpose."

Has any war or military operation historically demonstrated that such cooperation is even possible or explained how such accommodating structuration processes are achieved? To the contrary, we conclude that operational results tend to convey how unified action in logistics is perhaps a Utopian dream rather than a realizable discipline of professional practice.

We hope it is obvious that we purposefully poke at the edges of our profession that cross between the civilian and military communities of knowledge and research. We are attempting to begin a conversation about the conceptually ambiguous boundaries of our practice.

We intend to offer some explanation to leaders and students that a shared understanding of this vast and complex aspect of national security is limited. Our inability to clearly describe, define, and understand the business end of the Department of Defense could be very expensive, both in terms of readiness and the inefficient use of our resources.

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George L. Topic Jr. is the vice director for the Center for Joint and Strategic Logistics at Fort McNair, Washington, D.C.

# Managing External and Internal Support Requirements

Units within a brigade support battalion must follow the same procedures for requesting support as the units they support.

■ By Capt. Eric Shockley

Brigade support battalion (BSB) staffs, along with company- and battalion-level leaders, constantly must mentally separate the BSB's brigade combat team (BCT) sustainment requirements from internal BSB logistics requirements. BSBs that fail to make this distinction have difficulty executing day-to-day internal battalion operations while supporting the BCT. This statement is based on observations of unit rotations at the Joint Readiness Training Center (JRTC) at Fort Polk, Louisiana.

Army Techniques Publication (ATP) 4–90, Brigade Support Battalion, breaks the BSB staff's sustainment personnel into two sections: "Sustain I" for the BSB S–1 and S–4 and "Sustain II" for the support operations (SPO) staff.

One example of this separation is the battalion S–4's responsibility for BSB transportation. ATP 4–90 states that the BSB S–4 "coordinates the strategic and operational deployment of the BSB, as well as the request for movement through controlled routes" and "assists in developing unit movement plans for the BSB."

Sustainment company commanders must know which of their assets are for internal use and which assets are dedicated to BCT-level support, such as the light medium tactical vehicles in a light truck platoon. Company commanders and their executive officers (XOs) must then work with the battalion S–4 to coordinate movement of additional unit equipment.

They must also work with the SPO and battalion S–3 to ensure that the company's projected buildup of combat power is nested with the battalion's planned buildup of combat power. Because BSB units operate throughout a BCT's area of operations, the BSB S–3 section is also responsible for ensuring that subordinate unit movements are coordinated with adjacent battalion BCT-level operations within an area of operations.

For my examples below, I should clarify that a troop is a unit equivalent in size to a company or battery; a squadron is equivalent to a battalion; and a regiment is equivalent to a BCT. Within a regiment, the BSB element is known as the regimental support squadron (RSS).

## Learning the Hard Way

As an RSS S–4 in an armored cavalry regiment at the National Training Center at Fort Irwin, California, I learned the hard way the importance of separating BCT and internal BSB operations. As my RSS prepared to move into the training area, I assumed (incorrectly) that the SPO transportation cell would handle the squadron's movement requirements.

I quickly learned that was not the case and subsequently spent a long day identifying requirements and marrying loads to trailers and flatracks. I also had to synchronize the squadron's movement with the SPO transportation officer-in-charge in conjunction with the rest of the regiment's movement into the training area.

## Applying Lessons

I took this lesson with me as I took command of the regimental supply and transportation troop that had a distribution mission. I tried to get my leaders to understand our troop's split roles, which were our internal troop operations and external regimental support missions.

The transportation troop owned and operated the only heavy equipment transporters (HETs) in our regiment, so the prevailing thought within our troop was that we could use them whenever we needed to transport our own equipment to external locations. I had to explain that this line of thinking was incorrect.

As the commander, I was responsible for the maintenance and accountability of the HETs, along with providing trained and ready crews to operate them, but I did not have the authority to task those HETs. I explained to my team that the proper way to use the HETs for internal transportation requirements was for me or my troop XO to submit a request to the RSS S–4. The S–4 would then submit the request to the SPO transportation cell.

SPO transportation would call down to my truck master to verify availability of assets. After confirming availability and balancing any competing requirements, SPO transportation would notify the squadron S–4 of the approval, and the S–4 would in turn tell me or my XO. SPO transportation would also

pass the mission over to the squadron S–3 so that a mission order could be issued to my unit to execute the task. This may seem like a roundabout way of doing things, but it was the right process to ensure that the authorized person released the HETs (a regimental asset).

## Applying Doctrine

ATP 4–90 states, "S–3 plans and operations officers plan tactical troop movements, including route selection, priority of movement, timing, security, bivouacking, quartering, staging, and preparing movement orders." BSB S–4 personnel must adhere to this same process as they work to evacuate equipment and move supplies within the BSB since a company commander could receive competing missions from the S–3, S–4, and even the SPO.

Discipline among the staff in routing missions to the units can help prevent overcommitting the unit and forcing a company commander to try to figure out mission priority.

Standard operating procedures (SOPs) can help with this process as long as the battalion's tactical SOP is nested with the SPO section's external support SOP. The external support SOP must identify which assets are common user land transportation (CULT) assets so that the BSB S–4 and company-level leaders will not dedicate those assets for internal missions.

The CULT concept can also be applied to the use of the bulk fuel and water in the distribution company, the employment of wreckers from the maintenance company, and the management of medical evacuation platforms within the medical company.

## BSB Rehearsals

A contributing factor to the inability to separate the two support areas is often observed during JRTC rotations when BSBs do not have a battalion-level rehearsal (incorporating movement and occupation) but instead incorporate battalion internal operations into the BCT sustainment rehearsal. This quickly leads to confusion on the objective or in the assembly area when the quartering party arrives at the brigade support area (BSA) site and fails to execute quartering party tasks.

When the rest of the BSB arrives at the BSA, no plan is in place to receive and emplace units. This leads to conflicting priorities of work and misplaced units. Other effects include lapses in security and an unbalanced work/rest cycle while units attempt to occupy their areas and conduct support missions.

A BSB must execute a separate rehearsal of its occupation plan to synchronize actions among its companies. This will allow BSBs to perform their initial BSA occupation tasks that are similar to any battalion-sized unit occupying an assembly area.

Security, field hygiene, communication, work/rest plans, and preparing to receive follow-on forces are generic tasks that BSBs must be able to execute like any other battalion if they hope to successfully execute their sustainment mission. One technique that units can use to achieve success is to develop SOPs that identify the support process and make the distinction between BSB occupation rehearsals and BCT sustainment rehearsals.

Developing and using SOPs can be a technique to streamline BSA establishment. As unit leaders prioritize available training time, they should maximize training events by incorporating SOPs to the maximum extent and conducting a thorough validation and revision of the SOPs. ATP 4–90 emphasizes this concept, stating, "The most successful units follow and revise SOPs throughout training and mission execution."

A BSB must execute a separate rehearsal of its occupation plan to synchronize actions among its companies.

## BSB S–4

BSB S–4s cannot assume that supply requirements will be lumped in with the SPO section's logistics status tracking. The S–4 must analyze logistics requirements internal to the BSB using company input on expected fuel consumption and supply requirements for the headquarters and companies.

The S–4 must work directly with the BSB S–3 (and typically the headquarters and headquarters company commander) to identify the class IV (construction/barrier materials) requirements to properly secure the BSA. These requirements must then be submitted to the BCT S–4 and SPO in order to coordinate resupply.

Sustainment leaders who can maintain the mental separation between BSB operations and BCT sustainment will have a better chance of success with less confusion and wasted effort. Units that fail to maintain this separation will struggle to establish operations and sustain the BCT, especially in an austere operational environment.

Capt. Eric Shockley is an observer-coach/trainer with Task Force Sustainment at the Joint Readiness Training Center at Fort Polk, Louisiana. He holds a bachelor's degree from the University of North Carolina.

*Muraleedharan Kollankandy, a contracted billeting clerk who provides cleaning and laundry services for Army Field Support Battalion–Kandahar, 401st Army Field Support Brigade, organizes laundry at one of the battalion's drop-off sites. (Photo by Sharonda Pearson)*

# A New Way of Thinking About Strategic Sourcing

By using an Army Sustainment Command strategy of co-locating portfolio managers, the Army could more quickly realize its goals for services contracts.

■ By Penny Kroul and Jerry E. Jastrab

Strategic sourcing has been creating efficiencies, improving the quality of services, and reducing costs in private industry for years. Now it is time for the Army to strengthen its resolve in pursuing strategic sourcing for itself.

What if the Army could change the way it procures services? What if, by changing its behavior, the Army could save money and apply those savings to fund additional training and operations? What if the Army could eliminate redundant contracts and truly implement the intent of portfolio management for all services it buys? What if the Army could standardize performance work statements across the spectrum of services instead of having every requiring activity develop its own? These "what ifs" can be reality if the Army implements strategic sourcing to its full extent.

## How Strategic Sourcing Works

Strategic sourcing refines user requirements and analyzes how they fit into a bigger picture, leading to better contracts and better value. It also looks at local requirements from a broader set of disciplines and creates opportunities for small and disadvantaged businesses in order to maintain a vibrant national economy.

Strategic sourcing is not entirely new to the Army. The first initiatives

began in the early 2000s as part of a government-wide effort to reduce costs and increase value. In recent years, the Army has established a new governance structure, consisting of the Strategic Sourcing Executive Committee, Strategic Sourcing Steering Group, and strategic sourcing working groups, to bring focus and direction to strategic sourcing. Within the working groups are 10 geographically dispersed portfolio managers, each focusing on a separate service sector.

## Taking the Next Step

Creating a single Army strategic sourcing hub for acquisition would more quickly achieve the Army's goals of reducing redundancies, standardizing requirements, and incorporating program management of the acquisition of services.

Co-locating the Army's portfolio managers in a centralized strategic sourcing hub would create an environment that allows portfolio managers to rapidly exchange information on requirements and best practices, develop an integrated process for determining preferred providers, and create a centralized market research database. A centralized strategic sourcing hub also would enable senior leaders to make fact-based decisions on service contracts for the Army.

## Mission Command Implications

Moving all portfolio managers to a strategic sourcing hub would place the portfolio management function under one commander and concentrate expertise in one location. It would ensure one commander is accountable for maintaining situational awareness of all strategic sourcing contract mechanisms. This action would also allow for the development of one central database for all service requirements across the Army and consolidate the leads for policy development and implementation into one organization.

This strategic sourcing hub should be developed for all non-Corps of Engineer service acquisitions procured for the Army. It would then direct the requirements to the appropriate contracting center to solicit for and develop the contracts.

## The EAGLE Business Office

The Army Sustainment Command (ASC) is an example of what effective portfolio management can achieve. The ASC, a subordinate organization of the Army Materiel Command, is the portfolio manager for logistics management services. Within this portfolio, ASC has been seeking savings by consolidating and standardizing requirements.

One notable achievement under this initiative is the Enhanced Army Global Logistics Enterprise (EAGLE) Business Office. The EAGLE Business Office issues task orders that create a single contract mechanism to provide supply, maintenance, and transportation services.

The EAGLE Business Office uses an acquisition strategy that supports the Army's socioeconomic acquisition goals by creating new opportunities for small and disadvantaged businesses, while increasing competition and implementing efficient methods to improve contract administration and reduce costs.

The EAGLE Business Office is on track to provide the Army significant savings by reducing the number of contracts within the logistics readiness centers from 150 to approximately 40. To date, the EAGLE approach to services contracting is projected to save the Army $105 million over next five years. EAGLE has been recognized by the Army Materiel Command for its ability to "increase the Army's buying power and improve the supply chain across the command."

If ASC can accomplish this for logistics management services contracts, the Army can accomplish this for the acquisition of all services contracts. The Army could eliminate the need for multiple organizations overseeing multiple acquisition disciplines by implementing best practices from EAGLE to create a strategic sourcing hub.

A U.S. Government Accountability Office Report to Congressional Committees, "Strategic Sourcing: Improved and Expanded Use Could Save Billions in Annual Procurement Costs," suggests that the Army could save 10 percent annually, equating to a $50 billion savings, if it adopted a cross-discipline umbrella contract similar to EAGLE for all services contracts and used a single strategic sourcing hub.

Accelerating the positive impacts of strategic sourcing is a logical step forward. A centralized strategic sourcing hub for service acquisitions would refine and standardize requirements, achieve best value for the resources invested, and expedite contracting. It could also increase competition in a way that is favorable to the government, while simultaneously creating opportunities for small and disadvantaged businesses. Most importantly, it would improve the quality of contracted services supporting Soldiers in the field.

---

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Jerry E. Jastrab is a senior logistics management specialist in the Army Sustainment Command. He is part of the acquisition workforce and the portfolio manager for the Army's logistics management services contracts. He holds a bachelor's degree in industrial technology from the University of Wisconsin-Platteville, a master's degree in international relations from Troy State University, and a master's degree in strategic studies from the Army War College.

# How Technology and Data Affect Mission Command

Data can empower or impede decision-making. What matters is how much data there is and whether or not it is accessible.

■ By Lt. Col. Stacey L. Lee

Army Doctrine Publication 5–0, Mission Command, breaks mission command into two distinct but mutually supportive parts. The first part is "the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander's intent to empower agile and adaptive leaders in the conduct of unified land operations."

This first part is generally referred to as the art of mission command. The goal is effective communication of the commander's intent and subsequent empowerment of subordinate elements to accomplish an objective.

The second part is the mission command warfighting function, which is defined as "the related tasks and systems that develop and integrate those activities enabling a commander to balance the art of command and the science of control in order to integrate the other warfighting functions."

Generally referred to as the science of mission command, the goal of the warfighting function is to synchronize actions across all warfighting functions in time and space to support the decision cycle of the commander.

Technology supports and enables both the art and science of mission command, but it is in the warfighting function that technology carries the load. Technology, as a critical enabler, allows the commander and staff to see farther and faster, analyze and communicate with greater efficiency, and maintain a common operational picture that would otherwise be too time-consuming or difficult to maintain. Conversely, technology can overwhelm or hinder the decision-making process, causing "paralysis by analysis" if not used wisely.

## Technology's Role in Planning

It is critical to understand that technology is not a decision-making process. Technology is simply an integrating resource. Information is great, but it must enable decisions to be relevant. For example, a concept of support developed using the Operational Logistics Planner is not a complete list of detailed decisions by phase, but it is a useful baseline for beginning to understand and integrate operations across all warfighting functions.

For sustainment planners, synchronizing the numerous systems that support analysis and operate in real time to support the warfighting commander's decision cycle is challenging for two reasons: the number of overlapping systems and the sheer volume of data generated in the course of an operation.

## Overlapping Systems

In a perfect world, the Army would have one system for collecting, analyzing, and distributing the common operational picture in real time. This system of record would be fully capable of monitoring and interacting with the various subsystems to form a cooperating network of networks. What the Army actually faces is an overlapping, sometimes confusing, sometimes competing, sometimes cooperating plethora of systems that support planning, analysis, and decision-making.

The landscape is not all bleak. Strides have been made to consolidate and coordinate the disparate platforms into a single system, the Global Combat Support System–Army (GCSS–Army). For core sustainment tasks, GCSS–Army consolidates and, for the most part, coordinates across information stovepipes. As a software-based technology, it can be run on any system that meets the minimum requirements and does not require stand-alone hardware or information technology services.

The future is bright, but it is still a little fuzzy. Coordinating efforts across systems requires units and capability developers to answer questions like, "Should we continue to apply new modules and patches to existing systems to extend their lifecycles?"

Most military organizations, sustainment ones especially, run different applications and systems to support everything from day-to-day operations to human resources to finance—a veritable acronym soup of separate and distinct systems. The technology landscape is a confusing mix of legacy systems with open platform systems coupled with commercial off-the-shelf technology.

Can we simply transition stand-alone legacy systems to web-based platforms and integrate those programs as applications on common

platform architecture in a realistic time frame? Organizations struggle to create patches, normally requiring significant human interaction, to allow subsystems to share data across systems.

Would it be better simply to bite the bullet, take the pain, and build a better mousetrap? The goal is always a single system of record that will communicate with all subsystems and have access to all available data with minimal human interaction. Building a better mousetrap will likely exceed the risk tolerance allowed by commanders.

It is not enough to simply track how much data you have. To be useful, the data has to be segmented by data type in a timely manner. This stresses any mission command or decision-making process that relies on technology.

## Data Volume

Driving toward that single system, we run headlong into the second challenge: the sheer amount of data that is now available. By analyzing, combining, and applying data, more data is created. Put another way, as you interact with data, you are literally adding to the pile.

Data is both a difference in scale of information and in the kind of information. It is not enough to simply track how much data you have. To be useful, the data has to be segmented by data type in a timely manner. This stresses any mission command or decision-making process that relies on technology.

For military organizations, sustainment organizations in particular, the amount of data is problematic because sustaining forces at home station and in route to and on the battlefield are all data-intensive operations. Forecasting, tracking, and disseminating the information that comes from data usage all use and create a lot of data. Multiple layers of vertical reporting requirements simply add to the pile and the confusion.

Sustainment operations are largely about prediction—turning reams of data into tangible assets on the battlefield in the right place, at the right time, and in the right quantities. Constant, complex interactions with the area of operations further complicate the challenge.

In-depth, detailed analysis of every decision has to be balanced with the time available in the plan to make decisions. Waiting until you have perfect information before making a decision or presenting the information to a decision-maker will put you behind. A data point can also be completely relevant for intangible or residual effects and simultaneously irrelevant for tangible effects that drive toward achieving objectives.

## Recommendations

A focused understanding of the strengths, weaknesses, and challenges that technology and data present can go a long way toward mitigating or even eliminating the challenges. Answering the following questions will help ensure that technology and data analysis supports mission command:

- ☐ Are we measuring the right things? When dealing with large amounts of data from multiple levels of the organization, it can be helpful to break the information down into two or three manageable types or categories.
- ☐ Can everyone see the data?
- ☐ What information is presented and how is it as important as the data itself? The more clicks that are required to access the data, the less likely the information will be monitored.
- ☐ Do we have systems in place to separate the signal from the noise?

In addition to asking these questions, planners must trust but verify data. Use the available platforms but continually incorporate feedback from the battlefield to validate that the data is still relevant and timely to achieving the objective.

Also, never, ever throw away your pencils. A tactic many units face at the combat training centers is for the observer-coach/trainers to simply walk behind the tactical operations center and turn off or unplug the generators to simulate power loss due to enemy action or simply Murphy's law. In the scramble to account for the challenge, units quickly find that the best technologies they own are a standard issue green notebook and a good mechanical pencil.

Technology and the analysis and mobilization of data can enable or disrupt mission command. If current trends are any indicator, the rate of technology advancement and the sheer volume of data will continue to increase, exacerbating the problem. There is no simple solution for making data more accessible and useful, and addressing the challenges requires more than just technology.

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*A humvee from the 1st Battalion, 133rd Infantry Regiment, encounters a simulated car bomb during a convoy live-fire exercise at Peason Ridge, north of Fort Polk, Louisiana. (Photo by Sgt. 1st Class Clinton Wood)*

# The Simulation Operations Officer in a Sustainment Brigade

An FA57 simulation operations officer can significantly benefit a sustainment brigade that is preparing to deploy.

■ By Lt. Col. Carlos J. Kavetsky

After graduating from the Simulation Operations Course in 2012, I served as the simulations operations officer for the 3rd Sustainment Brigade. I deployed with the 3rd Sustainment Brigade to Afghanistan in 2013 and helped prepare the brigade for its deployments to Operation Spartan Shield and Operation Inherent Resolve in Kuwait.

I want to share with the simulations and sustainment communities my experience as a functional area 57 (FA57) simulation operations officer supporting multifunctional logisticians.

Specifically, I want to assist FA57s who will be assigned to sustainment brigades in the future and to describe the training exercises and road to war (RTW) that certified the 3rd Sustainment Brigade for the two deployments.

## Modeling and Simulations

While I was assigned to the 3rd Sustainment Brigade, I worked under two different brigade commanders. I spent most of my time helping them achieve their brigade RTW training objectives using constructive simulations and knowledge management (KM).

A primary difficulty units may face is how to effectively train a "hypermodular" formation. Sustainment

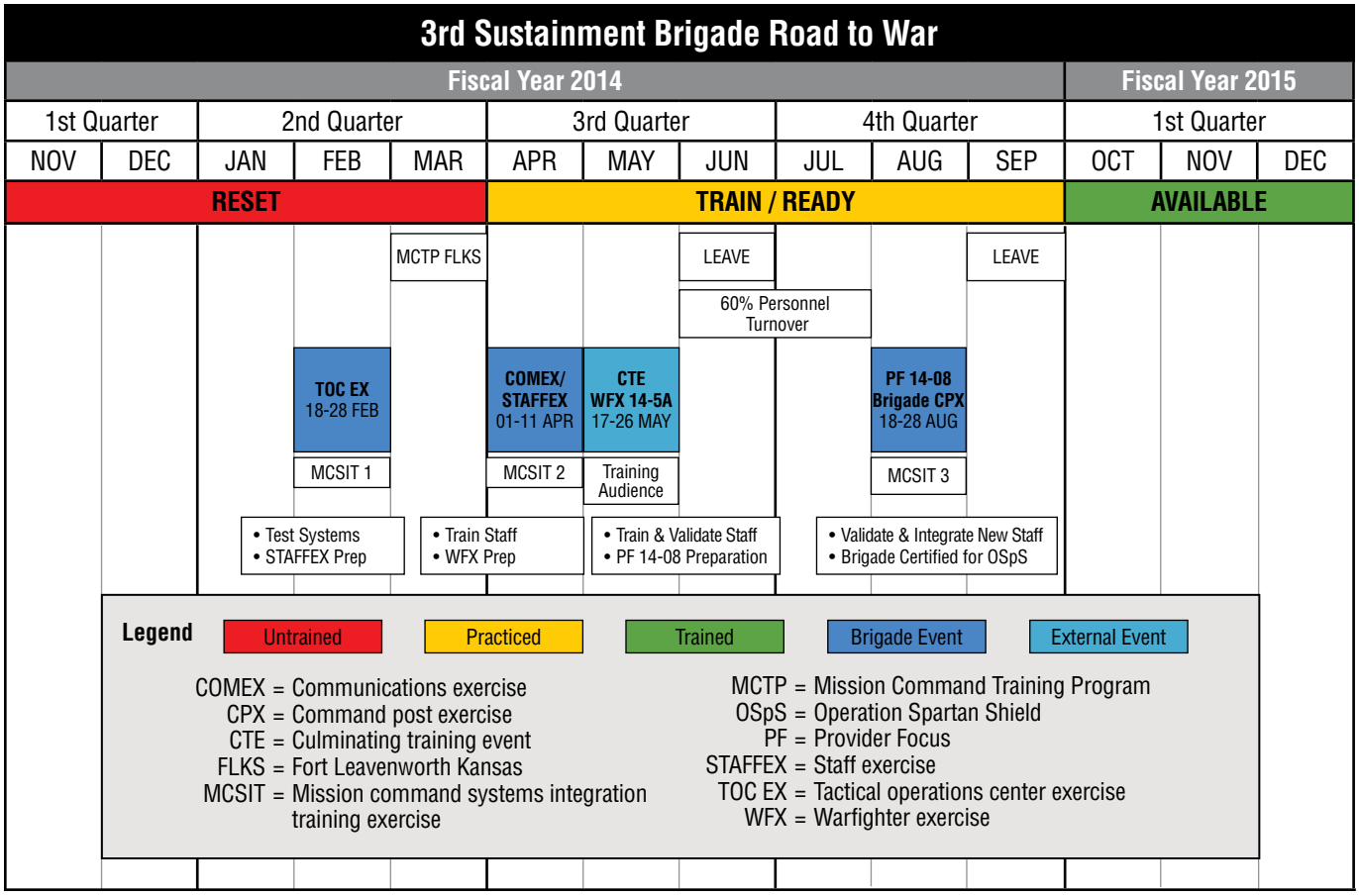


*Figure 1. The FA57 officer implemented a three-phased training plan to prepare the 3rd Sustainment Brigade for deployment.*

brigades do not follow a traditional Army Force Generation (ARFORGEN) cycle or deploy as a brigade. From 2012 to 2014, the 3rd Sustainment Brigade had all of its subordinate units in different pools of the ARFORGEN cycle. No more than two company-sized elements were in the same brigade ARFORGEN cycle.

The first challenge this situation causes is that when the FA57 and staff plan a brigade-level mission command systems integration training exercise (MCSIT), staff exercise, or command post exercise, the special troops battalion or combat sustainment support battalion will not necessarily be integrated simultaneously into the training strategy. The staff will have to find opportunities to train each unit separately or even integrate other units that will be assigned to the brigade during deployments.

The second challenge is time management and how to plan a MCSIT in a compressed, nontraditional ARFORGEN model. Therefore, the FA57 and the staff need to understand the ARFORGEN model, emerging readiness models, and division training guidance to include a MCSIT in the brigade's RTW.

## Mission Command Integration

Commanders and their staffs must understand what FA57s and simulation operations can do for their units to enable mission success. In my case, my brigade commanders empowered me to exercise my duties and responsibilities. The true game changer was that both commanders possessed joint exercise planning backgrounds and had a broad understanding of FA57 capabilities, which they leveraged to prepare the brigade for sustainment operations in Afghanistan and Kuwait.

If commanders and S–3s do not understand FA57 capabilities and the power of simulation operations, FA57s will have to build trust through education and by marketing their capabilities to unit leaders. FA57s can use an "elevator pitch," or a concise briefing, to educate leaders, raise awareness, and generate requests for assistance with training.

I recommend that FA57's conduct "battlefield circulation." FA57s should visit subordinate unit commanders and staffs and ask how they can help them. By doing so, the FA57 will discover the commander's needs, be able to provide solutions, and build trust.

## The MCSIT

Both of my commanders had a broad understanding of the MCSIT model, which we integrated into the brigade RTW. The FA57 can plan a MCSIT to train the brigade. (See

figure 1.) Regardless of the deployment time line or availability of a combat training center (CTC) rotation, when combined with constructive simulations integration, the MCSIT works for sustainment brigades and, in my opinion, is the solution to the modularity gap created by the brigade combat team-centric ARFORGEN model.

A sustainment brigade conducting a MCSIT—prescribed on its RTW and supported by its local mission training complex (MTC) and mission command training program (MCTP)—can validate itself for deployment without having a CTC rotation. A MCSIT is not the optimal venue to validate sustainment brigades, but it is a way, and it worked in our case.

The 3rd Sustainment Brigade deployed twice in the past three years without participating in any CTC rotations. Although the brigade participated in one Unified Endeavor mission and two warfighter exercises (WFXs), they occurred too early in the ARFORGEN cycle and subsequent personnel turnovers caused a loss of momentum. Therefore, the gap solution is the MCSIT combined with constructive simulations.

## Mission Command Systems

One integration challenge during MCSIT execution was training a new and immature brigade staff on mission command systems. The Fort Stewart, Georgia, MTC was instrumental in providing mission command systems (the Mission Command Workstation and Battle Command Sustainment Support System) functional area training.

The FA57's mission command systems training plan will facilitate staff integration training and enable the staff to understand how to leverage and collaborate through the Mission Command Workstation common operational picture.

## Outside Support

FA57s should know, understand, influence, and build rapport beyond their organizations to leverage partners in support of the commander's intent. The Fort Stewart MTC and the MCTP from Fort Leavenworth, Kansas, were instrumental in training the brigade. The MTC provided the support, facilities, equipment, and expertise for every exercise. The MCTP trained the brigade during WFX 14–5A and one of our MCSIT events.

FA57s' expertise makes them ideally suited to serve as brigade liaisons with the MTC and MCTP for technical, mission command, and operational concepts and details. This relationship builds on a common understanding and fosters coordination and cooperation with partners, which is essential in planning and executing MCSIT events.

## Leadership Styles

I worked for two extremely intelligent and competent commanders who possessed different leadership styles. Both commanders were directly involved throughout the planning of the MCSIT events, but at different stages. They placed direct emphasis on the importance of their intent and scenario as the vehicles to prepare the brigade for combat.

My first commander expected his intent to be followed and conveyed very specific guidance. He was very engaged in all stages of the planning and execution process, allowing room for ideas and mistakes and focusing the brigade on a specific end state.

However, my second commander also expected his intent to be followed but was less specific with his guidance, allowing me ample room to develop ideas and make mistakes. He was heavily engaged in the initial stages of the design and planning process but was less engaged in the final stages, letting his deputy and staff prepare for the exercise.

What allowed such flexibility was that the former commander and staff built and resourced the Kuwait RTW while in Afghanistan, providing a more predictable RTW. This gave the new commander and staff more flexibility to shape the exercises to attain the desired effects and end state.

Nevertheless, both commanders' focus was preparing the brigade for combat, and they let me direct and orchestrate every exercise with the MTC and MCTP in support of our operations. Therefore, the FA57 needs to be flexible and adapt to different leadership styles to be effective.

## Assimilating to the Culture

An FA57 should understand, learn, and assimilate to the organization's culture. In my case, I became a multifunctional logistician. The sustainment brigade's complexity forced me out of my comfort zone. A new FA57 will bring a broad range of experiences from his basic branch but may lack significant sustainment knowledge and experience.

The FA57 will have to take the initiative, learn the history and culture of the brigade and its capabilities, and network with the brigade subject matter experts. The FA57 should review doctrine, including Army Doctrine Publication (ADP) 4–0, Sustainment, ADP 5–0, The Operations Process, and ADP 6–0, Mission Command. The FA57 can also use the Army Training Network (https://atn.army.mil/) as a source for training tools.

These resources will enable the FA57 to quickly learn about sustainment operations, which will be essential for the design, scenario, and database development of command post exercises, staff exercises, or MCSITs. Finally, the FA57 should always have a senior logistician (noncommissioned or warrant officer) to assist during scenario development and help orchestrate exercise execution.

## Knowledge Management

As a primary trainer for all MCSIT events, the FA57 will have to find targeted opportunities to facilitate the flow of knowledge and enhance shared understanding. I chose to do this for every exercise, given our

time constraints, especially during WFX 14–5A.

Acting as the brigade KM officer and mission command trusted agent with the MCTP, I developed a KM strategy that enabled the brigade to become a learning organization that could effectively and efficiently capture and disseminate brigade lessons learned and incorporate them into our KM system.

We phased the strategy based on the five steps of the KM process: assess, design, develop, pilot, and implement. KM was critical for capturing tacit and explicit knowledge for new staff members and the rear detachment during the summer turnover of brigade personnel.

## Leveraging Experience

FA57s should leverage their experience to become relevant to their organizations. During my deployment to Afghanistan, I did not execute duties as the battle command officer or KM officer. I acted as the fusion cell officer-in-charge and was responsible for advising and assisting the brigade commander by developing, synchronizing, integrating, distributing, and strategically communicating key elements of his vision, goals, mission, and intent.

I was also responsible for plans and future operations. Although this was outside of my trained core competencies, it was not foreign to my background and past experiences.

The brigade's mission in Afghanistan was mission command of sustainment operations and redeployment, retrograde, and materiel reduction support for all U.S. and coalition forces operating in Regional Commands South and Southwest and National Support Element West.

The brigade was also responsible for providing security escort augmentation for commercially contracted sustainment convoys. This mission was very complex and required precise planning horizons. Therefore, the commander's intent for the fusion cell was to allow the brigade tactical operations center to focus on the current fight while the fusion cell bridged current and future operations and plans.

To accomplish this, the brigade commander provided me with a team of four smart officers to manage assessments, special projects, initiatives, and plans. As the fusion cell officer-in-charge, I produced the brigade's RTW for the follow-on deployment to Kuwait three months before redeploying from Operation Enduring Freedom.

Our team framed the RTW within the ARFORGEN and MCSIT model. We also produced our Operation Enduring Freedom sustainment mission observations, insights, and lessons for the Combined Arms Support Command Reverse Collection and Analysis Team.

## Provider Focus 14–08

Provider Focus 14–08 was the final MCSIT event on our RTW before the second deployment to Kuwait. Its purpose was to prepare a new staff to conduct operations in support of unified land operations. The brigade's mission was to provide mission command of sustainment operations throughout the Central Command Joint Support Area Georgia.

The brigade had a new mission and capabilities and was responsible for distribution operations not only by land and air but also by sea. We owned two logistics support vessels and two landing craft utility vessels, and we managed a significant contracting mission across the combined joint operations area.

With only two months to design and plan this exercise, we retrieved the 108th Sustainment Brigade culminating training event simulation and master scenario events list database from the Fort Hood, Texas, MTC to reduce the planning effort. It was designed to be a two-week mission command exercise, and we invited the 1st Theater Sustainment Command to participate as the higher command.

The commander decided to use the first week of the exercise as a venue to "live a week in the life of the 108th Sustainment Brigade" by conducting a virtual left-seat and right-seat hand over. We integrated the brigade staff into select 108th Sustainment Brigade battle rhythm events through video teleconferences and secure voice over Internet Protocol.

The brigade staff used tools that were available to garner current products and information to use during a three-day simulation exercise the following week. This exercise was 80 percent a learning and KM event and 20 percent a simulation exercise.

FA57 core competencies (simulation supported training, battle command systems integration, and operational KM) range across all six warfighting functions. Brigade capabilities do not anchor FA57s because FA57s are multidiscipline and not specific to any unit. They are master trainers and command and staff enablers within their core competencies.

Therefore, a sustainment brigade FA57 should ensure the commander and staff understand what FA57s and simulation operations can do for the unit. The FA57 should understand the commander's intent, the ARFORGEN model, emerging readiness models, and training doctrine. FA57s should adapt to different leadership styles, leverage their experiences, and stay relevant. They should understand, learn, and assimilate to their organization's culture and build rapport outside of their own organizations.

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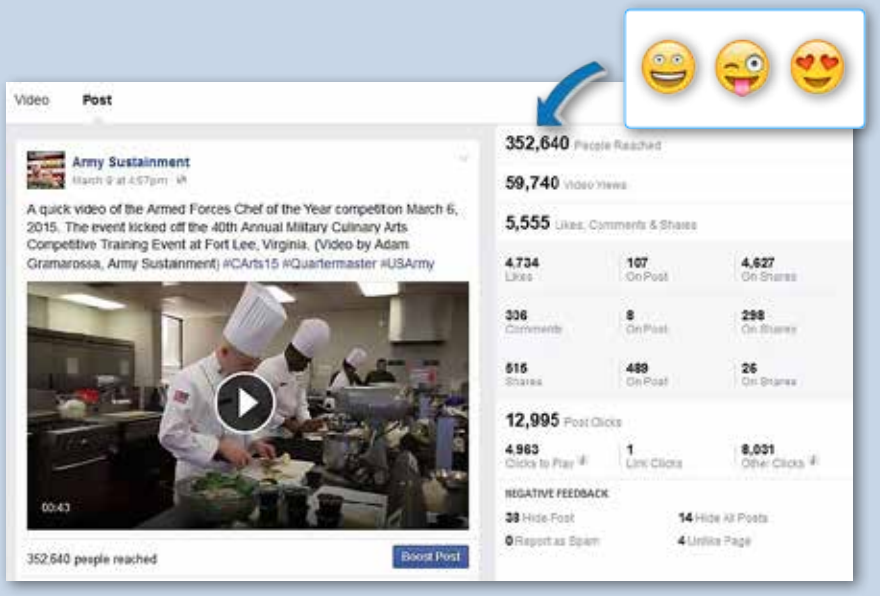
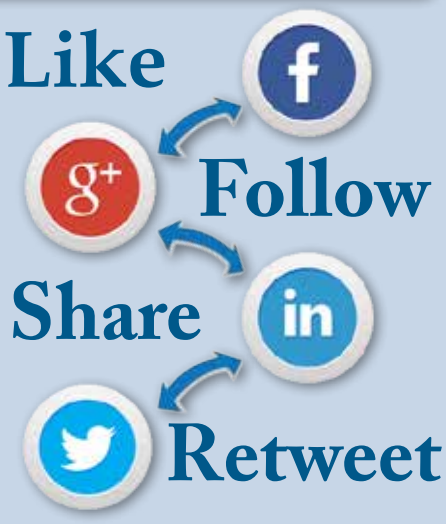



Army Sustainment's *original video on the Armed Forces Chef of the Year Competition reached over 350,000 people on Facebook.*

*This photo of training in Hawaii generated a lot of discussion on Facebook among the Ordnance community.*

*Between March 9 and March 16, 2015,* Army Sustainment *content, including this photo, was retweeted 52 times, reaching an audience of over 110,000 on Twitter.*

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*Capt. Shawn Palmer, a biochemist with the 1st Area Medical Laboratory from Aberdeen Proving Ground, Maryland, breaks down a biological safety level three glove box at the Ebola testing lab in Zwedru, Liberia. (Photo by Staff Sgt. Terrance D. Rhodes)*

# 101st Sustainment Brigade Supports Operation United Assistance

By Col. Kimberly J. Daub, Maj. Keith A. Petty, and Maj. Benjamin Polanco Jr.

QUA

Task Force Lifeliner provided logistics support to Operation United Assistance, which helped to stop the spread of Ebola in Liberia.

In early 2014, the Ebola virus disease began to spread throughout West Africa, particularly affecting Guinea, Sierra Leone, and Liberia. By August 2014, the epidemic had spread so fast that the U.N. declared it to be a global health crisis that could result in a threat to international peace and security. On Sept. 16, 2014, President Barack Obama announced the deployment of military forces to West Africa as part of a global response effort.

The 101st Sustainment Brigade at Fort Campbell, Kentucky, received a warning order to deploy to Liberia in support of the U.S. Agency for International Development (USAID) efforts to contain the spread of Ebola. This mission, Operation United Assistance (OUA), marked the first time U.S. military forces had deployed with a primary mission of force health protection during foreign humanitarian assistance operations.

Less than 30 days after receiving the order, elements of the 101st Sustainment Brigade, Task Force (TF) Lifeliner, along with additional units, deployed to Liberia to conduct joint reception, staging, onward movement, and integration.

This article examines the efforts of TF Lifeliner during OUA as the lead U.S. logistics organization in West Africa. TF Lifeliner experienced challenges and successes during this rapidly evolving mission. Specifically, this article describes training and execution that were critical to mission success and provides recommendations to bridge gaps for future military logistics responses to foreign humanitarian assistance and disaster relief (FHA/DR) missions.

## Changing the Training Focus

The first challenge in preparing for OUA was changing the operational mindset within the brigade. For months, TF Lifeliner had focused and trained for a scheduled deployment to Afghanistan in 2015 in support of the Resolute Support mission. Instead, and with less than a month's notice, the 101st Sustainment Brigade was called to support Ebola response operations in Liberia and Senegal.

In addition to supporting humanitarian assistance efforts, the troops deploying to West Africa would have to develop a new theater of operations—something that had not been done since the first deployments in support of Operations Enduring Freedom and Iraqi Freedom.

In Afghanistan and Iraq, the theaters of operation and support systems had matured for 13 years, so later deployments required significantly fewer resources in terms of building logistics and distribution capabilities. In West Africa, TF Lifeliner would build these systems and capabilities from scratch.

## Mission Planning

Mission planning began on Sept. 22, 2014. Daily meetings dealt with personnel challenges, medical readiness, and understanding the deployed environment. This included deciding whether to establish the TF Lifeliner headquarters in Liberia or Senegal, determining which seaport was best suited for operations, and obtaining imagery from the National Geospatial-Intelligence Agency on the key terrain and transportation infrastructure in Liberia and Senegal.

The task force also established communication with the brigade's parent headquarters, the 101st Airborne Division (Air Assault), which later became the Joint Forces Command–United Assistance (JFC–UA). It also contacted strategic partners, including the U.S. Africa Command (AFRICOM), U.S. Army Africa (USARAF), USAID, and the Defense Logistics Agency (DLA).

Even with the significantly compressed timeline, predeployment requirements were more stringent than with previous deployments. For example, medical readiness, both in terms of force health protection and personnel medical screening, was the emphasis because the mission involved a global health crisis. In this context, medical readiness required

training and establishing safety procedures for all deploying personnel. Learning how to don medical biohazard suits, conduct decontamination procedures, and prepare for emergency medical evacuations were all unique to this mission.

For personnel medical screenings, AFRICOM established more stringent predeployment medical requirements than that of the U.S. Central Command because of the lack of level-three military medical care in theater. These requirements disqualified otherwise deployable Soldiers as they went through the Soldier readiness processing site. This affected the brigade's ability to contribute the number of Soldiers required to deploy and the composition of rear-detachment personnel.

Faced with an uncertain operational environment, the brigade conducted significant research on West African states—particularly Liberia and Senegal—and the nongovernmental organizations (NGOs) with which it would interact. The brigade determined potential threats and force protection concerns beyond Ebola. The brigade staff also analyzed the infrastructure of Liberia and Senegal, including the road networks, communications infrastructure, and the host nation's ability to support contracting requirements.

## Strategic Enablers and Early Deployment

TF Lifeliner relied on multiple strategic enablers in order to develop mission capabilities in the austere operational environment in which it supported USAID's mission in conjunction with JFC–UA. These strategic enablers included DLA, the U.S. Transportation Command, the Military Surface Deployment and Distribution Command, AFRICOM, USARAF, and the Army Materiel Command.

Once established in theater, these organizations were great resources for reach back capabilities. The same organizations that pushed the units into the theater and supported them throughout provided guidance and assistance for the redeployment.

To take full advantage of these units and partner organizations, the JFC–UA headquarters and TF Lifeliner sent liaison officers (LNOs) to USARAF's planning cell in Italy immediately after receiving the warning order. Sending a team early proved extremely beneficial to the planning phase of operations. It facilitated development of the request for forces, provided situational awareness, and laid the foundation for early operation order development. Additionally, and perhaps most importantly, sending the advance planning team forward allowed the JFC–UA to develop relationships with key strategic partners, especially USARAF leaders.

Still, the 101st Sustainment Brigade had no LNO forward in Liberia, which limited planners at Fort Campbell in several important ways. The request for forces was developed to support an uncertain requirement with possible regional expansion of the mission. The brigade did not understand the full capabilities of its strategic partners, particularly DLA, until it arrived in Liberia. It would have been valuable to have someone forward as soon as possible.

Although DLA and USARAF were on the ground before the brigade arrived, it would have been helpful to include them in the brigade planning phase at the earliest opportunity. More effective communication among assets on the ground in Liberia and the brigade's planning teams in Italy and the continental United States would have provided a more complete operational picture. This might have better shaped strategic and tactical responsibilities, determined mission requirements for personnel and equipment, and developed a cohesive task list for an effective relief-in-place process.

Other unique aspects of OUA were the fiscal and contracting requirements. The mission came on the cusp of a new fiscal year. Congress had not yet approved a budget, which limited predeployment operations and maintenance (OMA) expenditures. Additionally, the division and brigade staffs were required to become familiar with the use of overseas humanitarian, disaster, and civic aid (OHDACA) funds.

Title 10 of the U.S. Code states that OHDACA funds are authorized "for humanitarian assistance … for the purpose of providing transportation of humanitarian relief and for other humanitarian purposes worldwide." Per Department of Defense (DOD) guidance, OHDACA was the sole source of funding authorized during OUA.

Planners unaccustomed to using funds other than OMA had to learn quickly when it was appropriate to exercise OMA or OHDACA for predeployment preparation expenses, how OHDACA would apply in theater, and how to request OHDACA funds through the joint requirements review board.

TF Lifeliner immediately established a team (contingency contracting, financial operations, and legal oversight) to monitor all contracting and fiscal needs within the brigade to ensure OHDACA funds were used appropriately.

Because of the high-profile nature of this deployment, the brigade leaders and staff understood that there would be significant public scrutiny of the operation, including potential audits of all OUA expenses. This meant that the contracting and fiscal piece had to be done right the first time with meticulous record keeping.

## Organization and Mission

At the peak of the deployment, TF Lifeliner had 16 units comprising more than 750 personnel. The brigade was made up of two organic battalions (the 101st Special Troops Battalion [STB] and the 129th Combat Sustainment Support Battalion [CSSB]), one attached battalion (the 53rd Movement Control Battalion), and six administratively controlled company-sized units. The bulk of the force was headquartered in Liberia, while an additional forward logistics element provided mission command for the intermediate

*Sgt. Anton Novosselov and Pfc. Nathan Watson with the 372nd Inland Cargo Transfer Company, 129th Combat Sustainment Support Battalion, 101st Sustainment Brigade, prepare to attach a load to a CH–47 Chinook helicopter for movement by sling load to a mobile medical lab in Liberia, Nov. 3, 2014, during Operation United Assistance. (Photo by Sgt. 1st Class Mary Mittlesteadt)*

staging base in Dakar, Senegal.

TF Lifeliner performed three overarching missions during OUA:

- Supporting USAID in sustaining and distributing personal protective equipment and supplies to 13 Ebola treatment units (ETUs), seven medical mobile laboratories, DOD Ebola training teams, and the Monrovia medical unit.
- Providing sustainment support for the JFC–UA, consisting of more than 2,900 military and DOD civilians located in two countries, five task force locations, seven military labs, and the Monrovia medical unit.
- Providing mission command for the intermediate staging base located in Dakar, Senegal, to provide the JFC–UA a forward location to receive bulk shipments of materiel from strategic enablers supporting the Ebola response and transload them onto C–130 aircraft for further movement into Liberia and other Ebola-infected areas.

## Mission Execution

The concept of support was developed to ensure it could be transitioned to the World Food Programme with minimal friction by not using assets unique to the DOD, such as rotary air support for sling loading supplies to remote locations.

TF Lifeliner's support operations officer and the JFC–UA J–4 orchestrated the support to the Ebola treatment units, medical mobile laboratories, and the Monrovia medical unit. This support included the delivery of classes I (subsistence), III (petroleum, oils, and lubricants), IV (construction materials), VII (major end items), VIII (medical supplies), and IX (repair parts).

During the deployment, TF Lifeliner supplied 134 customers, receiving and issuing more than 1.1 million gallons of fuel and 300 tons of subsistence, processing over 300 transportation movement releases and 1,300 flights that delivered more than 3,500 tons of materiel.

## Transportation Support

Upon arrival, the 53rd Movement Control Battalion (MCB) established the foundation for transportation management in theater. The MCB was instrumental in developing a successful relief in place/transfer of authority with the departing joint task force–port opening from whom it assumed control of the aerial port of debarkation and the role of senior airfield authority.

As the senior airfield authority, the 53rd MCB commander coordinated with Roberts International Airport's managers, ensuring its continued safe and efficient use as an airfield and coordinating multiple runway repairs,

adjustments to air traffic control procedures, and the airport's expanded mission requirements.

The battalion also oversaw the development and implementation of the JFC–UA's joint reception, staging, onward movement, and integration and redeployment process, leveraging capabilities across the JFC to ensure proper personnel accountability, passenger flow, and customs inspection. The 53rd MCB effectively enabled the JFC–UA to support USAID and NGO efforts to combat the Ebola outbreak.

## Contracting Support

Two developments were critical to accomplishing these missions: an effective contracting and fiscal process and good relations with local leaders. Before the brigade arrived in Liberia, no land was available for operations. Surveys of appropriate sites and land lease agreements were coordinated by the U.S. Army Corps of Engineers and staff judge advocates. Once the contracting and fiscal processes were established, TF Lifeliner entered into contracts for housing, warehousing, transportation services, and bottled and bulk water.

Initially, DLA had a contract with a local company to provide flatbed trucks to move supplies in theater. The brigade took over management of the contract in November 2014 and eventually, renegotiated terms for a new contract with better rates and terms. The company provided 20 trucks a day and had a surge capability of up to 50 trucks. This was a tremendous asset for the mission since these drivers were local, understood the terrain, and could go virtually anywhere in Liberia. TF Lifeliner conducted 93 military convoys and contracted 260 local civilian convoys during OUA.

DLA Energy negotiated a contract to provide jet A–1 and diesel fuel for the JFC–UA. DLA purchased 30 3,000-gallon fuel tanks to support the ETUs. Once the tanks were in place at the ETUs, Total delivered fuel directly to the ETUs and to the JFC camps. TF Lifeliner assumed management of the contract for bulk and retail fuel operations.

DLA also contracted to run a class I warehouse in Monrovia for storing all rations, fresh fruits and vegetables, and bottled water. The brigade's class I section managed the JFC's class I stock by coordinating with DLA, USARAF, and the 21st Theater Sustainment Command. These partners worked jointly on inbound sea and air movements and the distribution of $12 million worth of class I across Liberia and Senegal.

They established a class I ordering cycle that resulted in predictable, sustainable, and timely delivery of rations. Operational rations were also stored in a warehouse managed by 129th Combat Sustainment Support Battalion in Buchanan for delivery to units as needed.

## Supply Support Activity

Early in the deployment process USARAF decided to build a supply support activity (SSA) from scratch to support JFC–UA's units based on an equipment density analysis conducted by the Army Materiel Command. The 227th Quartermaster Company, 129th CSSB, established the SSA, which was operational less than 30 days after arrival. Initially, the quartermaster company set up the SSA in a warehouse at Buchanan. The Standard Army Retail Supply System and a very small aperture terminal were shipped from Italy. Once the system was operational, the SSA processed all supplies to bring them to record.

The authorized stockage list comprised 2,700 lines worth $12 million. Over time, the footprint of JFC–UA shrunk as the mission decreased. The SSA was moved from the Buchanan warehouse to a large area maintenance shelter tent at the aerial port of debarkation. This move facilitated the downsizing and then closure of the SSA as the 227th Quartermaster Company retrograded all parts back to Germany via opportune air platforms.

## Mail Operations

Since this was a new theater, mail operations had to be established. This started with a request through the U.S. Embassy to the governments of Liberia and Senegal to allow mail to be brought in country. It took approximately 45 days from when TF Lifeliner began the process to when the first mail shipment arrived.

The mail room personnel were delayed in arriving to theater because of a lengthy approval process for a request for forces. To bridge the gap, the 101st STB, which had oversight of mail operations, used Soldiers from the brigade headquarters who were ammunition handlers cross-trained in mail operations to set up and man a military mail terminal until relieved by a platoon from the 18th Human Resources Company from Fort Bragg, North Carolina. The military mail terminal received, distributed, and processed more than 280,000 pounds of incoming mail and 10,000 pounds of outgoing mail.

## Finance Operations

Finance operations, like mail operations, had to be established from the ground up. The 101st STB oversaw this mission. In order to accomplish this, TF Lifeliner Soldiers traveled to Germany to be validated by a financial management support unit (FMSU) to certify funds. The finance Soldiers of C Company, 101st Financial Management Support Unit (C/101st FMSU), were trained and certified in critical areas in order to comply with Army, DOD, and federal policies, laws, and regulations for disbursement, cash-holding restrictions, and the conduct of international treasury services.

This training taught them how to work with authorities to disburse funds in support of contracting efforts. It also enabled C/101st FMSU to assume overall pecuniary liability for the security and accountability of public funds, negotiable instruments, and pay vouchers.

C/101st FMSU disbursed more than $360,000 in casual pay to 2,427 service members, paid $381,000 in cash to vendors and disbursed $2.2

million in electronic funds transfers for a total of nearly $2.4 million in financial management support.

## Administrative Requirements

None of these missions would have been possible without the support of the governments and local leaders in Liberia and Senegal. Soon after arriving, the TF Lifeliner commander scheduled a senior leader engagement with the superintendent (governor) of Grand Bassa County. Because these leaders established a relationship, TF Lifeliner was able to facilitate operations without obstacles within Grand Bassa County. This relationship made it easier to gain access to coastal waters and rivers for water purification and set up a staging area near the Port of Buchanan for wash rack and port operations. It also included forming close ties with local law enforcement in order to support force protection efforts. During all operations, it was key for TF Lifeliner to ensure local leaders were informed of military operations. Exercising a diplomatic approach proved to be a force multiplier.

Inside the brigade, it was essential to practice mission command and for all staff sections to operate outside of their comfort zones. For example, the force protection cell staff worked closely together to develop an installation security plan. The S–2 took the lead in managing force protection, coordinating with a civil affairs team, and obtaining local and national health statistics on Ebola.

Because all personnel returning from Liberia had to participate in a 21-day quarantine to ensure they did not show symptoms of Ebola, the S–1 was required to review exceptions to the quarantine policy for personnel taking emergency leave. The S–1 implemented unique emergency leave requirements that addressed self-monitoring for Ebola symptoms in coordination with the DOD, Centers for Disease Control and Prevention, and state health officials.

The S–6 determined a way to give TF Lifeliner the ability to conduct mission command via secure and nonsecure voice and data systems despite having limited infrastructure and resources to do so. Traditional deployments afford units multiple means of communication redundancy within the Signal network architecture, such as fiber optic cable, satellite, and line-of-site, none of which were all available in Liberia.

## Redeployment

Shortly after the arrival of U.S. forces in Liberia, the daily number of confirmed cases of Ebola began to drop. As these rates continued to improve, and as more international support flowed into West Africa, the need for U.S. military logistics began to decline. As a result, redeployment planning began several months earlier than expected.

Over several months the task force planned and rehearsed multiple redeployment courses of action, branch plans, and sequels. Originally, smaller units were scheduled to replace the OUA units and planners prepared for a possible expanded Ebola response requiring an intratheater deployment to Sierra Leone or Guinea. However, the decision to end the mission in West Africa was made in February, triggering theater

*Soldiers scrub and clean a vehicle Jan. 23, 2015, at the U.S. Department of Agriculture inspection point, Camp Buchanan, Liberia. (Photo by Spc. Caitlyn Byrne)*

closing operations while leaving a minimal residual force.

The critical tasks in closing the OUA theater were planning for installation closure, establishing wash rack and port operations, and arranging for the redeployment of personnel to controlled monitoring areas (CMAs) where redeploying personnel would remain for 21 days.

## Installation Closure

Installation closure was not as straight forward as in other deployments largely because each installation was governed by different lease agreements or by an international agreement with the host nation. For example, the TF Lifeliner headquarters at Logistics Support Area Buchanan was a contracted land lease agreement with a private company. Specific requirements, such as an environmental survey ensuring no oil spills or damage to the property, had to be fulfilled before departure.

In contrast, the use of Roberts International Airport as the aerial port of debarkation was permitted under a diplomatic agreement between the United States and the government of Liberia. Essentially, this agreement allowed the U.S. to use Liberian government and public property in any way to accommodate U.S. training and storage needs. Although not formally required to survey this land or even make repairs, TF Lifeliner exercised caution and formalized the clearing process to ensure there were no outstanding liabilities on the part of the United States.

Installation closure also required the proper disposal of excess property. Anything that was not to redeploy with the brigade was determined to be foreign excess personal property (FEPP) or foreign excess real property (FERP). All units in theater had to identify which property should be deemed excess and submit a list of that property through the JFC–UA J–4 to AFRICOM and the Office of the Secretary of Defense for approval for the FEPP or FERP process.

Once approved, TF Lifeliner coordinated with the JFC–UA J–4, USAID, the embassy's chief of mission, and the governments of Liberia and Senegal to determine which government agencies or NGOs should receive the FEPP and FERP properties. This process is cumbersome, requires significant coordination among multiple partners at various levels, and can be confusing for those unfamiliar with theater closure.

## Wash Rack and Seaport Operations

The wash rack and seaport operations also required significant planning. First, the task force had to secure a proper space close enough to the port to conduct wash rack operations. Second, it had to synchronize the redeployment tasks and timing of all units in theater against a projected glide path.

This meant that all TF Lifeliner units, the division headquarters, the engineer brigade, the medical task force from the 86th Combat Support Hospital, and the aviation battalion all had to have adequate space and time to wash their rolling stock, nonrolling stock, and aircraft.

Because of the strong relationships that had been developed with local leaders, including personnel at the National Port Authority, securing an appropriate space close to the port for wash rack operations was not an issue. Ultimately, TF Lifeliner had 24 days to wash equipment from the time the leaders issued the redeployment order to the arrival of a Military Sealift Command vessel. After washing the equipment, the task force loaded 977 pieces of rolling stock and containers over a six-day period.

## CMA

Because of the 21 days of quarantine at the CMA, all personnel stationed in Liberia had an extended redeployment process to ensure DOD policy was followed. The CMAs were located at seven different military installations. The number of personnel that could return from theater at a given time was limited and depended on how much space was available at the CMA sites.

Since the personnel at the CMA could not interact with others, it was necessary to stagger flights to each location to allow the 21-day clock to run and make room for the next group. Personnel redeployment required significantly more planning and coordination than usual.

OUA was an unmitigated success thanks to early efforts of dedicated health care professionals, NGOs, USAID, and later, all elements of JFC–UA. Members of TF Lifeliner are proud to have served as the lead logistics organization in these efforts.

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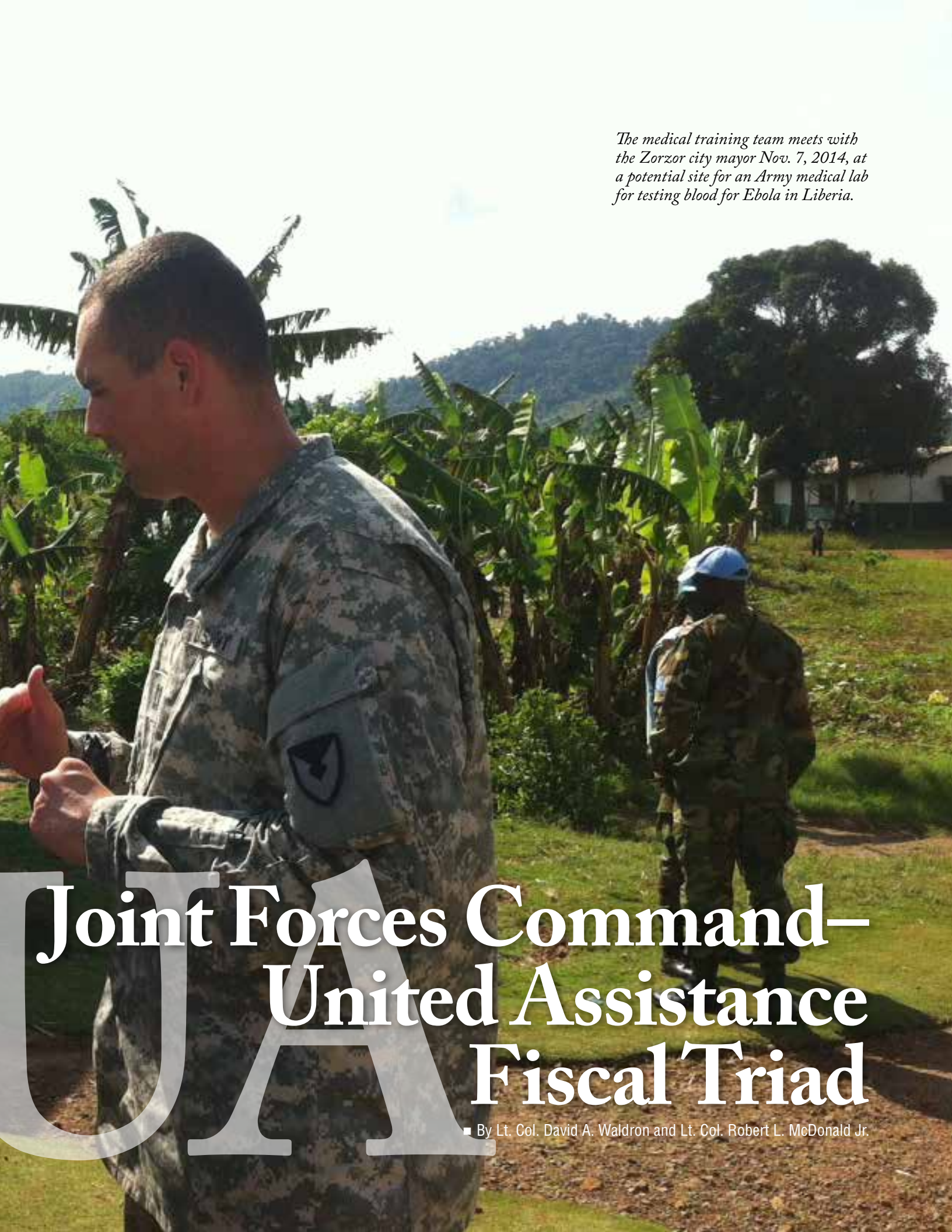
JEC-U



*The medical training team meets with the Zorzor city mayor Nov. 7, 2014, at a potential site for an Army medical lab for testing blood for Ebola in Liberia.*

# Joint Forces Command–United Assistance Fiscal Triad

By Lt. Col. David A. Waldron and Lt. Col. Robert L. McDonald Jr.

Excellent financial planning and execution enabled Operation United Assistance to complete its mission under budget.

In September 2014, the 101st Airborne Division (Air Assault) headquarters was alerted for immediate deployment to West Africa to support Operation United Assistance (OUA). As the newly established Joint Forces Command–United Assistance (JFC–UA), the 101st was to provide support to the U.S. Agency for International Development (USAID) in its efforts to prevent the spread of the Ebola virus disease.

The 101st Airborne Division G–8, the 922nd Contracting Battalion (CBN), and C Detachment, 101st Financial Management Support Unit (C/101st FMSU) all deployed from Fort Campbell, Kentucky, to resource OUA. This "fiscal triad" of resource management, contingency contracting, and financial operations units funded, procured, and disbursed more than $116 million in requirements during the first four months of OUA.

With total expenditures of $402.8 million, the cost of OUA was well below the initial U.S. Africa Command (AFRICOM) cost estimate of $750 million. OUA will be known as one of the few Department of Defense (DOD) operations to come in under budget, under the anticipated time, and with less manpower than initially requested.

## Planning and Deployment

Since the fiscal triad components of the 101st G–8, the 922nd CBN, and C/101st FMSU were all stationed at Fort Campbell, they synchronized their OUA financial management (FM) and contingency contracting predeployment planning. This led to a quick start once all units arrived in Liberia.

The C/101st FMSU planned and prepared for OUA in less than three weeks. In garrison, C/101st FMSU was operationally committed to the Fort Campbell Defense Military Pay Office, so it lacked disbursing and commercial vendor services (CVS) expertise. To alleviate this deficiency, C/101st FMSU attended Defense Finance and Accounting Service (DFAS)–Indianapolis Operational Support Team training.

DFAS nominated the 106th FMSU, 16th Special Troops Battalion, 16th Sustainment Brigade, in Baumholder, Germany, to support OUA. The finance concept of support called for half the detachment to perform the disbursing mission and the other half to provide customer services, answer military pay inquiries, and provide storefront CVS support via cash payments and electronic funds transfers (EFTs).

En route to Liberia, the 101st G–8 met with the U.S. Army Africa (USARAF) G–8 in Vicenza, Italy, and the AFRICOM J–8 in Stuttgart, Germany, in order to develop responsive and auditable funding processes. The C/101st FMSU stopped in Baumholder, Germany, to receive validation training and certification by the 106th FMSU command disbursing and CVS sections.

However, this training delayed the arrival of key finance assets in Liberia. In the future, the training and certification should be coordinated with the servicing theater FM center and completed at home station before deployment, if practical.

The 922nd CBN reached out to the 414th Contracting Support Brigade (CSB) in Vicenza to synchronize contingency contracting policy and procedures. This allowed the 922nd CBN command team to determine the division of labor and any additional training that would be required before deploying.

The Logistics Civil Augmentation Program (LOGCAP) office sent a small team to train the 922nd on LOGCAP, which was already established in Africa. The 414th CSB deployed a contingency contracting team and representatives from its contracting support plans and operations cell to Liberia. They provided contracting support for the initial mission and basic living requirements until the 101st headquarters and the 922nd CBN assumed JFC–UA operations.

After arriving at the Barclay Training Center in Monrovia, the JFC–UA J–8, the C/101st FMSU, and the 922nd CBN were co-located, which enabled a shared understanding of the fiscal common operational picture.

## Funding

The Defense Security Cooperation Agency, DOD's lead for security cooperation programs including foreign humanitarian assistance and disaster relief (FHA/DR), allocated overseas humanitarian, disaster, and civic aid (OHDACA) funding to AFRICOM. AFRICOM further allocated funding to commands supporting OUA, such as USARAF.

The intended purpose for OHDACA funds is to support humanitarian assistance operations, relieve indigenous population suffering following a specific disaster, and generate long-term positive perceptions of the DOD.

OUA did not have mature funding processes, procedures, or relationships like those that U.S. Army Central had established for operations in Afghanistan and Iraq. AFRICOM did not have a dedicated funds center in the General Fund Enterprise Business System (GFEBS) to execute OHDACA funds. Therefore, the JFC had to rely on a command with a funds center to execute OHDACA in GFEBS.

Continental United States-based Army divisions do not typically work with an Army service component command (ASCC) for funding, so the 101st G–8 had to establish a relationship with USARAF to obligate funds using GFEBS work breakdown structures. This partnership was highly effective and enabled the small 101st G–8 section to reach back to USARAF for budget and accounting assistance.

## G–8 Operations

In September 2014, USARAF deployed a G–8 officer with its forward command team who sent validated requirements back to the USARAF G–8 in Italy for funding in GFEBS. This process worked and proved that USARAF could execute funding on the JFC's behalf. The 101st G–8 section deployed its noncommissioned officer-in-charge early in the force flow, and he successfully executed a GFEBS financial transaction in Liberia, proving that GFEBS could be used.

Being able to reach back to the USARAF G–8 was critical to maintaining continuity between commands in case the JFC was replaced or if communications failed. The 101st G–8 co-located the deputy G–8 and a noncommissioned officer with GFEBS experience with USARAF G–8 as liaison officers. After validation training and verifying GFEBS roles, the USARAF G–8 delegated to the JFC J–8 full funds certification authority to execute OHDACA for JFC–UA requirements.

After all six 101st G–8 personnel deployed, the JFC had its own team to fund valid requirements, submit status of funds reports, and request funds from AFRICOM. Although a funding and budget execution structure of this nature had never been used by a division in Africa before, it was highly successful.

The USARAF G–8 representative in Liberia established a relationship with the Defense Attaché Office in the U.S. Embassy to fund basic living requirements using fund cite letters for rental vehicles, fuel, lodging, administration, Internet, and security services.

The JFC–UA J–8 further defined roles and responsibilities, developed a detailed ledger, and synchronized requirements with the JFC validation process to capture costs and properly authorize obligation of funds. This relationship with the embassy proved to be a very efficient way to procure and pay the Department of State and local-national vendors for services.

## C/101st FMSU Operations

The C/101st FMSU faced several unique challenges in West Africa. Fortunately, Liberians use the U.S. dollar in addition to their own currency. Most CVS payments to larger vendors were paid via EFTs, but the smaller local vendors required cash because some did not understand how EFTs worked and a few did not have bank accounts.

Bank fraud was too great a risk in West Africa, so C/101st FMSU never established a limited depository account. The detachment secured coins for postal operations and direct-exchanged currency with the custodian of postal effects—two unexpected requirements.

Despite the presence of 14 automated teller machines in Monrovia, C/101st FMSU disbursed more than $360,000 in casual pay to Soldiers for cash to spend at the U.S. Embassy or a vetted local market. The JFC did not request Army and Air Force Exchange Service or EagleCash stored-value cards because of the assumed short duration of the deployment and the requirements to set them up.

## 922nd CBN Operations

The 922nd CBN established the regional contracting center to provide mission command for regional contracting offices in Liberia and Senegal. The battalion commander chaired the joint contracting support board, which determined how to source requirements that were vetted, prioritized, approved, and funded by JFC–UA, thus enabling the contracting team to award contracts.

Over the span of five months, the 922nd CBN and the 643rd and 718th Contracting Teams awarded more than 200 contracts, valued at over $93 million, in support of the validated requirements. The 922nd CBN administered LOGCAP with associated contracts valued at over $75 million.

The LOGCAP task order provided for basic living requirements using Force Provider camps for over 2,500 JFC–UA service members and built six Ebola treatment units in Liberia. Leveraging LOGCAP precluded the deployment of hundreds of addition-

al U.S. military personnel and their equipment.

## Commercial Shipping

Demands to ship test, measurement, and diagnostic equipment, Army Oil Analysis Program samples, and critical communications parts in need of repair came immediately, but no system was in place to commercially ship the equipment.

The JFC–UA J–8 contacted the DHL warfighter support team and established a dedicated account with local DHL offices to ship items without paying cash for each requirement. The DHL account provided cost savings in the form of dedicated DOD shipping rates, which avoided taxes and tariffs.

The JFC–UA J–4 and J–8 validated every shipping requirement to ensure the local DHL office shipped only JFC-approved items. Each shipment required authorization through a signed memorandum affixed to an invoice provided by the requester. The DHL process increased awareness of shipping costs, removed the need for cash, and served as a cost effective and transferable process to ship critical items.

## JRRB

In order to ensure that JFC–UA units were good stewards of appropriated funds, the JFC–UA commander instituted multiple cost-saving measures to track how OHDACA funds were being spent. Two measures included the JFC–UA joint requirements review board (JRRB) and publication of the JFC–UA OUA FM Handbook.

OUA requirements came from two sources: USAID's mission tasking matrix requirements and the JFC's life support requirements. After receiving a mission tasking matrix from USAID's disaster assistance response team, the JFC determined how best to execute the mission.

Since the infrastructure in Liberia could not support OUA, the Defense Logistics Agency (DLA) provided many commodities to enable the construction of JFC living areas and Ebola treatment units. When DLA did not have the materials on hand, the JFC needed a means to procure the required items. The first step in requesting support was to submit documentation to the JFC's JRRB.

> The JRRB process saved millions of dollars by ascertaining what requirements clearly helped USAID and the government of Liberia fight Ebola.

To validate requirements below the AFRICOM threshold of $10 million, the JFC conducted a JRRB three times a week, led by the deputy commanding general. The JRRB was the only JFC venue for validating requirements and approving funding, enabling centralized and focused scrutiny of OHDACA expenditures.

Board members included the J–3 operations officer, J–4 logistics officer, engineer, staff judge advocate, 922nd CBN commander, and the J–8 comptroller. Each member brought subject matter expertise to determine if a requirement was valid, executable, and legal. Any project that did not meet OHDACA's humanitarian assistance requirements or aid the Ebola effort was not funded.

JFC units could not use OHDACA frivolously on living requirements because the board enforced strict spending guidelines. Most importantly, the JRRB kept all units focused on the JFC commander's and USAID's priorities.

## FM Handbook

To alleviate commanders' fears about deploying to an austere environment with unfamiliar financial resources, the JFC–UA J–8 published the OUA FM handbook. The procedures in the handbook were the result of lessons learned and communication with higher headquarters, supported units and legal, contracting, and FM professionals.

JFC–UA commanders and financial managers used the FM handbook for guidance on OHDACA funding. It was modeled on the well-known Commander's Guide to Money as a Weapon System Handbook used in Iraq and Afghanistan.

The OUA FM handbook served as a how-to guide with the intent of making all OUA financial processes repeatable from one headquarters to the next, assuming Ebola containment efforts would last for a long time or have to be restarted. It described standard processes including committing funds in GFEBS, paying contracts and commercial shipping, facilitating supply requisitions, and funding emergency leave.

The handbook's legacy rests with its application to ASCCs and JFCs or joint task forces that can replicate OUA FM procedures in other contingency deployments. The procedures captured in the handbook will be incorporated in the Army Finance School programs of instruction. Most importantly, future units can deploy with the lessons learned found in the handbook and immediately begin resourcing their commander's priorities without having to reinvent processes.

## Lessons Learned

The following are the JFC–UA's recommendations for the next JFC or joint task force preparing for deployment.

1. Include resource management, finance support, contingency contracting, and staff judge advocate

personnel with the advance party. Their expertise is needed to fund, contract, and pay for host-nation support quickly and responsibly.

Co-locate this team in the JFC headquarters in order to act on and fund requirements quickly based on a shared understanding of the fiscal common operational picture. The triad walked projects from initial procurement action through funding, disbursing, and contract closeout, greatly reducing issues in the Standard Procurement System and unmatched transactions in GFEBS.

2. Ensure the early-entry J–6 establishes Internet connectivity and enables .mil access. This is critical for the J–8 financial managers to commit funds and generate reports in GFEBS.

3. Conduct a structured JRRB led by a JFC senior leader in order to keep OHDACA expenditures to a minimum. Having a routine board validate all requirements forced everyone to scrutinize requirements and ensured that the JFC was focused more on Ebola containment than on spending on its own living requirements.

4. Fight to retain the JFC commander's authority to approve all requirements up to $10 million. Most JFC–UA requirements fell below this threshold, which provided maximum flexibility for the commander to reallocate manpower and assets to support USAID.

5. Use ASCC staff for reach-back support. USARAF's support during the first 30 days of OUA was critical to ensuring a successful transition to an enduring JFC. As systems within the forward deployed FM section are established, the reliance on the ASCC can be lessened. The ASCC can be relied on for financial transactions in systems like GFEBS in case connectivity degrades.

6. Quickly publish FM guidance so units understand the operation's funding and contingency contracting processes. Guidance is critical when dealing with an unfamiliar appropriations like OHDACA.

7. Establish an operational contract support integration cell (OCSIC) at the brigade or higher level before deploying, and exercise it by processing garrison contracts. The OCSIC was instrumental in collecting unit requirements and preparing for the JRRB. However, it could have been resourced better.

The JFC–UA OCSIC was manned by a major and a sergeant first class. With at least one more person and more collective training, this team could have better prepared units by providing constructive criticism for their packets prior to the JRRB.

The OCSIC maintains the requirements database, which should be the single source to answer internal and external requisitions. To maximize its usefulness, this database needs to be synchronized at least weekly with the J–8's funding data and status of contracts.

8. Use Intelink.gov to maintain transparency of the JFC's requirements, JRRB results, status of funds, and standard operating procedures. This unclassified venue enabled higher headquarters to maintain situational awareness of funding and command-interest items like vehicle and property leases and communications equipment purchases.

9. FMSUs need to train their detachments for short-notice deployments where they will conduct disbursing operations, especially EFT and cash-based operations. Train with the DFAS–Indianapolis CVS operational support team.

10. Ensure the CBN trains field ordering officers, and the FMSU trains pay agents at home station before deployment. Have these micropurchase teams trained and ready to deploy once deployment requirements are known. Select high-performing Soldiers for these duties. Overseeing quality results in better contracting outcomes and best value to the U.S. government.

11. Contracting units must develop early lines of communication with the U.S. Embassy in the host nation. Embassies maintain vendor lists that provide an immediate network to facilitate expeditious contracting solutions.

The 101st Airborne Division headquarters and the Fort Campbell "fiscal triad" that supported JFC–UA sought out solutions to initial problems, reached out to subject matter experts, and fully resourced the JFC commander's priorities with no operational delays caused by funding, contracting, or a lack of disbursing support.

The triad quickly learned how to use OHDACA funding and applied it smartly. JFC–UA task forces accomplished all USAID-tasked missions, which led to the decline of Ebola in Liberia.

The JFC–UA fiscal triad was critical to the accomplishment of the OUA mission. The JFC took stringent measures to remain cost conscious. Upon completion, the cost of OUA was 57 percent of the initial estimated amount. More than 1,500 healthcare workers were trained, and four Army mobile labs supported the 10 Ebola treatment units that JFC–UA had built, contracted for, and monitored.

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# The Joint Logistics Enterprise Enables Operation United Assistance

■ By Capt. Ross M. Hertlein

*U.S. service members board a C-130 Hercules aircraft Oct. 22, 2014, in Dakar, Senegal, to travel to Liberia to support Operation United Assistance. (Photo by Maj. Dale Greer)*

JLEnt

Using the joint logistics enterprise, AFRICOM and USARAF etched their place in history by being part of the largest U.S. response to an international public health crisis, combating the spread of Ebola in Liberia.

As part of Operation United Assistance (OUA), the U.S. Africa Command (AFRICOM) and U.S. Army Africa (USARAF) provided logistics, training, and engineering support for the U.S. Agency for International Development's (USAID's) mission to combat the Ebola virus disease outbreak in West Africa. Establishing OUA required the rapid reaction of the Department of Defense (DOD) with its unique military skills and capabilities.

Integral to this effort was "setting the theater," a fundamental mission of Army service component commands (ASCCs). The ASCCs provide the DOD with the ability to confront a range of contingencies worldwide in support of U.S. government policy. The joint logistics enterprise (JLEnt) gave USARAF the muscle it needed to set the theater and accomplish the mission in West Africa.

## Logistics Challenges

AFRICOM's area of responsibility encompasses 54 countries. The U.N. has classified 33 of these, including Liberia, as the "least developed in the world." With numerous governance challenges, harsh weather, limited infrastructure over a significant land mass, and no permanently assigned or stationed U.S. logistics forces, rapid action in Africa is extremely complex.

USARAF's lack of logistics enablers requires it to constantly request support to accomplish complex joint and ASCC missions across the continent. Using the request for forces process, USARAF obtains JLEnt forces to fill immediate requirements for logistics personnel in Africa.

It is essential for the theater opening force to have easy access to logistics enablers early in the operation to set the conditions to support follow-on forces. In USARAF's case, this was only available through the JLEnt. A web of relationships among global logistics providers, supporting and supported organizations and units, and other entities connects the JLEnt. The key DOD organizations in the JLEnt include the services, combatant commands, the Defense Logistics Agency (DLA), and the U.S. Transportation Command (TRANSCOM).

USARAF led the way in establishing the joint logistics footprint in Liberia with the USARAF G–4, who was also the Joint Forces Command (JFC) J–4, and 7 personnel from his directorate. Because of the global reach of organizations such as DLA, the JFC immediately began supply procurement in support of USAID's mission. By employing TRANSCOM's Joint Task Force–Port Opening (JTF–PO), the JFC rapidly opened aerial logistics nodes in Liberia and Senegal in order to receive vital equipment, supplies, and enablers.

## JLEnt's Support

The JLEnt's ability to move supplies worldwide was demonstrated in Liberia at the end of September, and by Oct. 20, 2014, the USARAF G–4 Mobility Division had requested, tracked, and received 136 strategic-lift flights within the joint operations area. Additionally, DLA and the 598th Transportation Brigade from the Military Surface Deployment and Distribution Command had arranged for the transport of 690 20-foot-equivalent containers by sea.

Without these requests and timely arrival of the JTF–PO, the cargo could not have been delivered in Liberia. Without this joint capability on ground, the JFC would not have been able to accomplish any of the achievements it made in the first 40 days.

By early November, TRANSCOM had two Military Sealift Command vessels moving to Liberia with more than 1,500 additional pieces of cargo. TRANSCOM, the Army Materiel Command, DLA, JTF–PO, the 123rd Contingency Response Group, and a range of other joint logistics partners proved to be the critical force multipliers during OUA that bridged gaps between immediate requirements and available forces.

*Airmen with Joint Task Force–Port Opening unload medical supplies Nov. 16, 2014, at Roberts International Airport in Liberia. (Photo by Staff Sgt. Gustavo Gonzalez)*

## Commercial Partners

Commercial partners also played a vital role in virtually all aspects of the JLEnt. Leveraging the capabilities of commercial partners through contracts provided an alternative to the military options.

Contracts enabled construction, storage, and distribution operations and compensated for the initial lack of subordinate units. The JFC used local area knowledge from the U.S. Embassy to procure needed common supplies and services from the Liberian economy.

As of Oct. 31, 2014, the JFC operational contract support team had executed 96 contract actions in support of OUA that were valued at more than $61 million. The DLA Joint Contingency Acquisition Support Office team, the Logistics Civil Augmentation Program, and the contracting specialists from the 414th Contracting Support Brigade were responsible for those contract actions.

## Mission Success

Despite challenges, USARAF made an impact on containing the Ebola epidemic by using the JLEnt to support OUA. For more than 40 days, the G–4 simultaneously executed ASCC and JFC roles during 24/7 operations across Senegal, Sierra Leone, Guinea, and Liberia.

From the USARAF G–4's perspective, the availability of personnel was the foremost challenge of OUA. Only the additional personnel provided by the JLEnt made success possible.

In a little over a month, the JFC established two mobile laboratories and the 25-bed Monrovia medical unit and laid the foundations for building, managing, and sustaining Ebola treatment units. The JFC also established life support areas, opened aerial and sea ports of debarkation, and emplaced the framework necessary to sustain the 101st Airborne Division (Air Assault)—all without assigned subordinate forces.

The volume of supplies required during humanitarian assistance and disaster relief operations can overload existing distribution networks. Logistics support is central to these operations, and OUA was no exception. Without strong and efficient mission command at the onset, such as that provided by the JFC and the JLEnt, networks will clog and responsiveness will suffer.

The JLEnt's forces and abilities, as leveraged during OUA, are the fulcrum upon which success balanced. Future missions of this nature will occur and will test not only the JLEnt but also other ASCC's logistics planning and execution abilities worldwide. However, with trained personnel and a modernized force, the DOD will succeed in complex, ambiguous environments.

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# Shortfalls in the SBCT's Forward Support Companies

■ By Capt. Adam Dyet

In today's Army, forward support companies (FSCs) are some of the fastest paced and most relied on support units. During my 28 months in command of an FSC, my unit experienced a decisive action National Training Center rotation, a load out, a deployment to Kuwait, and redeployment and reintegration. I then led my company in a huge transformation as the brigade turned in tanks and Bradley fighting vehicles and transitioned to a fleet of Strykers. In between these major events, we conducted plenty of collective training.

In March 2014, the 1st Armored Brigade Combat Team (ABCT), 4th Infantry Division, was reflagged and rapidly began the transition to become the 1st Stryker Brigade Combat Team (SBCT). It is the first SBCT to have only the double-V-hull Stryker variant. We witnessed the addition of several Stryker maneuver battalions and a dramatic restructuring of support assets and personnel.

As we transitioned, many of my subordinates and peers became concerned that we did not have the proper manpower and that the modified table of organization and equipment (MTOE) did not make sense.

## The SBCT Support Concept

Stryker brigades, and the FSCs that now support them, are a relatively new concept in the Army. The newest edition of Army Techniques Publication 4–90, Brigade Support Battalion, specifically states that legacy SBCT brigade support battalions (BSBs) do not have FSCs.

In early Stryker units, maneuver squadrons were supported by a massive BSB or regimental support squadron consisting of over 700 personnel and operating under a logistics support team (LST) concept. LSTs were attached to specific maneuver units depending on the mission at hand. From the beginning, the LSTs had severe problems with the amount of manpower and equipment that they had to support the maneuver units.

Instead of using the LST concept, the 1st SBCT kept the FSC concept that it used while it was an ABCT. Unfortunately, FSC commanders quickly noticed some systemic problems with the new MTOE. FSCs across the Army lack specialized personnel for maintenance and mission command, communications equipment, defensive capabilities, and major end items for critical sustainment and support operations.

## Personnel Shortages

In manning FSCs, the lack of some military occupational specialties (MOSs) must be addressed. Not having an MOS 25U (signal support systems specialist) assigned to the FSC is detrimental. This critical support MOS needs to be assigned in an MTOE slot rather than as an additional duty because of the fluidity of movement and communications in a Stryker formation and the FSC's emphasis on digital systems, such as Joint Capabilities Release Logistics.

Personnel shortages extend to the headquarters sections of all FSCs. MTOE personnel authorizations for the headquarters sections do not allow for an operations sergeant, a communications sergeant, a chemical, biological, radiological, and nuclear sergeant, an operations assistant, drivers, or radio/telephone operators. The supply sergeant position in an FSC was downgraded from an E–6 to an E–5, despite the FSCs having complex property with hugely varying line item numbers and a vast number of components.

In Stryker maneuver company MTOEs, the headquarters section alone consists of several additional personnel. Infantry company headquarters have two radio/telephone operators, two drivers, one vehicle commander, and one signal support specialist. The cavalry squadron has more. These personnel are in addition to the commander, first sergeant, executive officer, supply sergeant, and supply clerk.

The FSCs are left pulling personnel from the already scant maintenance and distribution sections to fill administrative requirements in the orderly room and to man the command post for operations in the field or in combat.

This manning shortage in the headquarters sections cannot be overlooked considering the FSC's role in unified land operations. FSCs are responsible for setting up the field trains command post (FTCP) and unit maintenance collection point (UMCP), which are often pushed far forward from the brigade support area (BSA) but still behind the forward line of troops.

FSCs play a pivotal role in relaying communications, staging support assets, serving as vital support and command nodes, and being as important to the fight as the tactical operations center or tactical command post. Without the FTCP or UMCP, there simply would not be recovery,

maintenance, or any classes of supply forward to keep the warfighter going. These posts need to have the same type of manning that we see in the maneuver companies to function properly.

One of the most pressing concerns for FSCs is the number of mechanics assigned to the formation. The Army uses manpower requirements criteria (MARC) to determine the number of personnel by MOS needed to complete duties in a specific unit. The perceived lack of manpower is not a result of an incorrect maintenance allocation chart (MAC) for time spent on each service or vehicle.

Quite the contrary, the MAC is calculated based on extensive testing and observations that factor in how long repairs should take for a specific piece of equipment. These numbers are then put into a larger formula that calculates the MARC for that unit. The issue with the MARC is that the formula it uses to authorize mechanics is based on deployed man-hours, not garrison man-hours.

In a deployed environment, the MOS availability factor, or available Soldier hours, for a BSB is calculated at 62.12 hours per week per Soldier. This is feasible during deployed operations in which Soldiers are working 12-hour days, seven days per week. Not so in a garrison environment with training and readiness requirements, weekends, federal holidays, budgetary shortages, and tasking requirements.

Coupled with the high operational readiness requirements in garrison, the reduced Soldier availability makes it extremely difficult for FSC mechanics to complete the required scheduled and unscheduled services. Major training that requires the support unit Soldiers to participate results in even more days that vehicles are deadlined.

Army Regulation 570–4, Manpower Management, recognizes the difference in garrison and deployed maintenance and further concedes that garrison Soldiers are available less often. It applies an MOS availability factor of 29 hours per Soldier per week. This differs greatly from the wartime requirement of 62.12 hours.

With the continuing transition from major combat operations overseas and a very real emphasis on operational readiness of equipment in garrison, support unit MTOEs need to be built and filled based on a compromise between wartime and peacetime requirements.

## Equipment Shortages

Commanders of SBCT FSCs have also noticed equipment shortages. When they were part of the ABCT, the FSCs were given M1075 heavy expanded-mobility tactical truck (HEMTT) palletized load systems (PLSs) that were used to transport the forward repair system (FRS) for the combat repair teams that were attached to line companies.

Each FRS weighs 24,600 pounds, or about 12 short tons. This was not a problem for the PLS, which can carry 16.5 short tons because of its larger engine and an extra axle. It is, however, a problem for the M1120 HEMTT load handling system (LHS), which has a carrying capacity of 11 short tons. Almost identical to the PLS in looks and function, it has one less axle and a smaller engine.

SBCT FSCs do not have PLS variants as part of their MTOEs, so they are left with the reduced carrying capacity of the LHS to move their FRSs. The M1075 trailers that are paired with both the PLS and LHS are authorized to haul 16.5 short tons, but only when paired with a PLS. With the LHS, the trailers that are rated at 16.5 short tons can hold only 11 short tons if the LHS already has a full load on the front.

An FRS can be moved with an LHS, but it puts severe strain on the hydraulics and the operator must manually override the weight sensor on the vehicle that indicates that the load it is lifting is too heavy. To have a workaround in place that requires operators to override safety protocols is irresponsible and foolish, especially when any perceived savings between the PLS and LHS would be lost when one considers the impact of rupturing the vehicle's hydraulics or injuring a Soldier.

In an SBCT, all equipment must be able to be airlifted by C–130 Hercules. The PLS, with its slightly larger size, is too large to fit on the aircraft. The solution was to go with the less capable LHS, sacrificing lift capacity for mobility.

However, the C–130 airlift requirement works only with the older, lighter, flat-bottomed Stryker. The new double-V-hull models that make up the 1st SBCT (and will soon become the norm for all Stryker brigades) are simply too heavy and can be airlifted only by a C–17 Globemaster or C–5 Galaxy aircraft. The PLS's airlift capability problem is now a moot point.

## Convoy Security

For years, SBCTs have had the advantage of being at the forefront of research and development for armor, mobility, communications, weapons, and optics. Still, their support units' vehicles have limited capabilities, especially concerning armor and self-defense.

FSCs spend inordinate amounts of time on the road moving supplies, often within just a few kilometers of the front line. Although M66 ring mounts can be fitted onto most FSC vehicles for self-defense during convoy operations, FSCs are done a great disservice by not being authorized up-armored humvees for convoy operations.

A standard FSC supporting a Stryker infantry battalion has 12 soft-skinned humvees by MTOE. These humvees are often outdated M998s fitted with Blue Force Tracking or Joint Capabilities Release and used by the commander or distribution platoon leader as convoy escort or mission command vehicles. Older versions in the FSCs also lack the capability to have a mounted weapons system.

FSCs need up-armored humvees with crew-served weapon mounting

capability. FSCs have enough crew-served weapons available to arm a sufficient number of vehicles, so why waste the maneuverability and speed of a humvee by not properly equipping it with a larger caliber weapon? After the dissolution of reconnaissance squadrons across the Army (11 have dissolved so far), plenty of up-armored humvees should be available to units that need them.

Furthermore, FSC vehicles lack the sophisticated communications equipment that their maneuver brethren possess. Forward support units still lack authorizations for advanced radios, such as the Harris or multiband inter/intra team radio, and internal communications systems within their vehicles.

## Maintenance Shortfalls

A lack of proper maintenance equipment further complicates matters for the FSCs. The FSCs have a shortage of contact trucks to be paired with maneuver companies. In the past, the contact truck and contact team (usually consisting of two skilled mechanics) would be part of the combat repair team. They would hold fast in the company trains, directly behind the front line, but they also could be quickly dispatched for expedient repairs on a vehicle or piece of equipment.

All SBCT FSCs are short by one contact truck. For example, a Stryker reconnaissance squadron has three line troops, but the FSC has only two contact trucks to support them. This formula is repeated with every FSC across the formation. Each is short one vehicle that is needed to go with that last maneuver troop.

Where are these extra contact trucks? Six of them reside with the BSB, authorized to the maintenance company. During decisive action, the BSA, which accommodates the entire BSB maintenance company, sits anywhere from 25 to 30 kilometers back from the forward line of troops.

Furthermore, the maintenance company is largely immobile in the BSA. The FSCs expedite repairs at their respective unit maintenance collection points, which are located forward and are more than capable of doing repairs on their own.

The maintenance company has six contact trucks, yet it does not have the Stryker mechanics authorized to man them. In fact, four of these six contact trucks are assigned to the ground support equipment section, made up of generator mechanics who are, by MTOE, unable to man all the vehicles assigned to the section.

If the intent is for these assets to be attached just prior to combat operations, why not just make them part of the FSCs from the beginning? Attaching them later is like reverting to the LST concept—tailoring support packages based on need.

The late addition of a maintenance team puts that team out of the loop on its new organization's tactics, techniques, procedures, and leadership styles. The old adage, "the team that trains together, wins together," can be applied here.

## Fuel Truck Shortages

FSCs also have a support asset shortage when it comes to M978 HEMTT 2,500-gallon fuel tankers. Each FSC has one less fuel truck than the number of maneuver companies it needs to support. The proposed fix for this is the modular fuel system (MFS).

With only two M978s authorized in the FSCs, the option exists to transform assigned LHSs into fuelers with an MFS tank on the back, thus leaving a trailer open to carry additional supplies.

Another option is to create a service station fuel point with the M978s or MFS where Strykers cycle through. This was already tested during a 4th Squadron, 2nd Cavalry Regiment, combat training center rotation. At times, the distribution section would emplace a service station resupply point for class IIIB (bulk petroleum, oils, and lubricants) and class V (ammunition), and several troops would cycle through the same location.

This is feasible in set-piece operations (moving troops in column into a screen, for example), but the most realistic training the squadron conducted demonstrated that this concept of resupply was too centralized and not dispersed enough for fluid operations. A cavalry squadron conducting a screen or zone reconnaissance is spread over 30 to 50 kilometers, often with mission objectives that require distinctly different logistics packages. Supporting a Stryker formation with just two fuel tankers in this case is not feasible.

## Recommendations

What are the best ways to fix the problems in the FSCs and keep costs down? For most of the issues, the fixes are simply to make better use of the resources already at hand.

***Personnel.*** First, the manning portion of the MTOE needs to change. FSCs need viable command posts and training rooms without having to pull personnel from already stretched platoons. Front line support units need a robust headquarters section with specialized personnel, just like line units do.

The supply sergeant position should be redesignated as an E–6 like it was previously. Signal support system specialists can be moved from the maneuver battalion S–6 section to the FSC, but this is just a temporary fix. The FSCs need a dedicated communications representative on hand, always.

Having an operations sergeant and operations assistant, like in the cavalry squadron, would bolster the FTCP and make it a much more viable command node. In garrison, these Soldiers could serve as the training room noncommissioned officer-in-charge and orderly room clerk or armorer.

Currently, the distribution platoon lacks gunners. For FSCs that decide to equip their LHSs with crew-served weapons, the truck commanders would have to act as the gunners as well.

Expecting the Army to fill FSC maintenance shortfalls based on peacetime requirements in a downsizing Army may be a bridge too far. However, it would be worthwhile to relook the available man-hours in garrison and raise the authorization of mechanics by 10 percent across the board. This would mean an extra three or four mechanics in each FSC.

***Vehicles.*** Second, major end item distribution and MTOE authorizations need to be relooked. Provide PLSs to the FSCs so that they can lift and transport their FRSs and excessive amounts of class V (in the case of the fires battalion FSC). PLSs can be fielded from either the combat sustainment support battalion or BSB and traded for the LHSs that the FSCs already have.

During my last National Training Center rotation with the ABCT, the UMCP jumped no less than four times during decisive action operations, requiring each FRS to be picked up and transported each time.

Provide an extra 2,500-gallon fuel tanker truck to each FSC from the BSB's distribution company to mitigate the shortage of mobile refueling capability. The distribution company has 10 2,500-gallon tankers and 10 MFSs.

Giving one 2,500-gallon tanker to each FSC would leave the distribution company with four in addition to the MFSs it would retain. This is more than enough equipment to push logistics packages from the BSA to each FTCP while still providing retail bulk fuel in the BSA.

FSCs can also turn three of their LHSs into fuelers using the MFS and attach a trailer to bring out additional supplies. This configuration would allow LHSs to be assigned to each of their respective line units while transporting fuel and some other commodities like class V or class IX (repair parts) on one platform.

It seems that this option was not thought through with the MTOE redesign. There are only a total of four petroleum supply specialists (MOS 92F) assigned, thus two in each authorized M978. There are no additional 92F Soldiers to operate the MFSs. Any proposed solution would require the redistribution of the 92F Soldiers and would leave one M978 without any 92Fs to man it.

Furthermore, using three tank racks to take up pallet space on the LHS will test the FSC load out capability. The BSB's maintenance company can supply each FSC with an extra contact truck. This would leave the maintenance company with none, but they are not the ones doing expeditious repairs at the front; the FSCs are.

The maintenance company would still maintain its own FRSs and wreckers in the BSA to perform services and repairs as needed. Put the contact trucks where they can have the most positive impact. The maintenance platoon, even with the MTOE change, has sufficient personnel to effectively man these extra vehicles. It would just take careful consideration from the FSC leaders on how best to assign these Soldiers to the vehicles.

***Equipment.*** Third, upgrade the equipment. If the expectation is that FSCs will deploy with the equipment that they have in garrison, then the current humvee fleet that exists in the FSCs will not suffice. They need ballistic armor and gunner protective kits. The added defense, mobility, and security that these provide in addition to their mission command capability cannot be overlooked.

FSCs are behind the times without advanced radios or internal vehicle communications. Providing these would allow FSCs to communicate better internally and externally during both mounted and dismounted operations.

## The Positives

The FSC concept in the SBCT has some very positive points. For one, the overall mission command capability that exists in an FSC is much better than it was under the LST concept. An FSC has dedicated positions for its commander (a captain), first sergeant, executive officer, and distribution platoon leader.

Often in the LST, the mission command was left to a lieutenant or warrant officer. In an FSC, a logistics captain and first sergeant make up the command team, so the warrant officer can focus on maintenance and the lieutenants take responsibilities as the executive officer and distribution platoon leader.

In spite of the issues addressed earlier, the maintenance setup of the FSC does allow it to set up a viable UMCP that can quickly recover and repair vehicles with the wrecker support and forward repair systems available. The field feeding section in an FSC is robust. With its authorized equipment, it is more than prepared to support the warfighters wherever they are.

The FSC, even with the reduced number of vehicles and personnel, has proven it can still move itself in one lift to a field or combat environment and support Strykers by establishing viable support nodes in the form of the FTCP and UMCP. For this to happen effectively, FSC leaders need to plan their load outs carefully and manage their personnel responsibly.

FSCs can currently provide very effective support to the SBCT, but there are still lingering issues that must be scrutinized to allow for better efficiency and efficacy. A slight reshuffling and addition of materiel and personnel will solve many of the problems within the FSC with limited or no cost.

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# Getting Back to the Basics

The 330th Transportation Battalion planned and executed a home-station field training exercise to prepare for expeditionary warfare.

By Lt. Col. Joseph D. Blanding, Capt. Joshua S. Weintraub, and 1st Lt. Benjamin Gibbs

*A noncommissioned officer mans the m249 machine gun to provide perimeter security Feb. 24, 2015, during the 30th Transportation Battalion's field training exercise. (Photo by Sgt. Anthony Palmer)*

Lately, "getting back to the basics" is a common saying heard across our Army. The Army is returning to its pre-9/11 way of preparing units for future combat operations. In other words, training at home station and at combat training centers will be more routine than constructing deployment equipment lists through the Transportation Coordinator's Automated Information for Movements System II (TC–AIMS II) and attending medical screening appointments at the Soldier readiness center.

Before 9/11, units rotated frequently through training centers, mainly the National Training Center at Fort Irwin, California, the Joint Readiness Training Center at Fort Polk, Louisiana, and the Joint Multinational Readiness Center in Hohenfels, Germany. The focus of these centers is to improve the probability for success in the event of military operations, most of which will be conducted in austere environments on short notice. This type of operation is frequently known as expeditionary warfare.

## Expeditionary Logistics

Expeditionary warfare has two significant characteristics: deploying on short notice and living and working in areas without electricity and climate control and where force protection levels mandate the prolonged use of body armor and chemical protection equipment.

In the Army's array of forces, many types of units can provide potable water, electricity, chemical decontamination, and other requirements for sustaining combat operations in an austere environment. Basic Soldier skills center on providing first aid, chemical and defensive protection, communications, personal hygiene supplies, and preventive measures to reduce noncombat-related injuries and illnesses. The Army must remain current on these skills in order to fight in expeditionary operations.

To be successful, we must be able to feed ourselves, maintain our own

equipment, provide electricity, wash our own laundry, and dispose of our own waste in an efficient and tactical manner. In other words, we must be prepared to live without the use of the Logistics Civil Augmentation Program (LOGCAP) and the amenities that contractors provide.

During the third iteration of the LOGCAP contract, KBR, which was the sole contractor, provided both supply and field services operations, including all nine classes of supply, laundry and bath, food services, billeting, and information management. It also provided other operations and services, such as power generation and distribution, engineering and construction, and physical security in the form of perimeter fencing and barrier maintenance.

Many of our Soldiers do not know what it is like to deploy to an area of operations without contractors and the amenities they provide to ensure comfort and survival. Soldier skills like burning manure or conducting bird baths are no longer highlighted during home-station training because units are used to having KBR on site. Many Soldiers assume that containerized housing units will be available upon arrival in theater.

As the Army transitions back to a force of preparation, Soldiers of all military occupational specialties must be reminded that future deployments will be more expeditionary in nature. We must focus on our basic Soldier skills to be prepared to meet the demands of expeditionary warfare. Home-station training must focus on the fundamentals of basic Soldier skills in order to prepare for austere environments. This is especially true for logisticians, who normally are the first ones in and the last ones out.

## The 330th MCB

The 82nd Sustainment Brigade is no stranger to expeditionary logistics. It fulfills its role of providing logistics support for the Global Response Force (GRF). Being a member of the GRF requires units to be ready at all times to deploy to some of the world's harshest environments. This requires constant training on the tasks and skills required in such environments.

The 330th Transportation Battalion, a movement control battalion (MCB) stationed at Fort Bragg, North Carolina, and assigned to the 82nd Sustainment Brigade, recently rehearsed deploying to and setting up operations within an austere and undeveloped operational environment.

Currently, the 330th MCB is composed of a headquarters and headquarters detachment (HHD), the 403rd Inland Cargo Transfer Company (ICTC), the 261st Movement Control Team (MCT), and the 329th MCT. Two additional MCTs, the 609th and the 610th, are currently deployed in support of contingency operations.

Although each company provides a unique capability, the battalion's primary mission is to provide uninterrupted in-transit visibility (ITV) of personnel, cargo, and equipment and the discharge, loading, and transshipment of cargo at ports and nodes within a theater of operations.

Key to this mission is providing for reception, staging, onward movement, and integration through various transportation nodes. These include a central receiving and shipping point (CRSP), an arrival/departure airfield control group (A/DACG), and an entry control point (ECP).

*The 330th Transportation Battalion set up this battalion headquarters command post Feb. 24, 2015, during its field training exercise focusing on mission command, defensive positions, and other warfighting skills to prepare Soldiers for expeditionary warfare. (Photo by Sgt. Anthony Palmer)*

In order to prepare for its missions and focus on basic Soldier skills, the battalion conducted a week-long field training exercise (FTX) at home station at Fort Bragg. This valuable training took place Feb. 23 to 27, 2015, during adverse weather conditions. Freezing rain, snow, and persistent ice added an element of realism to the training event.

## The Training Plan

In preparation for the FTX, the commander of the 330th MCB provided a clear vision for the exercise. As early as October 2014, his stated intent was for the 330th to be prepared to operate in any environment. The battalion would accomplish this by going back to the fundamentals of Army planning and soldiering—things that had not been done by this particular MCB for quite some time.

The plan included these stated training objectives:

- ☐ Complete the military decision-making process.
- ☐ Establish life support, to include field feeding.
- ☐ Establish a defensive perimeter, to include dismounted fighting positions, triple-strand concertina wire, sector sketches, and range cards.
- ☐ Establish an ECP that also provides a node for ITV.
- ☐ Establish a maintenance area.
- ☐ Establish a CRSP yard.

The 329th MCT would execute its direct-support mission as a part of the GRF in support of the 2nd Brigade Combat Team, 82nd Airborne Division. An element of B Company, 407th Brigade Support Battalion, would be included in the FTX to exercise its joint mission of managing an expeditionary A/DACG in support of the brigade during a forced-entry exercise.

## The Exercise

After five months of planning, on Feb. 23, 2015, the 330th MCB began the FTX with an early morning alert, which tested the unit's system

of recalling assigned personnel. The alert was conducted as planned; however, not all personnel were properly notified through the recall procedure. The unit discovered that it is beneficial to safeguard the time of the alert; this information should be closely held among the battalion command team.

Another recommendation for the alert process is to conduct monthly alerts to become more proficient in meeting the two-hour assembly standard. Alert rosters should be validated weekly at the battalion and company levels. The battalion and company staff duty officers should be responsible for verifying contact numbers.

Following the alert, the companies prepared their units for convoy operations in preplanned serials, starting with the 261st MCT and the HHD, which led the quartering party. Convoy briefs were rehearsed during the rehearsal of concept (ROC) drill and conducted prior to movement. During the ROC drill, the battalion drew on the experience of noncommissioned officers (NCOs) in order to cover the relevant elements of the convoy brief.

One challenge the unit experienced during the FTX was balancing garrison requirements and taskings with the number of convoys required to provide realistic training. To overcome this shortfall, the MCB relied heavily on its sister unit within the brigade, the 189th Combat Sustainment Support Battalion, to augment the serials. The MCB also relied on the 189th to provide classes I (subsistence) and III (petroleum, oils, and lubricants) and to act as the opposing force (OPFOR) during the FTX.

An additional challenge for the battalion was the lack of tents needed for life support and the mission command center. Again, to overcome this challenge the battalion relied on a sister unit for support. To mitigate future shortfalls, the MCB used end-of-year funds to buy tents. Do not let equipment shortfalls affect opportunities to train. If possible, build relationships with sister units to fulfill requirements.

One challenge the unit experienced during the FTX was balancing garrison requirements and taskings with the number of convoys required to provide realistic training.

Sister units need to partner more for training. Units normally deploy locally to an FTX with only members of their units. But training multiple units at the same time at home station has value.

On the battlefield, units rely on each other. During the process, they build valuable relationships. Relationships are an important tenet of team building. Ultimately, by combining efforts, training becomes more realistic.

## Training Opportunities

Units reacted to the OPFOR for the duration of the exercise, starting with a chemical attack once the quartering party arrived on the ground. The battalion chemical NCO led the effort to test the units' reaction to the chemical threat. Once the threat was cleared, all units got to work.

The 261st MCT immediately set up the main ECP and tracked unit movements. The HHD began setting up its fighting positions, the mobile kitchen trailer, and the tactical operations center. And the 403rd ICTC began setting up its fighting positions, maintenance tent, and CRSP yard. All three companies also set up a defensive perimeter secured with concertina wire and range cards with sector sketches—a lost skill for many sustainment units.

Taking advantage of another training opportunity, the 329th MCT processed through the Fort Bragg A/DACG operated by the 403rd ICTC before moving to Area of Operations Duke to exercise the outload process for the battalion. New Soldiers saw firsthand what it takes to deploy using aerial assets. They conducted preinspections, corrected deficiencies, and measured the center weight and balance of the equipment.

The Air Force provided a team to do a joint inspection, solidifying an understanding of the amount of time and effort it actually takes for units to flow through an A/DACG and fly out on an actual mission. The Soldiers also pinged the unit's radio frequency identification tags using the national radio frequency ITV server as the equipment went through different nodes within the A/DACG.

The lessons that the 329th MCT learned during the outload process were shared with the battalion's subordinate units in order to update standard operating procedures. All units stationed on a power projection platform base, such as Fort Bragg, should incorporate this process into their training plans to identify real-world deployment challenges and shortfalls.

## Functional Operations

Once the training area was fully established, the companies began their functional operations. The battalion staff conducted a complete sequence of the formal military decisionmaking process over the course of the week, with special emphasis on mission analysis and intelligence preparation of the battlefield.

The 403rd ICTC pushed logistics packages focused on maintenance. It also set up its CRSP yard and

*During their field training exercise Feb. 24, 2015, 330th Transportation Battalion Soldiers take up a defensive posture as the opposing force tries to infiltrate the perimeter. (Photo by Sgt. Anthony Palmer)*

conducted some flatrack exchanges, tracking both inbound and outbound shipping procedures. The 261st MCT managed the ECP and practiced movement control functions by regulating movement into and out of the ECP.

The 329th MCT was poised to deploy farther to a notional forward landing strip with B Company, 407th Brigade Support Battalion; however, the roads were closed because of bad weather, which halted the joint training portion of the FTX.

The 329th MCT quickly transitioned to focusing solely on using TC–AIMS II to write and read radio frequency identification tags for 403rd ICTC vehicles convoying as part of a logistics package. Although the full training value of practicing with the supported unit was hampered because of the weather, the Soldiers were able to practice critical transportation management skills in the field.

## FTX Lessons Learned

Many lessons were learned from the FTX. For example, during one of the chemical attacks, Soldiers appeared to be unfamiliar with how to react to the scenario. One recommendation is to rehearse all battle drills down to the Soldier level. The MCB practiced reacting to a chemical attack during its leader-level ROC drill; it evidently did not make it to the Soldier level. Leader's time training is a good forum to practice such battle drills.

Another lesson learned focused on blank ammunition. Blank ammunition dunnage was compro-

mised during the FTX because of numerous master scenario events list injects. Thus, units should consider conducting a police call for brass on the spot after each individual inject.

To ensure realism, units should use the multiple integrated laser engagement system to identify casualties. This procedure was commonplace before 9/11.

The MCB also discovered that it was better prepared for a real-world deployment after conducting a joint inspection with the Air Force during the FTX. The 329th MCT identified shortfalls that would have prevented it from deploying in a real-world situation. These shortfalls could be a hazardous materials declaration that is improperly filled out or insufficiently cleaned vehicles.

All GRF or prepare-to-deploy-order units should conduct a bimonthly inspection to ensure vehicles remain up to standard for deployment. Unit movement officers should make and maintain joint inspection binders for every vehicle and all secondary cargo in their units; this will save valuable time during emergency deployment readiness exercises and deployments.

Additionally, unit movement officers must refresh their skills on systems such as TC–AIMS II in order to properly create the deployment equipment list and other pertinent requirements for deployment. Refresher courses for shipping hazardous materials would also be beneficial. Lastly, using observer-controllers from an external unit to provide unbiased feedback would have been beneficial for the unit assessment.

On a positive note, the battalion met its start-point times because it staged all vehicles and equipment in the motor pool before the weekend. The success was attributed to conducting precombat checks and inspections prior to the weekend and having another inspection right before the start point. The checks and inspections also reduced the need to go back to retrieve essential items for survival in the field.

*330th Transportation Battalion Soldiers are confronted Feb. 24, 2015, with a simulated angry mob, played by opposing force Soldiers from the 189th Combat Sustainment Support Battalion. (Photo by Sgt. Anthony Palmer)*

## The ROC Drill

The most valuable lesson learned was the criticality of conducting a ROC drill before the FTX. The ROC drill focused on fundamentals and operating with an expeditionary mindset.

It allowed leaders and subordinates to develop a mental picture of responsibilities and events that had to occur while setting up and operating in an austere environment—skills that have been hindered by the prolonged use of LOGCAP.

The ROC drill enabled social learning. Social learning theory centers on the belief that people learn by interacting with each other. Many people learn best through social interaction.

People are less likely to admit not knowing how to do things in front of peers or subordinates, but the ROC drill facilitates the possibility of learning through demonstration. Thus, if Soldiers did not know beforehand, they would know after the ROC drill without having to acknowledge their shortfalls. In this case, everyone benefits.

A ROC drill assists an organization with synchronizing the training with times, places, and other resources. A simple walk through or tabletop exercise can help leaders visualize how training is supposed to unfold, what might go wrong, and how the training could be changed or adjusted for intended and unintended events.

The purpose of the MCB's ROC drill centered on the fundamental tasks of the FTX. This rehearsal used an extremely detailed and comprehensive terrain model that set the standard for all future ROC drills. The model was built over the course of five weeks by the Soldiers and NCOs of the battalion. The terrain model spanned more than 2,000 square feet and took over 1,900 manhours to construct.

The terrain model, located at the 261st MCT unit area, featured detailed models of the five operational nodes. The nodes included the 330th MCB motor pool, Intermediate Staging Base Dragon, the A/DACG, the battalion headquarters, and the forward landing strip.

Connecting all operational nodes on the model was a detailed and comprehensive road network that perfectly mirrored the roads in and around Fort Bragg. The Soldiers used aerial imagery and detailed maps of the Fort Bragg area to ensure the model was precise and built to scale.

Checkpoints and phase lines were represented in the terrain model. Other key elements included a North seeking arrow, grid lines and coordinates, large zoomed-in views of the training areas, and detailed models of trees and vegetation.

The terrain model also included a sectioned off area called the "bullpen," which served as the designated area for squad-level personnel to depict their actions on the objective. For example, as the convoy commander discussed his unit's reaction procedures for a chemical attack, his Soldiers would demonstrate to the group by donning their protective gear and using their equipment to test the quality of the air to ensure it was safe.

After the battalion ROC drill, the companies within the unit used the terrain model to rehearse their portions of the mission. Convoy commanders used the model to brief their movements, ensuring all members of the unit had a clear understanding of all primary and alternate routes.

One recommendation for improvement is to allow more time between the battalion ROC drill and the execution of the FTX in order to give subordinate units more time to rehearse.

After many hours of planning and construction and a thorough ROC drill, the 330th MCB went into the FTX confident in its plan and ready for all contingencies. Units working together and Soldiers executing with little-to-no guidance were both direct results of the all-inclusive rehearsal that the unit executed. Having all personnel operating in sync was critical to the overall success of the exercise.

> The most valuable lesson learned was the criticality of conducting a ROC drill before the FTX.

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*Three enhanced speed bag systems are rigged on a UH–60 Black Hawk helicopter and ready for resupply Jan. 31, 2013, at Bagram Airfield, Afghanistan. (Photo by Sgt. 1st Class Samuel M. Bright)*

# The Enhanced Speed Bag System

## The enhanced speed bag system for helicopter resupply is a crucial development in aerial sustainment.

■ By Capt. Jude G.B. Coe

The enhanced speed bag system (ESBS) is a cutting-edge piece of equipment. Its purpose is to facilitate emergency resupply operations from a UH–60 Black Hawk helicopter that is maintaining a relatively safe altitude (between 100 and 110 feet) and a reasonable speed (20 knots). The ESBS enables Soldiers to conduct quick and accurate resupply operations while avoiding enemy small-arms fire and rocket-propelled grenades.

Soldiers from A Company and H Forward Support Company, 3rd Battalion, 187th Infantry Regiment (Iron Rakkasans), 101st Airborne Division (Air Assault), were the first to test this piece of equipment in Afghanistan. An introduction to the system and a validation exercise with Task Force Talon (the 3rd General Aviation Support Battalion, 82nd Combat Aviation Brigade) were both conducted at Bagram Airfield, Afghanistan, from December 2014 to January 2015.

### ESBS Specifications

The ESBS is composed of the

multipurpose cargo bag with padding, one speed line assembly with a cable grip that is used to facilitate the descent of the bag from the aircraft, one linear brake system that is used to control the bag's descent, two 5,000-pound carabiners for holding the bags in place inside the aircraft, one multisetting gauge for setting the system to the weight of each bag, one roll of tape to secure extra rope, and four manila tags for marking the contents of each bag.

Six systems can be rigged in a Black Hawk simultaneously. Each bag can hold a maximum of 200 pounds of supplies. All six bags can be deployed from the aircraft into the resupply area at the same time, which allows for up to 1,200 pounds of supplies per aircraft to be dropped.

Each bag must weigh at least 125 pounds. The bags are gauged using the multisetting gauge before they are loaded onto the aircraft. Because of the length of the rope in each system, the aircraft must maintain an altitude between 100 and 110 feet during the deployment of the bag.

The ESBS can be used during day or night operations. Once deployed, the bag descends at a speed of 40 to 50 feet per second, which allows for a quick resupply. The resupply area should be clear of any personnel, and the bags should be recovered only when the crew has communicated to the ground troops that they have finished the bag deployments and are moving from the resupply area.

Finally, the aircraft must maintain a hover when conducting a resupply with an ESBS in a wooded area. This is to ensure that the rope does not become tangled and to avoid injury to the air crew and the troops on ground.

## Preliminary Instruction

On Dec. 20, 2014, the Rapid Equipping Force office at Bagram Airfield conducted an ESBS introduction class with 12 Iron Rakkasans Soldiers and noncommissioned officers from A Company and H Company. The training and introduction was divided into two sections. The first section involved an outline of the purpose of the ESBS, an in-depth instruction on how to properly operate the ESBS, and a practical exercise to ensure the Soldiers understood how to set up the ESBS.

The second portion of the ESBS introduction included aviation personnel from Task Force Talon. The introduction comprised ESBS rigging instructions and a practical exercise. The result of the training was the Iron Rakkasans and Task Force Talon Soldiers' concrete understanding of how to set up and rig the ESBS inside a Black Hawk.

## Validation Exercise

After two joint in-progress reviews, Task Force Talon and the Iron Rakkasans agreed on a date of Jan. 14, 2015, to conduct a validation exercise of the ESBS to ensure its effectiveness in theater. A Company provided 10 Soldiers to mark a pickup site with VS–17 signal panel markers and to maintain communication with the aircraft crew deploying the ESBS.

The ground crew's main function was to extract the bags from the pickup site once the aircraft executed the supply drop. The Iron Rakkasans' leaders were on the ground to inspect each ESBS and its supplies, ensuring that both the bag and the supplies were still intact.

Four crews from Task Force Talon certified the crews in ESBS operations. The forward support company's first sergeant and maintenance platoon sergeant each pushed one ESBS from the aircraft. Every ESBS was inspected once removed from the pickup site.

*Sgt. 1st Class Kevin Stanfield, a maintenance platoon sergeant, prepares the rigging for an enhanced speed bag system in a UH–60 Black Hawk helicopter at Bagram Airfield, Afghanistan. (Photo by Capt. Jude G.B. Coe)*

The ESBSs performed remarkably well. The bags contained either water, meals ready-to-eat, ammunition (of which 40-millimeter rounds were the most volatile), or sandbags. Two bags were packed with more than 200 pounds of supplies and withstood a drop of 100 feet onto a rocky surface.

## Advantages

The validation exercise showed that the ESBS has numerous advantages and few disadvantages. The most distinct advantage is that the aircraft can maintain a relatively safe altitude and speed, rendering it less susceptible to enemy small-arms and rocket-propelled-grenade fire.

Since the ESBS descends at 40 to 50 feet per second, it will typically take only two seconds for each bag to reach the ground. This factor makes for a quick resupply and subsequent exit from the battlefield, limiting the aircraft's exposure to the enemy.

The altitude is also an advantage because using the ESBS negates the need to perform the type of resupply operations in which the supply aircraft must hover five to 10 feet off the ground during an extremely hostile firefight. This type of resupply not only endangers the pilots but also results in the enemy obtaining a more precise location of U.S. forces.

Another advantage of this system is that only the linear brake system and the two carabiners are recoverable items. The rest of the system is designed to be used once and is not required to be recovered.

When applicable, the ESBS can replace sling sets, cargo nets, or cargo bags. These items can be extremely difficult to recover from the battlefield, especially during a fast-paced air assault operation involving numerous units. Both the carabiners and linear brake system are compact enough to fit inside an assault pack and can easily be recovered by one Soldier.

## Disadvantages

The disadvantages of the ESBS are that it is expensive (approximately $1,000 per system) and designed to be used only once. The bag will develop tears after it is dropped from an aircraft, rendering it useless for future operations. Also, its smaller size and 200-pound capacity essentially constrains its use to classes I (subsistence), II (clothing and individual equipment), V (ammunition), and VIII (medical materiel).

Using the ESBS for class III (petroleum, oils, and lubricants) is not recommended, although it can be done by using fuel cans, removing the top covering of the ESBS, and securing the fuel can into the bag with a ratchet strap or a similar device. This should be done only during an extreme emergency for class III resupply.

Despite its disadvantages, the ESBS is a useful system when it is necessary to resupply a fighting position of a company-sized or smaller element with classes I, II, V, and VIII. The ESBS's design allows an aircraft to be less exposed to enemy fire during a resupply operation and allows the troops on ground to receive the supplies quickly.

Using the ESBS instead of sling sets, cargo nets, and cargo bags (when possible) assists in property accountability and reduces the amount of equipment to retrograde from the battlefield. This revolutionary system has the potential to add yet another instrument to the aerial sustainment repository. Based on the validation exercise at Bagram Airfield, it can withstand the toughest of terrain to resupply the warfighter.

*1st Sgt. Shawn Murk and a crew chief from the 82nd Airborne Division's Task Force Talon participate in the enhanced speed bag system validation exercise Jan. 31, 2013. (Photo by Sgt. 1st Class Samuel M. Bright)*

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*A Soldier from the Regimental Support Squadron, 11th Armored Cavalry Regiment, works on an engine Jan. 28, 2015, at Fort Irwin, California. Maintenance is one of many areas tracked in the Global Combat Support System–Army. (Photo by Sgt. Erik A. Thurman)*

# GCSS–Army Empowers Company Commanders

■ By Capt. W. Sean McGill and 1st Lt. Evan M. FitzGerald

Over the past several years, the 11th Armored Cavalry Regiment (ACR) has fielded the Global Combat Support System–Army (GCSS–Army). GCSS–Army Wave 2 is being deployed to fielding groups throughout the Army, and the knowledge the 11th ACR has acquired could potentially ease the transition.

While Wave 1 of GCSS–Army provided access solely to supply support activity functions, Wave 2 also provides commanders with maintenance, dispatching, unit supply, and property book functions.

## Roles in GCSS–Army

GCSS–Army has numerous user roles. Each role is based on a military occupational specialty or leadership position.

At the company level, commanders' rights enable them to view multiple types of transactions in their organization and approve dispatches and other basic functions.

These rights can be delegated to other members of the unit, such as the executive officer. The executive officer, being the supply and maintenance officer for the company, can have the rights to view exactly what

the supply room and maintenance sections are doing.

Motor sergeants have a different role—one that allows them to read and write in several maintenance functions. The supply sergeant has similar rights that apply solely to the supply room.

## Maintenance

Being mission capable starts with maintenance operations and is vital to unit readiness. GCSS–Army allows members of the chain of command to pull equipment status reports (ESRs) to see which vehicles are not mission capable. (Information is pulled from the ESR using the transaction code Z_EQUST.)

The ESR provides data about a piece of equipment and, more importantly, the status of parts on order to correct faults. Commanders have this ability with the Standard Army Maintenance System–Enhanced; however, GCSS–Army gives them the flexibility to pull this information from any location along with the vehicle's history and unit financial information. These functions allow the commander to make timely decisions without the delay of external reports.

Using the ESR, the commander or executive officer can determine the dead-lining fault, the estimated ship date of the repair part, and the current location of the inbound part. GCSS–Army also allows the chain of command to see the vehicle's status history and who conducted the last service on the vehicle.

## Dispatching

Once parts are received and the vehicle is fully mission capable, dispatching occurs. After the end-user has completed the Department of the Army Form 5988–E, Equipment Inspection and Maintenance Worksheet, the information is uploaded into GCSS–Army.

Pulling information from licensing functions built into the system, a clerk and dispatching personnel can immediately see if the operator is properly licensed. Although it does not replace premovement checks and inspections, it serves as an additional check to ensure personnel are only using equipment they are certified to operate.

Once the company's prescribed load list clerk completes the dispatching packet, the information is sent to the dispatching authority through GCSS–Army. Using the Systems, Applications, and Products in Data Processing (SAP) Business Workplace T-code, an approver can view who is trying to dispatch a vehicle before approving it.

With the ability to dispatch from afar with a single click comes the potential loss of face time in the motor pool. However, the advantage of being able to multitask may outweigh this risk.

## Supply

As the manager of the commander's hand receipt, the supply sergeant uses GCSS–Army to keep supply functions up to date. Property Book

*A Soldier from the Regimental Support Squadron, 11th Armored Cavalry Regiment, uses the Global Combat Support System–Army Jan. 28, 2015, at Fort Irwin, California. (Photo by Sgt. Erik A. Thurman)*

Unit Supply Enhanced is a stovepiped system and has difficulty pulling information from other systems, but GCSS–Army uses information from other systems with similar coding. This makes ordering expendable class II (clothing and individual equipment) items easier.

Once an order has been placed, it progresses through different automated gates and gatekeepers before the order is confirmed. One of these gates is the T-code ME5A, a list of purchase requisitions that can be accessed by budget officers. ME5A and other gates ensure that the right item is put on order and information that is entered incorrectly is more noticeable.

Once an item has passed through the purchasing process, T-codes such as VL06I, the inbound delivery monitor, can be used to determine its status in the Army supply system. After the order has been verified, it can be tracked until it arrives at the supply support activity for pickup.

*Lt. Col. James M. Stephens addresses leaders of the Regimental Support Squadron, 11th Armored Cavalry Regiment, during a Global Combat Support System–Army leader professional development session at Fort Irwin, California. (Photo by 1st Lt. Evan M. FitzGerald)*

## Property Book

After pickup, the supply sergeant can move the item within GCSS–Army by assigning it to a storage location, where a clerk will update the commander's hand receipt. This ability allows for automatic updates in the system to sub-hand receipts and plays a large role in the change of command inventory process.

For both the incoming and outgoing commanders, the change of command inventory is incredibly important. For this purpose, GCSS–Army can generate the primary hand receipt, sub-hand receipts, and hand receipts for basic issue items and components of the end items.

Once the verification of all end items is complete, the numbers can be entered into GCSS–Army to create a base document for the commander and the sub-hand receipt holders. This document can be updated in the system, removing the need for excessive amounts of paper hand receipts.

Platoon leaders and platoon sergeants can also visit their respective storage locations in GCSS–Army and digitally sign their hand receipts, making the inventory process easier.

At the company level, GCSS–Army streamlines operations and reduces the number of redundant systems. The enterprise nature of GCSS–Army reduces the amount of time commanders and leaders spend on clerical tasks and increases the amount of time they spend on training forces.

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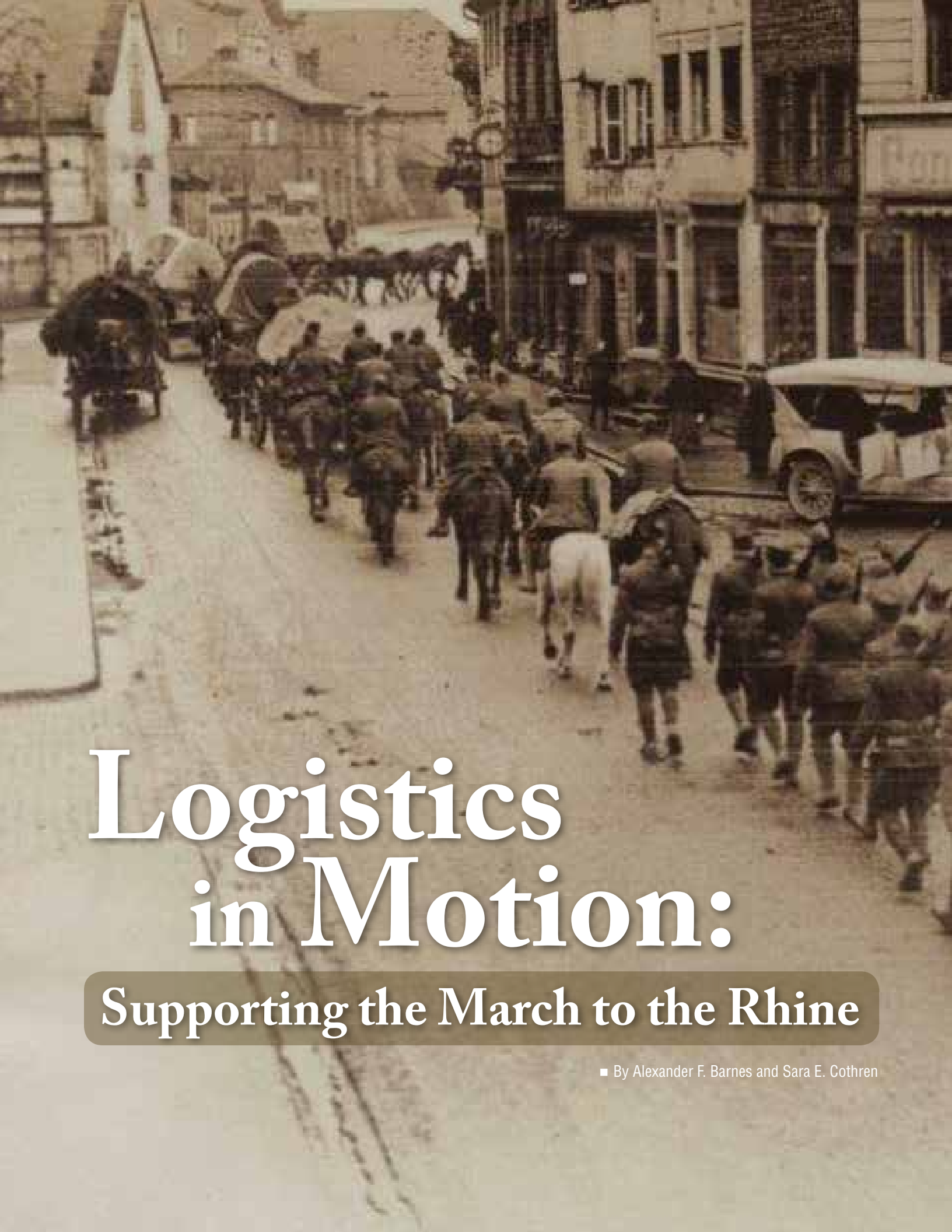

# Logistics in Motion:

## Supporting the March to the Rhine

■ By Alexander F. Barnes and Sara E. Cothren

*Soldiers from the Big Red One move through the outskirts of Coblenz, Germany, en route to the bridge that would lead them across the Rhine to their occupation sector. (Photo courtesy of Alexander F. Barnes)*

HISTORY

U.S. Army logisticians fed, clothed, and supported a quarter of a million combat-weary Soldiers as they marched to the Rhine River after World War I.

*It was cold. That was nothing new, the corporal thought. It had been cold since late September, so this miserable weather was really just a continuation. What added to the young Soldier's discomfort was the rain that was turning to sleet and the roads that were becoming more slippery the farther the convoy went.*

*It didn't help that the trucks and tractors from the Big Red One had torn up the roads while dragging their division artillery on this same route.*

*The corporal slipped the glove off his right hand and, leaning forward, tapped the gas gauge on the dashboard with his finger. No motion; either it was as frozen as his feet were or he really was almost out of gas.*

*He looked to his right at the bundled figure of his sergeant, wrapped in a heavy overcoat and a wool blanket. The sergeant's eyes were the only thing that betrayed the fact that he was still awake and watching. The corporal pointed to the gauge and the sergeant nodded but said nothing.*

*"Just great," the corporal thought. "If we don't get some gas soon, we're going to be walking the last 45 miles to the Rhine River." As the truck skidded slightly in reaction to a bend in the road, the corporal turned again to his sergeant and said, "If this is what it feels like to win a war, I'd sure hate to be on the losing side."*

With the signing of the armistice on Nov. 11, 1918, the guns fell silent on the western front for the first time in almost five years. For the victorious Allies, however, the mission was not complete. Their soldiers would occupy the German Rhineland.

Under the terms of the armistice, an area of over 2,500 square miles of western Germany with a million inhabitants was assigned to the American Expeditionary Forces (AEF). Another 10,000 square miles would be occupied by the Belgian, British, and French armies.

The U.S. Third Army was to set up positions in an area that stretched from the Luxembourg border eastward to the Rhine and in a half circle on the east side of the river. This entire part of Germany would soon become known as the "Coblenz Bridgehead."

Understanding that the armistice was really only a ceasefire until peace talks could be concluded, the soldiers had valid fears that the war might start again. As soon as the Allied armies had taken up their positions in the occupation zones, they were to prepare immediately for "aggressive, offensive action."

The march to the occupation zones on the Rhine began on Nov. 17, 1918, at 5 a.m., just six days after the signing of the armistice. The Allied forces, stretching from the North Sea to the Swiss border, moved simultaneously in the wake of the defeated and withdrawing German armies.

It would be hard to imagine a more difficult or complex operation than that of moving the Third Army to the Rhine. As an organization, the Third Army was still less than two weeks old when it received the mission to become the "Army of Occupation." Of the divisions now assigned to the Third Army, most had either been in combat right up to the signing of the armistice or had just been relieved from the trenches and were behind the lines attempting to refurbish and reorganize for further combat.

Add to the mix the uncertainty of whether or not the Germans might resume combat operations at some point during the move and then stir in a large dose of European winter weather, and you have the recipe for an operational nightmare. On a positive note, the initial part of the march would be through "friendly" France and the soon-to-be liberated Grand Duchy of Luxembourg.

## Marching Through Luxembourg

As the Third Army crossed into Luxembourg, AEF headquarters announced a policy of noninterference in the affairs of the grand duchy. For the United States, maintaining independence of command in the duchy was extremely important because not

only would the Third Army's route of march and logistics support pipeline run through Luxembourg, some U.S. forces were to remain within its borders to protect that pipeline.

Gen. John J. Pershing, the AEF commander, made it clear that the Americans would not support any of the factions currently struggling for control of Luxembourg.

When Luxembourg officials requested that Pershing have Soldiers ready in case there were riots or disturbances among the local populace, Pershing replied that it would not be necessary as there would be no riots or revolts.

He was right. The long lines of U.S. infantrymen moving through Luxembourg en route to Germany encouraged the troublemakers to stay home and gave credence to Pershing's statement.

Among the very first Third Army doughboys to cross into Luxembourg were the telephone linemen of the 322nd Field Signal Battalion. Not exactly sure how they would be treated by the locals, the Soldiers were pleasantly surprised by warm greetings and happily reported back to their unit that the local inhabitants considered Americans to be the liberators of Luxembourg.

By Nov. 26, 1918, most of the Third Army had reached the German border and stopped; it had been previously agreed that all Allied forces would simultaneously cross the German border on Dec. 1. The remnants of the German army were still slowly clearing out of what was soon to be the U.S. sector.

With five days to wait before they could cross the German border, most units used the pause in the movement to replenish their supplies, make what repairs they could to their uniforms and equipment, and rest their animals. It was needed.

Yet, in spite of the weather and road conditions, morale among the Soldiers remained high as they enjoyed their role as the liberators of German-occupied France and Luxembourg. That was about to change.

## Marching Through Germany

Once the troops crossed into Germany, all bets were off. It was expected that the German population would be unreceptive at best and hostile at worst. The hilly terrain in the Mosel River valley also worked against the doughboys.

Following Pershing's instructions, during the advance to the Rhine, the Soldiers were billeted in any house, barn, or shelter available. The movement of the Third Army was concentrated along the few roads running from west to east. With only small villages and farms clustered along these roads, it was impossible to provide clean and dry quarters for all of the troops. Therefore, on some nights, the marching doughboys had to eat, rest, and sleep alongside the road wherever they had stopped.

These hardships were accepted as a matter of course by the Soldiers; most of them had recently come from sleeping in open trenches under enemy gunfire and gas attacks. In comparison, the barns, haylofts, and

*A supply wagon moves near the small German town of Kaiseresch in December 1918. Each U.S. Army division of the period had between 8 and 10 thousand draft animals. (Photo courtesy of Alexander F. Barnes)*

porches of peasant cabins seemed like luxurious accommodations. Regardless, the march proved challenging for the Americans in many ways.

For logistics units, it was a particularly difficult operation. The organic supply, maintenance, and transportation units of each division were as worn out as the infantry and field artillery regiments. The Meuse-Argonne Offensive had been grueling, and many of the thousands of horses and mules in each division were as sick or as tired as the Soldiers.

Col. George C. Marshall, on behalf of Gen. Pershing, issued orders that AEF divisions not making the march were to hand over their best draft animals to those going to Germany and accept their worn-out animals in return. Similarly, they were to exchange motor vehicles, when possible, to ensure the Third Army had the best available equipment.

The U.S. headquarters sent the Third Army the directive that the "First and Second Armies will also assist you in all matters of supply until such time as you are able to dispense with such assistance." Unfortunately, many of the divisions in the First and Second Armies were as worn down as the divisions they were supposed to assist. So, the sanctioned swapping had little effect on improving the Third Army.

A requirement of the armistice made it necessary to keep a 10- to 25-kilometer separation zone between advancing Allied forces and the retreating German army. This proved to be difficult because the weather restricted the Americans' aerial observation and denied visibility of where in front of them the German army actually was. With road conditions deteriorating quickly because of the weather and heavy traffic, meeting the published march schedules was problematic for both sides.

During the march of the Allied armies into Germany, railroad traffic was suspended in the area between the hostile armies. This restriction was not a problem for the Third Army. The Americans had not even planned to use this mode of transportation because of the geographical constraints of their route through the Mosel Valley. The other Allied armies had a rail component to their movement, but for the Americans, the trip was on foot, on hoof, or by truck all the way to the Rhine.

## Increasing Difficulties

As the march continued, the daily reports from the Third Army back

*The difficulties facing the Soldiers during the march to the Rhine are readily apparent in this photograph of infantrymen from the 1st Division. Moving eastward through the Mosel Valley in cold, wet weather proved to be a challenge for even the most physically fit Soldiers. (Photo courtesy of the U.S. Army Heritage and Education Center)*

to AEF headquarters in Chaumont highlighted the problems that the advancing forces were facing. The inability to accurately gauge the location of the German forces and the confusion caused by the revolution that was sweeping throughout Germany made it difficult to provide a clear picture of the movement.

The Nov. 18, 1918, AEF report said, "The march of the Third Army to the Rhine has been resumed one day in advance of the prearranged schedule owing to the lack of established authority in the region being evacuated by the enemy. The latter is having difficulty in complying with the terms of the armistice because of the limited number of roads available for his withdrawal across the MOSELLE and SURE Rivers."

In addition to the Germans having problems moving their own units out of the occupation zones, some Germans also went out of their way to make it more difficult for the advancing Americans by cutting telegraph lines and shooting bullets through water storage tanks.

In other cases, the doughboys themselves added to the confusion. One participant of the march later recorded that a few doughboys in the 1st Division swapped some of their rations to a retreating German army unit for a motorized artillery tractor.

The doughboys used the tractor as transportation for part of the march until one of their officers caught on and made them abandon it for fear of being mistaken for a German unit. The industrious Soldiers continued the rest of the march on foot using what many would refer to later as the "Hobnail Express."

## Crossing Into Germany

On Dec. 1, 1918, after the short period of rest and refurbishment, all of the Allied armies crossed into Germany for the first time. With both Americans and Germans appearing to be on their best behavior, the march continued on a wide front through the Mosel Valley west of the Rhine.

The signal units moving in front of the Third Army found it extremely difficult to maintain communications between the moving units and their commanders because of the massive scale of the movement and the three-division-wide front. Adding to their troubles, much of the phone network they had expected to find in place had been either deliberately or accidentally damaged by the retreating Germans and, therefore, required repair or maintenance.

Motorized units also ran into problems as gasoline was in short supply. Tanker trucks in the divisional supply trains were kept busy bringing gas to keep the Third Army moving.

Still, the march continued with staggered stops and starts but was always pushing eastward with the 1st, 2nd, and 32nd Divisions leading the way. These three divisions, under the control of III Corps, were the lead elements because they had the farthest distance to travel. Ultimately, their march would lead them over the river to sectors on the far side of the Rhine.

Also moving in front of Third Army units were the advance party teams responsible for securing the billets, campsites, and stables for the troops and their horses. The advance parties and officers detailed to act as "town majors" usually preceded the main bodies of troops by 24 hours.

Upon arrival in the towns, they quickly located and developed lists of available accommodations. These billets were then assigned to units and individuals based on size and accessibility. The town majors were directed to keep accurate records of the billets and other accommodations in order to secure payment for the local property owners from the U.S. Army quartermasters at a later date.

Medical personnel making the hike became concerned as the march progressed because so many of the troops were dropping out from diseases such as mumps, flu, and pneumonia. One division had more than 2,000 Soldiers evacuated to the field hospitals during the march. The medics worried that some Soldiers would be left behind and forgotten by the advancing division. This led them to perform a nightly search along the route to ensure no Soldiers were lost.

Although the move into Germany was peaceful for the most part, there were some incidents of Germans throwing rocks at U.S. troops in the town of Kell, 12 miles southeast of Trier. It could be said that the acceptance of U.S. troops in Germany was relative to the conditions existing in each town and village they entered.

In the smaller towns and villages, there had been some stirrings of pride as the well-organized units of the retreating German army had marched through. However, as disorganized outfits with stragglers, deserters, and revolutionaries passed through, citizens had a great deal of concern and fear.

The citizens were frightened by stories filtering out of the areas east of the Rhine River, where armed revolutionaries and labor organizers were battling the police and right-wing militia groups for control of the streets. The German version of revolution and anarchy seemed to be waiting just around the corner.

Therefore, many local inhabitants welcomed the Americans for the peace and stability they would bring. Under these conditions, it is easy to see why the appearance of the uniformly healthy and comparatively well-fed U.S. doughboys, hiking through the towns behind their regimental bands to the beat of "Suwannee River" and "Dixie," created a positive impression on the Germans.

And for the doughboys? Even with their flags flying and their bands playing, it was still a hard march. In the 4th Division, the movement to take up occupation duty was no small event; its march was the longest distance covered by any U.S. unit. The 330 kilometers from the Argonne Forest was a struggle.

A sergeant of the 39th Infantry

*This photograph, taken at 6:30 a.m., shows the fatigue on the faces of these 32nd Division National Guard engineers preparing to move out after having slept beside the road overnight. (Photo courtesy of Alexander F. Barnes)*

Regiment wrote to his father, "I will not mention the fourteen days hike from the Argonne woods to Coblenz, making anywhere from twenty to fifty four kilometers a day with full field equipment. I couldn't begin to express my feelings."

## Arrival at the Rhine

And yet they made it. By Dec. 11, 1918, all four of the Allied armies reached the Rhine. The three armies (French, U.S., and British) that had occupation sectors on the east bank crossed the river in large numbers on Dec. 13, after another short pause for reorganization.

The U.S. Army's 1st, 2nd, and 32nd Divisions were on the east bank. In their wake, they left the 89th and 90th Divisions near Trier, while the 3rd, 4th, and 42nd Divisions moved into occupation sectors on the west side of the Rhine. With the arrival of the main U.S. force, the headquarters for the Third Army was established in Coblenz, using the large German government building complex on the west bank of the Rhine. By late December, all of the U.S. units had reached their occupation sectors and begun to settle.

Among the immediate concerns for the Third Army's logisticians, in addition to providing billets and food for the force, was the problem of replacing the Soldiers' worn out uniforms and shoes. During the march to the Rhine, the focus had been on feeding the troops and animals and repairing broken motor vehicles to keep the long march rolling. Now the attention turned to the Soldiers and their equipment.

The Army Medical Department determined that approximately 90 percent of the Third Army doughboys had some degree of lice infestation. Now that the troops were in their assigned sectors, the medics started a massive campaign to delouse the troops.

Only one truck-mounted steam sterilizer machine was available, so the division medics worked with the mechanics and built several steam-powered disinfecting machines. When some standard steam disinfectors and portable shower baths arrived in the zone, the lice menace was rapidly reduced. By May 31, 1919, it was down to less than 1 percent.

Of equal importance was providing winter clothing and boots for all of the Soldiers. Fortunately, a complete shoe and uniform manufacturing plant was found in Lützel, a town near Coblenz. Owned by the German government and previously a major supplier of uniforms and shoes for the German army, the plant was well laid out and complete with electrically powered machines.

The Third Army quartermasters took over operation of the facility and repaired 13,348 pairs of shoes in January and February 1919. Uniforms were also repaired, cleaned, and reissued to the troops.

When the spring of 1919 finally arrived, the Third Army logisticians had completed their work and the doughboys were as well-dressed and well-fed as they had ever been. It was

truly an amazing accomplishment, considering the difficulties they had faced.

With the Treaty of Versailles signed in June 1919, it was now time to redeploy the Third Army back to the United States and let a new occupation force, known as the American Forces in Germany, take over the job. The retrograde of eight divisions and the redistribution of their equipment, animals, and vehicles would prove to be a major challenge for the Army logisticians, but that is a story for another day.

## Lessons Learned

So what lessons learned can we take away from this operation? There are a few.

***Quartermasters are important.*** Central European winters can be extremely harsh. Any Army that is not prepared for them can quickly become disorganized and ineffective. The importance of good rations and reliable winter clothing cannot be overstated.

The AEF and the Third Army had a surprisingly low rate of trench foot and frostbite. This was mainly because of the emphasis that senior leaders put on ensuring the troops were supplied with footwear that would protect them from the problems associated with the continuously cold and wet conditions in the trenches and on the march. As a result, the doughboys suffered a lower percentage of debilitating foot injuries than U.S. Soldiers did under very similar conditions in the same part of Europe just thirty years later, during World War II.

***Common sense is a force multiplier.*** Faced with thousands of sick horses and mules, the Third Army gathered as many Soldiers as they could find with ranch, farm, or veterinary experience. Adding those Soldiers to staffs of the remount squadrons, the Americans nursed back to health many of the sick animals.

Now faced with a surplus of healthy animals, mainly because the field artillery regiments were re-equipped with trucks as prime movers and other units had redeployed to the United States, the Third Army conducted a series of auctions. Selling the now healthy draft animals to a German population desperately in need of horses for farming proved to be a lucrative business and eventually turned a profit for the U.S. Army.

***Necessity is the mother of invention.*** The Third Army's logisticians struggled to provide their Soldiers with meals while on the march. Arriving at their occupation sectors just before Christmas was a challenge for the division quartermasters. Germany had been under a blockade for several years, which caused a significant food shortage there and in the war-ravaged sections of Belgium and France. As a result, the issue of rations was quite uneven for a while.

It was noted that while the 42nd Division received a nice Christmas dinner with all the trimmings, some nearby 4th Division units received none. So, some of the 4th Division officers got creative, pooled their funds, and bought for their men what was available from the local vendors: doughnuts and beer.

***Salvage is a good thing.*** The AEF did a good job of recovering salvageable materiel. It was reported in 1919 that 91 percent of all the materiel turned in was repaired and put back into service. For recovered shoes, the rate was almost 100 percent.

Even more impressive was the salvage companies' ability to repurpose materials. The troops used recovered kitchen grease to waterproof Soldiers' boots, and stale bread was ground up and reused as flour.

Almost every doughboy arrived in France wearing the famed "Montana Peak" campaign hat. While these hats were perfect for the Mexican Expedition against Pancho Villa, they were completely impractical for the trenches. Therefore, the hats were collected at central locations and the pressed rabbit fur from which they were made was converted into slippers for the wounded and sick Soldiers in the hospitals.

Replacing those hats were the newly created "overseas hats." The wool to create some of the hats had been repurposed. Early versions of the heavyweight woolen overcoats issued to the doughboys proved to be too long to wear in the muddy trenches of Europe, so the length of the coats were shortened to the knee and the recovered material was used to make the overseas hats.

The story of the U.S. Army's occupation of the German Rhineland from December 1918 to February 1923 is not well-known, yet it represents one of the Army's shining successes in the 20th century. Perhaps forgotten because it took place between the two World Wars, it represents one of the best examples of nation building and stabilization in U.S. military history.

Logisticians' part in the march to the Rhine and their ability to feed, clothe, and support a quarter of a million combat-weary doughboys on the move in the dead of winter was truly a noteworthy accomplishment.

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# *Army Sustainment* Receives Secretary of the Army Award

*Army Sustainment*, the Army's official professional bulletin on sustainment, was awarded the 2015 Secretary of the Army Award for Publications Improvement (Departmental). The award was presented by Gerald B. O'Keefe, administrative assistant to the secretary of the Army on May 27, 2015, at an awards ceremony at the Pentagon.

The magazine earned the award for improvements made to its production workflow and overall operations from July 2013 through June 2014. This is the seventh Secretary of the Army award received by *Army Sustainment* and its predecessor *Army Logistician* over its 46 years as a Department of the Army publication.

## Transformation

Given the current fiscal environment, trends in print publishing, declining print distribution, and the number of readers interested in electronic distribution, it was clear the publication needed to better position itself to enter the digital marketplace. To do that, editorial and production processes needed to be reworked, a strategy needed to be developed, technology needed to be implemented, and senior leader engagement was required.

The goal of the transformation was to make the editing and production process more efficient, reducing the effort required for the print version and freeing up time both in editing and production to channel efforts toward digital distribution. Another goal was to create a division of labor, giving editors more control over their products throughout the print production and electronic distribution process.

## Editorial Process

The staff began by moving to a more digital process by making better use of the editing capabilities in Microsoft Word. All copy edits are now tracked using the track changes function. The project editor can address most suggested changes to the article by accepting, modifying, or rejecting the change, which saves time over typing changes into the manuscript—the method that was required when passing and marking paper copies of articles.

## Production Process

The staff implemented the use of Adobe InCopy for the editors. With InCopy, the editors make changes to the text directly in the layout, and the training required was minimal. This all but eliminates the requirement for the designer to type in the numerous changes, reduces the number of errors, and allows the editors to ensure that the correct changes are made without having to communicate those changes to the graphic designer.

## Digital Media Tactical Plan

In an effort to further develop and engage the magazine's digital readership, the staff developed and implemented a digital media tactical plan that provides the way ahead to increase awareness of the publication's online presence, engage and excite influencers and readers, and convert social media followers to *Army Sustainment* readers and subscribers.

## Digital Improvements

The result of the transformation has yielded positive digital results.

***Weekly sustainment news.*** The staff posts sustainment-related news, photos, and videos to the website weekly, providing readers with more current news. This drives to the website additional visitors who would not otherwise visit. During the award period, 65,700 visitors viewed 129,774 pages on the *Army Sustainment* website.

***Automated email distribution system.*** The *Army Sustainment* website now features a link to an automated email distribution system where readers can sign up to receive news updates and articles when the latest version of the publication is posted. The system allows for easy subscribing or unsubscribing.

It also allows the staff to track reader activity to see which types of news articles received the most activity and to invite readers to participate in discussions on social media. In the past year, the distribution system generated 75,732 views of 827 items with 10,774 clicks back to the site on 800 items.

***Social media.*** Based on a recent readership survey, the print publication's largest readership is 36 years old and older. Through social media, though, the publication's primary audience is 18 to 36 years old. During the award period, the top daily reach for the publication's Facebook page was 17,886 and Twitter was 57,786. At a high point, the publication's Twitter mention reach on June 4, 2014, was 1,782,535. Also in the same period, the publication added more than 1,100 new followers across its social media platforms.

These changes have provided a more efficient editing and production process and increased reach to *Army Sustainment* readers and subscribers. The contributions of the staff were vital to achieving the transformation. ***Editor***

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## Sustainer Spotlight

*Winners of this year's Combined Logistics Excellence Awards (CLEA) pose for a photo May 29, 2015, after being presented awards for their organizations during the ceremony. Eighteen units and organizations earned honors in this year's U.S. Army Europe-level CLEA ceremony. The CLEA encompasses three program categories: the Army Award for Maintenance Excellence, the Deployment Excellence Award, and the Supply Excellence Award. (Photo by Dee Crawford)*

*View the full list of winners here!*