ARMOR

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MAINTAINING THE COMBAT ARM OF DECISION

ARMOR

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BG David Lesperance
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Maintenance and Sustainability

For armored brigade combat teams to deliver overwhelming combat power to bear on our enemies, we must have fully combat-ready equipment and the required supplies to sustain the fight. However, the ability to conduct operations that are sustainable starts long before crossing the line of departure or receipt of mission.

Just as with lethality in our last publication, maintenance plays a critical role in ensuring our readiness. An ingrained maintenance and sustainment ethos is critical for our branch, regardless of the type of brigade in which we find ourselves.

Over the years, sound maintenance skills and best practices have atrophied. The presence of dedicated in-theater maintenance, high operations tempo and lack of experience maintaining our combat platforms contributed to a gap in the fundamental understanding of combat-power generation. Thankfully, we have a system of proven tools as well as new tools that can enable success in maintaining our fleet; we must relearn and enforce the use of those tools. Leader professional development on preventive maintenance, checks and services (PMCS) through the use of technical manuals and regulations, dedicated platoon services with in- and out-briefs and a culture of maintenance will help build readiness across all formations. These efforts are important for good maintenance execution but, more importantly, they develop leaders whom in future years understand the processes and systems they must master.

Similarly, operational sustainment must be relearned. Combined-arms maneuver at the combat-training centers (CTCs) helps underscore the importance of sustainment operations. Being a professional in combined-arms maneuver and succeeding in future fights, whether at the CTCs or against potential adversaries on foreign soil, requires sustainment foresight gained through education and experience. Currently we are accustomed to robust theater logistics support. The presence of established bases where we can essentially get whatever we need to sustain the fight may not be present at the start of our next battle. It is paramount that the tools for sustainment are brought back into the fight. Incorporating sustainment in home-station training is a big part of that. If units wait until the CTC to learn and test those systems, they will find that they don't have what they need or it arrives late.

Today the Armor School is spearheading that effort through the Maneuver Leaders Maintenance Course taught by 316th Cavalry Brigade and an increased focus on maintenance and sustainment across all programs of instruction. Also, we are increasing the level of maintenance management and PMCS rigor in the Armor Basic Officer Leader Course. These efforts are intended to lay the foundation for maintenance and sustainment leadership in our formations. Coupled with the aforementioned efforts in the operational force, we will help ensure our readiness well in advance of our next fight.

Forge the Thunderbolt!

ACRONYM QUICK-SCAN

CTC – combat-training center
PMCS – preventive maintenance, checks and services

GUNNER'S SEAT

CSM Kevin J. Muhlenbeck
Command Sergeant Major
U.S. Army Armor School

Relationships, Education, Pride

Greetings to the Soldiers and leaders of the Armor Branch. My name is CSM Kevin J. Muhlenbeck, the new command sergeant major for the U.S. Army Armor School, an opportunity and a level of responsibility I am truly humbled to have bestowed upon me. My career as an Armor Soldier has allowed me to serve in all 19K positions within an armored brigade combat team as well as in senior-noncommissioned-officer positions within a Stryker brigade combat team.

My experience at both ends of the Armor spectrum has impressed on me that although our branch is critical, it cannot fight and win alone. CSM Alan Hummel and our predecessors have done an amazing job in building relationships with the other centers of excellence to ensure the best-trained Soldiers and leaders are provided to the operational force.

My goals while in the position are the following:

- Continue to build on those relationships by maintaining clear lines of communication between the Armor School, other branch schools and leaders in the operational force.
- Assist the Soldiers and leaders of the Armor Branch in achieving their goals and educational requirements by seeking to maximize opportunities for both professional education and functional training by leveraging the capabilities of all three components of the total-army force. This will ensure our Soldiers of the Armor Branch are prepared to accomplish any task and mission our Army and our nation require.
- Continue to foster a climate of pride of being an Armor and Cavalry Soldier by educating the force on what initiatives the Armor School is working on and what the future holds for our branch by visiting 19-series Soldiers and leaders across the country and globe to hear their concerns and bring those back to the Armor School with proper feedback sent back out.

Today I had the honor of spending a few minutes with retired CSM Joe Gainey, the former senior-enlisted adviser to the Chairman of the Joint Chiefs of Staff and Armor Center command sergeant major. I showed him a coin he gave me as a platoon sergeant because I knew what he put on the bottom of every article he wrote for this publication, and I asked him if I could use that statement to close my article every quarter. I too will ask Soldiers if they know what it is as I travel, so remember these words: "**Pride is contagious!**"

Regionally Aligned Force Success in Europe Relies Heavily on Logistics Planning

U.S. Army M1A2 Abrams tanks from 1st Battalion, 8th Infantry Regiment, 3rd Armored Brigade Combat Team, 4th Infantry Division, sit on a train prior to offloading at Mihail Kogalniceanu Air Base, Romania, Feb. 14, 2017. The equipment was taken to Romania in support of Operation Atlantic Resolve, a demonstration of continued U.S. commitment to collective security through a series of actions designed to reassure NATO allies and partners of America's dedication to enduring peace and stability in the region. *(U.S. Marine Corps photo by CPL Emily Dorumsgaard)*

by MAJ Sarah Gilbert

Regionally aligned forces (RAF) deploying to Europe face a set of challenges unlike those they have previously encountered. RAF units currently fall in on an improving but still growing theater infrastructure, making logistics planning critical to the overall success of an armor brigade combat team's (ABCT) mission. Throughout the deployment, RAF units must simultaneously support several missions: ongoing support to Operation Atlantic Resolve, event-specific support to integrated North Atlantic Treaty Organization (NATO) training events and contingency support across Europe. Each mission pulls from the unit's organic pool of assets, so leaders must identify requirements early and find innovative ways to resource shortfalls.

Arriving in theater with the highest possible operational-readiness (OR) rate and sustaining that readiness directly enables RAF unit success. It also serves as a buffer to allow continued operations if parts are delayed due to immature logistics systems in theater.

When 3rd ABCT, 4thInfantry Division, returned from Kuwait in support of Operation Spartan Shield in October 2015, the unit was notified that it would be deploying to Europe as an RAF in support of Operation Atlantic Resolve in early 2017. It would take the support of the entire Army enterprise to ensure the brigade's readiness during a short (11 months) train-up complete with command-post exercises, field-training exercises (FTXs), gunnery, a brigade FTX and a National Training Center (NTC) rotation. These significant training events could potentially deteriorate 3rd ABCT's OR rate quickly if there wasn't a quality maintenance plan in place fully supported by brigade leadership. The unit's goal was a safe and successful train-up, arriving in Europe ready to fight with an OR rate of 95 percent or above.

There were 63 days between NTC completion and the beginning of RAF deployment outload for 3rd ABCT. The brigade spent considerable time developing and executing a plan for maintenance during the train-up to achieve the 95 percent OR rate upon arrival in Europe. Simultaneously, 3rd ABCT leaders organized multiple internal working groups for key topics such as shop-stockage listings (SSL) and theater concepts of support in an effort to create a common sight picture for logisticians on both sides of the Atlantic. The goal was to identify friction points early, assign responsibility for resolving those friction points and clearly communicate problems requiring elevation to higher levels.

Figure 1. A Soldier from 1st Battalion, 66th Armor Regiment, 3rd ABCT, 4th Infantry Division, ground-guides an M2A3 Bradley Fighting Vehicle to a maintenance area July 1, 2017, at the Cincu Joint Multinational Training Center in Cincu, Romania, where the brigade participated in the USAREUR-led multinational exercise Getica Saber 17. Getica Saber was a U.S.-led fire-coordination exercise and combined-arms live-fire exercise held July 8-15 to highlight participant deterrence capabilities, specifically the ability to mass forces at any given time anywhere in Europe. Besides 3rd ABCT, Getica Saber featured the Romanian 282nd Mechanized Brigade, the U.S. 1st Cavalry Division's division artillery and service members from Croatia, Ukraine, Portugal, Montenegro and Armenia. *(U.S. Army photo by SSG Ange Desinor, 3rd ABCT Public Affairs)*

Lessons-learned: what went well

The 3rd ABCT was required to ship all its organic equipment overseas. Shipping equipment was nothing new, but shipping an entire brigade's set of equipment with limited assets available to receive and move that equipment in theater drove significant analysis by the brigade staff. The 3rd ABCT recognized the need to emphasize several priorities to succeed in Europe, but these lessons apply for movement into any immature theater.

Rehearsal-of-concept (ROC) drills. Integrated planning involving 4th Infantry Division and 21st Theater Support Command staffs during the months leading up to 3rd ABCT's deployment identified friction points and directly enabled informed decisions from commanders at all levels. Planners and sustainers conducted two integrated ROC drills (one at home station and one in theater – in this case, Germany) to allow the team to visualize the flow of 3rd ABCT personnel and equipment into theater.

Each unit's support-operations officer (SPO) briefed concepts of support by phase for reception, staging, onward movement and integration (RSO&I). This proved invaluable, as it helped logisticians and supported units alike understand the limitations of Europe's logistics infrastructure.

At brigade level, 3rd ABCT enabled ROC-drill success by providing relevant and timely requests for information and identifying friction points by warfighting function.

Focusing on maintenance. During the 11-month train-up, the 3rd ABCT brigade logistics-support team (BLST) worked diligently with parts managers to identify, release and expedite parts. The brigade-logistics officer and executive officer adjusted budget forecasts to fund critical items with the full support of the division's leadership.

The final train-up milestone at NTC significantly taxed equipment, therefore 3rd ABCT expected an OR rate dip. The staff worked jointly with 4th Sustainment Brigade at home station to develop a mitigation plan for this expected dip, contracting 42 civilian inspectors to scrutinize all tracked platforms; brigade internal mechanics inspected all rolling stock.

The brigade commander directed that vehicles would load the trains only

when they were fully mission-capable; that was a Soldier's ticket home unless a repair part was significantly delayed. Mechanics and crews worked long hours side by side to ensure that vehicles were ready to move. Crew ownership was a key factor, as each Soldier knew his or her efforts would pay dividends down the line since Europe would demand more from his or her vehicles than previous deployments.

Ultimately, this emphasis on inspections and critical part installation at Fort Irwin, CA, enabled 3rd ABCT's vehicles to return to home station at a much higher OR rate than if the unit had simply waited for parts to arrive at Fort Carson, CO. That saved valuable time for focusing on other tasks once the unit returned home to prepare for outload.

Building muscle memory for deployment outload tasks. To achieve efficiency, 3rd ABCT's operations officer assigned each battalion a key task to support the NTC outload, and that same task was assigned to support the deployment outload. For example, one battalion managed the train-upload process at Fort Carson for both NTC and international deployment. Another battalion was responsible for train operations at both NTC and the port of Bremerhaven, Germany. The ability to anticipate issues the second time around allowed a safer and more rapid execution at each node.

Leveraging the enterprise. A vital component of the unit's success was integrated support from the BLST, 4th Sustainment Brigade, 4th Infantry Division G-4 and Army Material Command (AMC) to expedite critical parts for the fleet – not only at Fort Irwin but from every supply-support activity (SSA) able to support during the train-up. At NTC, this support was visible through daily maintenance meetings. At home station, weekly videoteleconferences with key leaders at AMC drove rapid solutions.

SSL scrubs. The brigade conducted weekly SSL scrubs using demand history from similar brigades, a previous Kuwait rotation and past NTC rotations to develop a common-parts listing that would enable the sustainable-readiness effort. The plan was to ensure that all SSLs would be able to support

Figure 2. PVT Daniel Hernandez, left, and PFC Corey Smith, both M1A2 Abrams main battle tank system maintainers with 64th Brigade Support Battalion, 3rd ABCT, 4th Infantry Division, conduct maintenance on a palletized load system at Dragonkasernen, Denmark, May 11, 2107. The Soldiers are preparing vehicles to support a tank team from the brigade's 1st Battalion, 66th Armor Regiment, at the Nordic Tank Challenge competition May 15-18. *(U.S. Army photo by SSG Ange Desinor, 3rd ABCT Public Affairs)*

their companies in an expeditionary environment spread over long distances. Each unit-identification code was authorized 150 lines of SSL, but in some cases, exceptions were made to increase that number to support the delayed delivery of supplies through the enterprise system downrange. This proved to be the reason the OR rate remained at a high level during the first 45 days in theater. As a point of caution, however, the number of lines continued to increase for the unit once in theater. Consistent management of this process at the company and battalion level is paramount in keeping the brigade's SSL under control.

Diverting parts from the continental United States to the forward location. Two weeks before rail upload, 3rd ABCT diverted all inbound parts to Germersheim Army Depot by changing the tactical-actions center (TAC) 1 and TAC 2 addresses. Those parts were consolidated, inventoried and held in

Germersheim until the 3rd ABCT SSA was established at Skwierzyna, Poland, and then Germersheim pushed those containers forward. In all, 41 containers of 02/05/12 priority parts arrived at the SSA over a three-week period. The SSA processed all 02 parts immediately upon receipt, and processed the 05/12 backlog in under 30 days, enabling simultaneous gunnery and steady-state support to 3rd ABCT's battalions.

In retrospect, changing the TAC code only two weeks before the deployment was not enough time to shut off the pipeline of parts to home station; the result was having to manage the shipment of parts forward or maintain them until the brigade's return.

Battlefield circulation of medical, maintenance and sustainment automation assets. The brigade-support battalion (BSB) developed a plan for battlefield circulation early to reach all battalions while they were aggregated in Poland. Behavioral health, physical therapy and dental providers traveled together via non-tactical vehicles to each location, where they stayed from two to seven days depending on the need. The maintenance company circulated communications and equipment (C&E) weekly, and the Direct-Support Electrical-System Test Set (DSESTS) supported gunnery sites for the duration of training. C&E and DSESTS traveled via military vehicles to carry their SSL to each location.

Managing changes to distribution requirements. Initial route reconnaissance via non-tactical vehicle was key for the distribution platoon because it introduced them to the distance and potential challenges they would encounter. The BSB began initial convoy operations 14 days after arrival in theater, distributing to the five aggregation locations in Poland. Within 45 days, the unit was delivering commodities to four countries, and the distribution platoon had logged more than 30,800 miles.

Troop-to-task rapidly became a full-time job, as European diplomatic-clearance requirements forced leadership to match Soldiers against missions and specific bumper numbers as many as 21 days before execution. Once the diplomatic march credits were approved, name changes and bumper number changes were not permitted. To build in flexibility, the company routinely added one more distribution system to each march credit request. If a Soldier got sick or a vehicle had maintenance issues, the company would still execute the mission minus that one system.

Lessons-learned: opportunities to improve

RSO&I posed an immense challenge for sustainers in 3rd ABCT and across Europe. Rail cars and line-haul assets were limited, and requests for support required significant lead times. Diplomatic clearances complicated movement even further due to additional requirements based on items shipped and vehicle heights. The deploying unit's inbound-equipment flow had to achieve the right balance of combat platforms and sustainment equipment over time to enable the simultaneous build of both tactical and sustainment readiness.

It was also crucial to fully understand the window for strategic-air arrival, as any delays would threaten mission-command validation exercises and logistics-information-systems gunnery. Having at least a 15-day supply of oil and lubricant products for initial-maintenance operations helped maintain the unit's combat platforms until the supply system could begin to distribute more supplies.

Time-phased force-deployment data. Part of the brigade's RSO&I plan included gunnery beginning 14 days after arrival. For this reason, and given the limited number of trains and line-haul assets available in theater, the brigade chose to prioritize combat platforms from the port to Poland. Early gunnery staging and support came from theater units until the organic BSB's equipment arrived and could begin resupply operations.

For future RAF units, a longer period between arrival and the start of gunnery may allow a more even flow of combat and sustainment platforms into the Atlantic Resolve footprint and enable organic support to early training events. More combat-sustainment-support battalion (CSSB) support also arrived in theater in 2017 following the 3rd ABCT RSO&I, enabling a more seamless gunnery timeline for the most recent RAF unit.

Strategic air. Strategic-air arrival delays caused a later start for the

Figure 3. U.S. Soldiers with 1st Battalion, 8th Infantry Regiment, 3rd ABCT, 4th Infantry Division, offload M1A2 Abrams tanks at Mihail Kogalniceanu Air Base, Constanta County, Romania, Feb. 14, 2017. The equipment was brought to Romania in support of Operation Atlantic Resolve, a demonstration of continued U.S. commitment to collective security through a series of actions designed to reassure NATO allies and partners of America's dedication to enduring peace and stability in the region. *(U.S. Marine Corps photo by CPL Emily Dorumsgaard)*

in-theater-support automation gunnery. This gunnery delay caused some initial issues with connectivity and parts ordering at both battalion and SSA level; to mitigate the delays, key leaders prioritized automation gunnery throughput to units with earlier training requirements and worked their way through the other battalions. As a learning opportunity, key leaders involved in the strategic-air planning looked at load plans and discussed how they could have grouped or prioritized items differently to ensure gunnery items arrived sooner than less-critical equipment.

Multiple concepts of support. The brigade SPO must develop concepts of support for each ongoing support effort. In 3rd ABCT's case, the unit supported steady-state operations in Poland, Germany, Latvia and Lithuania while simultaneously supporting gunnery events and training-center rotations in Poland and Germany.

Clearly delineating steady-state vs. event-driven requirements on separate concepts of support forces logisticians to recognize limitations in the number of vehicles and crews available. The earlier they recognize shortfalls, the earlier they can communicate those shortfalls to the CSSB and lock in a plan for mitigation.

Ideally, key logistics leaders should begin discussing these multiple requirements/concepts of support prior to the deployment and simply adjust them incrementally downrange. Creating these documents downrange in the midst of multiple planning efforts can tax the staff and reduce the CSSB's reaction time.

Conclusion

The 3rd ABCT completed its RAF mission in October 2017, sharing lessons-learned downrange to enable an even faster and more effective RSO&I process for the follow-on unit. With many successes and a few points of improvement to share, two key themes emerged:

- First, arrival in theater with the highest possible OR rate is paramount. Units influence this OR rate with strong maintenance plans before deployment and by adequately forecasting needs for the first month downrange.
- The second, and perhaps most important, theme was that in-theater logistics cannot be taken for granted for future deployment operations. The experience of moving an entire brigade's set of equipment and personnel from home station to theater and back allowed 3rd ABCT to recapture a skillset that has atrophied in the Army over time. The 3rd ABCT's leaders returned from Europe able to frame better questions in preparation for future deployments to immature theaters worldwide.

MAJ Sarah Gilbert is the logistics lieutenant-colonels assignments officer at Human Resources Command, Fort Knox, KY. When she wrote this article, she was serving as the battalion executive officer for 64th BSB, 3rd ABCT, 4th Infantry Division, at Fort Carson, CO, and in Poland. Previous assignments include brigade S-4, 3rd ABCT, 4th Infantry Division, Fort Carson and Kuwait; brigade exercise planner, 120th Infantry Brigade, Fort Hood, TX; assistant professor of military science, Loyola University-Maryland, Baltimore, MD; and commander, forward-support company, 1-32 Infantry Battalion, 3rd Infantry Brigade Combat Team, 10th Mountain Division, Fort Drum, NY, and in Afghanistan. MAJ Gilbert's military schooling includes Command and General Staff College, Combined Logistics Captain's Career Course and Quartermaster Officer Basic Course. She holds a bachelor's of arts degree in international studies from the University of Missouri-Columbia, a bachelor's of science degree in international business from the University of Missouri-Columbia and a master's of science degree in supply-chain management from the University of Kansas.

Acronym Quick-Scan

ABCT – armored brigade combat team
AMC – Army Materiel Command
BLST – brigade logistics-support team
BSB – brigade-support battalion
C&E – communications and equipment
CSSB – combat-sustainment-support battalion
DSESTS – Direct-Support Electrical-System Test Set
FTX – field-training exercise
NATO – North Atlantic Treaty Organization
NTC – National Training Center
OR – operational readiness
RAF – regionally aligned force
ROC – rehearsal-of-concept (drill)
RSO&I – reception, staging, onward movement and integration
SSA – supply-support activity
SSL – shop-stockage listing
SPO – support-operations officer
TAC – tactical-actions center

Using Logistics Release Point Meetings to Mitigate Persistent Friction Points in Cavalry Squadron Operations

by CPT Blake Niewenhuis

You're the squadron executive officer. It is Training Day 6 during your decisive-action rotation at the National Training Center (NTC) and nothing seems to be going smoothly:

- Four tanks that were task-organized to Comanche Troop are down for fire-resistant hydraulic fluid that has been sitting in the brigade-support area (BSA) for the last three days because the distribution-platoon leader doesn't know someone needs it.
- The logistic-status reports (logstats) your S-4 has been receiving are indecipherable wish lists.
- Apache Troop's died-of-wounds rate is at 100 percent because they are evacuating casualties 20 kilometers to the squadron aid station even though an adjacent combined-arms battalion's Role I is only six kilometers behind their troop trains.
- The S-1 hasn't received a single personnel-status report (perstat) the entire rotation and you don't know you have 60 personnel at the BSA sitting on deadlined vehicles with long lead-time parts.
- And you just found out that the Joint Battle Command Platform (JBC-P) has been jammed so the S-3 is now trying to call back troop commanders to the squadron's main command post (CP) to share graphics for some last-minute changes.

These are all actual scenarios observed by the Cobra Team's cavalry-squadron trainers from Fiscal Year (FY) 2016 into FY18 at NTC. Units eventually overcome these challenges – sometimes through face-to-face maintenance meetings at the maintenance collection point; at logistics synchronizations (logsynchs) at the squadron main CP; or with brute force on the part of individual leaders at echelon – but units that consistently put out the fires before they happen use the logistics release point (LRP) meeting. The LRP meeting is already happening in some form every 24-72 hours. When planned and executed deliberately with the right leaders, it can be used to both report and receive information and to synchronize resources for the squadron.

Persistent problems

Cavalry squadrons suffer from consistent problems in combat service support (CSS). Some are common to the other maneuver task forces, and some are unique to the squadron. Squadrons routinely suffer from inconsistent inputs and planning failures in sustainment. Logstats are submitted in some form, though timeliness and accuracy are usually an issue. Perstats are sometimes never turned in during a rotation. The effectiveness of S-4s is hit or miss, with many not being engaged in planning sustainment for the squadron, leaving planning and executing on the forward-support company (FSC) commander, who does not have the visibility of current and future operations the S-4 has as a member of the staff at the combat-trains CP (CTCP). This often has the effect of desynchronized support like setting LRP times to close to or after the line of departure. Form DA 5988e flow habitually is poor for the cavalry squadron when compared to the other maneuver task forces, partly because troops are not doctrinally allowed to consolidate into assembly areas.

Squadrons also experience problems in CSS in regard to execution. Distribution platoons are often late to the LRP without their squadron being notified, and in turn troops are late to return the logistics package (logpac) with no consequence. Troops routinely do not receive what they ask for in terms of Class IX and Class III packaged petroleum, oils and lubricants, even if it was annotated in the logstat because logpacs are being built with historical data only.

Squadrons often have difficulties with sustainment with respect to the communications primary-alternate-contingency-emergency plan and the logistics common operating picture (COP). When a squadron does have a refined logistics COP, it is often not disseminated or understood by the line troops. Troop first sergeants are not made aware of adjacent unit aid stations. Often a squadron does not have the ability to retransmit on an administration and logistics net, causing an overreliance on Joint Capabilities Release (JCR)/JBC-P for all sustainment traffic to the CTCP or field-trains CP (FTCP), which can become a single-point-of-failure in a cyber-electromagnetic activities (CEMA)-denied environment.

All these problems are exacerbated by the disparate nature of cavalry operations. Scouts are always out, but we need to get together at some point to identify and correct a lot of easy fixes that often only require a little sunlight and command emphasis.

LRP and logpac lifecycles

The creation of a troop logpac begins with the submission of a timely and accurate troop logstat to the squadron S-4. The S-4 then identifies the requirement that the FSC and troop supply sergeants in the FTCP need to fulfill. Ideally, some form of logsynch meeting occurs via frequency modulation, JBC-P/JCR chatroom or LRP meeting to validate these requirements and forecast others in the long term, which is generally within the next 72 hours in a cavalry squadron. The S-4 now begins to plan and develop the logpac with the FSC commander's input. He/she will address priorities as well as identify shortfalls and possible LRP locations based off an understanding of the squadron's current and future operations.

Later, the plan is refined, and the load plans for the logpac are finalized. FSC personnel or the S-4 noncommissioned officer in charge (NCOIC) check each supply sergeant's "shopping list" to

verify if he or she has picked up all commodities to be issued while the distribution platoon leader/platoon sergeant does the same for FSC loads. The S-4, with FSC input, finalizes the LRP location(s) and routes and notifies all subordinate units through the CTCP of the planned linkup points and times.

This cycle culminates with the execution of the LRP according to the unit's tactical standard operating procedure (tacSOP). Typically the distribution platoon meets troop first sergeants and a representative from the CTCP (S-4, S-4 NCOIC, battalion/squadron command sergeant major) at the LRP, and troop first sergeants escort their logpac break back to their troop trains. The tacSOP or S-4 dictates the return time for logpac to the LRP site. Units often have difficulty returning logpac in under four hours at NTC due to the distance cavalry troops are spread across the forward-line-of-troops. The four-hour turnaround time is reasonable and feasible, however, and any longer can disrupt the FSC's ability to receive resupply from the brigade-support battalion (BSB) in time for the next logpac cycle.

The logpacs are then escorted back to the LRP, where the distribution-platoon leader consolidates them and moves back to the FTCP. The consequence for troops who don't make the link-up time usually involves the supported troop escorting logpac back to the FTCP. Units that do not enforce a turnaround time – i.e., the distribution platoon waits at the LRP indefinitely for late logpac – will suffer from desynchronized resupply from the BSB, resulting in emergency resupply or shortfalls that will eventually effect the troops.

LRP meeting

The squadron is spread out across a distance and depth of tens of kilometers. Its communications framework may not support the amount of traffic to address multiple sustainment and support problems simultaneously. This can all be mitigated through the deliberate planning, rehearsing and executing squadron LRP meetings.

The LRP meeting is not a new concept. The following excerpt from ***ARMOR***'s September-October 2003 edition describes an armor task force conducting an LRP meeting in the then-named Combat Maneuver Training Center in 2003: "About 30 minutes before the scheduled arrival of logpac (4 p.m.), the company first sergeants arrived for the LRP meeting. …The battalion command sergeant major, Hurricane 6 (headquarters and headquarters company [HHC] commander) and Hurricane 7 (HHC first sergeant) were discussing the upcoming mission while their drivers pulled security with M-4s. ... At the LRP meeting, Hurricane 7 discussed the location of the return LRP, the return time and the make-up of the incoming logpac (order of movement). He then reminded them to collect the 5988Es, Equipment Inspection and Maintenance Worksheets, from their company crews and send them back with their company supply sergeants. The battalion command sergeant major's policy was clear: no crew made it to the company chow line without first turning in completed (dirty) 5988Es to the company maintenance team chief. Company first sergeants would supervise each crew going through their maintenance sections to turn in 5988Es, refuel, then to chow. Just like the old cavalry, the horses had to be taken care of first." (CPT Mike Sullivan and MSG Tom Pailliotet, "Field Trains and [Logistics Packages] in an Armor Task Force.")

An LRP meeting should begin 30-60 minutes before the arrival of the distribution platoon to minimize the large footprint they bring. Attendees should be at a minimum the squadron command sergeant major, S-4 and troop first sergeants, but this can be tailored to address current problems. For example, if there is an issue with perstats, units can bring the S-1. If there are problems with casualty evacuation (casevac), the medical officer (MEDO) can come, and the command sergeant major could even conduct an expedient medical evacuation (medevac)/casevac rehearsal for future operations. And so on.

(1)	CSS overlay (ensure everyone has one or issue updated via analog graphics)
(2)	Next logpac location and time
(3)	Exchange logistics reports (analog logstat/perstat)
(4)	Verify requests on logistics reports with first sergeants
(5)	Verify/update headcount (ensure first sergeants know/include attachments)
(6)	Discuss any class-of-supply problems
(7)	Verify turnaround time (four-hour standard)
(8)	Verify personnel status
(9)	Discuss troop maintenance posture; ensure Equipment Status Report reflects this
(10)	Quality assure/quality control 5988es before consolidation by the distribution-platoon leader
(11)	Verify with first sergeants that they are receiving Class IX items and evacuating repairable Class IX items
(12)	Ask if any religious support is needed within the next 24 hours
(13)	Address any specific medical problems that occur in the troop; review medevac/casevac plan
(14)	If combat operation is to occur, conduct rehearsal of the CSS portion of the operation
(15)	Discuss any other logistical issues (S-1, MEDO, squadron maintenance officers)

Table 1. Example LRP meeting agenda units can use that was inspired by a 1997 edition of 4-7 Cavalry Squadron's tacSOP.

Table 1's example LRP meeting agenda is not an authoritative list, and additions and omissions should be made based on unit needs or time available, but some form of agenda is essential in the squadron's tacSOP. Also, this meeting doesn't have to be CSS-restricted. If the opportunity arises, the S-3 could share products (graphics, fragmentary orders) through the CTCP to get to troops without calling them back to the main CP.

Distro platoon leader can't do it alone

A common error cavalry squadrons commit is not conducting any kind of LRP meeting and sending no one from squadron to oversee the operation. This leaves the distribution-platoon leader as the only face-to-face interaction that troop first sergeants have with squadron sustainment leaders, and this only makes it back to the FSC commander bypassing the S-4. Often the distro-platoon leader is a second lieutenant who is having enough trouble executing his or her own troop-leading procedures to make start-point times while trying to collate stacks of loose 5988es and doesn't normally have the capital to dictate terms to experienced troop first sergeants. Even after the coming change of the FSC distribution-platoon leader authorization to a "senior" maneuver lieutenant in armored brigade combat teams (ABCTs), the job of the LRP meeting will not be reliably completed without senior squadron leader involvement on the ground.

Conclusion

At the Cobra Team, we have observed units struggling with sustainment make immediate and significant improvements in distribution as well as maintenance reporting when they deliberately execute an LRP meeting lead by or under the supervision of the command sergeant major. This has become a standard coaching point from Cobra Team during training rotations and Leader's Training Program briefings.

In a time where cavalry squadrons are making strides to go back to the basics in the face of a near-peer enemy in a CEMA-denied environment, the touchpoint of a regular and deliberate LRP meeting can synchronize sustainment operations and consistently stop CSS problems before they happen. Squadrons should include a LRP meeting format in their tacSOP and codify the importance of the squadron, troops and the FSC adhering to a standard when executing logpac. Key-leader involvement is critical in the execution of sustainment. Squadron command sergeants major are uniquely experienced in CSS and can have an immense impact on the squadron if they take the lead in this process.

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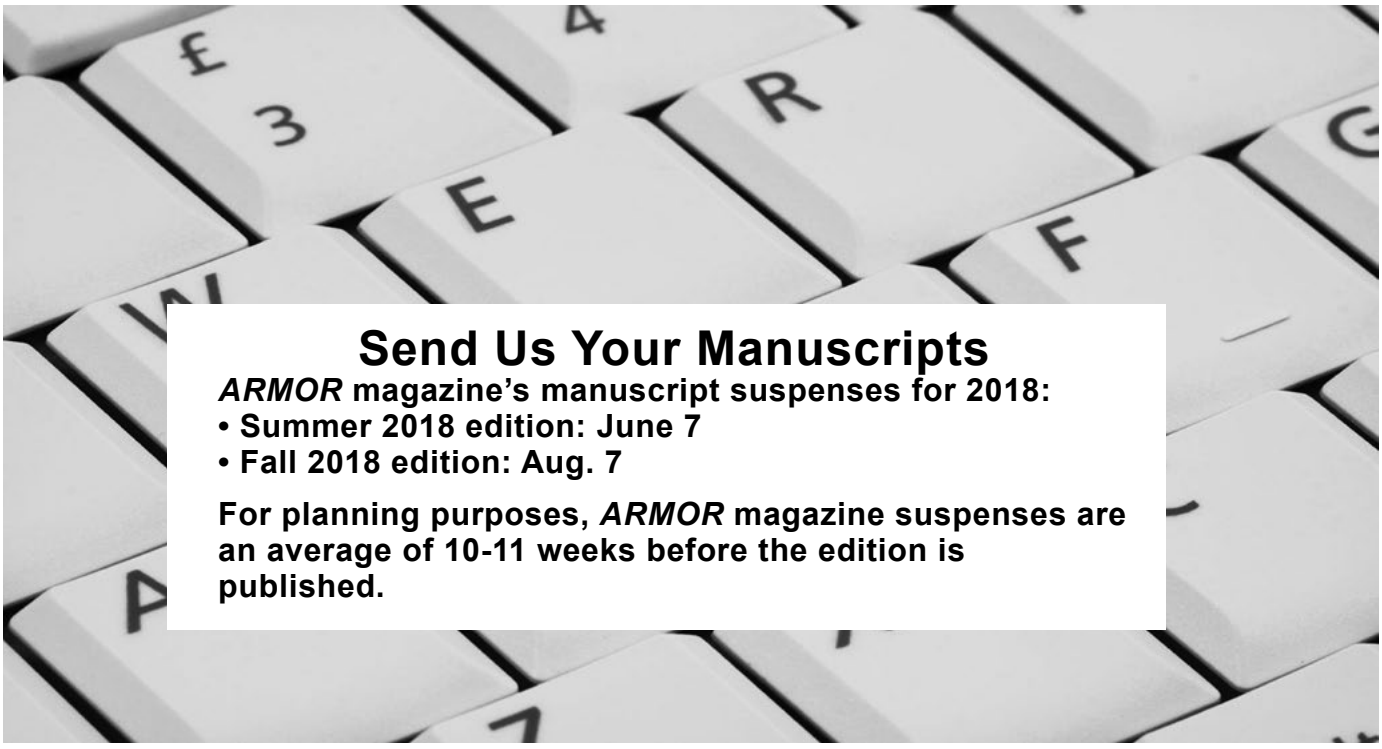
Figure 1. D FSC of 4-10 Cavalry conducts a convoy through the Goat Trail at NTC in September 2016.

commander, HHC, 123rd BSB, 3rd ABCT, 1st Armored Division, Fort Bliss, TX; battalion S-4, 123rd BSB, 3rd ABCT, 1st Armored Division, Fort Bliss, TX; and platoon leader, 2nd Platoon, 594th Transportation Company, 129th Combat Sustainment Support Battalion, 101st Sustainment Brigade, 101st Airborne Division (Air Assault), Fort Campbell, KY. His military education includes the Combined Logistics Captain's Career Course, Support Operations Course, Mortuary Affairs Officer Course, Transportation Basic Officer Leader's Course, Basic Officer Leader Leader's Course II, Air Assault School and the Pathfinder Course. He holds a bachelor's of science degree in biology from University of Texas-San Antonio. His awards include the Bronze Star Medal, two Meritorious Service Medals and the Combat Action Badge. CPT Niewenhuis is a Project Warrior program officer.

Figure 2. D FSC, 4-10 Cavalry, and B Troop, 5-7 Cavalry, make link-up at the LRP south of Hill 760 in February 2017.

Acronym Quick-Scan

ABCT – armored brigade combat team
BSA – brigade-support area
BSB – brigade-support battalion
Casevac – casualty evacuation
CEMA – cyber-electromagnetic activities
COP – common operating picture
CP – command post
CSS – combat service support
CTCP – combat-trains command post
DA 5988e – Equipment Maintenance and Inspection Worksheet
FSC – forward-support company
FTCP – field-trains command post
FY – fiscal year
HHC – headquarters and headquarters company
JCR – Joint Capabilities Release
JBC-P – Joint Battle Command Platform
Logpac – logistics package
Logstat – logistics status
Logsync – logistics synchronization
LRP – logistics release point
Medevac – medical evacuation
MEDO – medical officer (battalion/squadron)
NCOIC – noncommissioned officer in charge
NTC – National Training Center
Perstat – personnel status
TacSOP – tactical standard operating procedure



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Fusion Cell: The Bridge Between the Warfighter and Sustainment during Dagger Resolve

2/1 Armored Brigade Combat Team's Reception, Staging, Onward Movement and Integration

by LTC Brian J. Ketz, MAJ William P. Gumabon, CPT John R. Lakso and 1LT Evan T. Kowalski

German military strategist Helmuth von Moltke once famously stated that "No battle plan survives contact with the enemy." This became true when Hurricane Harvey, a Category 4 hurricane, hit the Port of Belmont, TX, as 2nd Brigade, 1st Infantry Division's armored brigade combat team (ABCT) prepared to deploy in support of Atlantic Resolve, causing a major shift in how 21st Theater Support Command executed reception, staging, onward movement and integration (RSOI) operations in support of 2/1 ABCT.

Delays in the arrival of 2/1's strategic equipment forced the warfighter to embed into the existing logistics footprint, creating a fusion cell. This fortuitous collaboration enabled 2/1 to meet its ready-to-fight tasks in 10 days by using sustainment brigade (SB)-level assets, allowing seamless communication and execution of the mission at the tactical level.

Atlantic Resolve

In an era of continued global instability and political uncertainty, the U.S. Army has maintained a persistent and credible deterrent presence in the European theater. The employment of this credible deterrent capability has resulted in the continuous rotation of ABCTs into Europe. Recently, 2/1 deployed from Fort Riley, KS, into the joint operations area (JOA) of Atlantic Resolve. The Atlantic Resolve JOA consists of the North Atlantic Treaty Organization (NATO)'s "eastern flank," including Poland, Lithuania, Latvia, Estonia, Romania and Bulgaria.

Upon arrival in Poland and achievement of Readiness Condition (RedCon) 1 status, the 2/1 ABCT replaced 3rd Brigade, 4th Infantry Division, from Fort Carson, CO. This extensive operation encompassed the concurrent deployment and redeployment of two ABCTs, each possessing roughly 3,500 personnel and 2,600 pieces of equipment – including Abrams main battle tanks, Bradley Fighting Vehicles (BFVs) and other heavy armored platforms. On top of this simultaneous movement of armored brigades, U.S. Army Europe (USAREUR) charged 2/1 ABCT with having a mere 10 days upon "ramp-down" arrival of equipment to become RedCon 1 "ready to fight."

"This rotational force, deploying with its full complement of equipment, puts U.S. armor back into Europe on a continuous basis for the first time since 2013," said LTG Frederick "Ben" Hodges, commanding general of USAREUR upon the deployment of 3/4 ABCT in January 2017. "Their forward presence is the bedrock of our country's ability to assure allies, deter adversaries and posture to act quickly if deterrence fails."

The 3/4 redeployment, coupled with the 2/1 deployment in support of Atlantic Resolve, marked the continuation of a permanent U.S. armored brigade presence in Europe. The start of "heel-to-toe rotations," made possible by the European Deterrence Initiative, demonstrates a strong signal of the United States' ironclad commitment to strengthen the defensive and deterrence capabilities of the NATO alliance.

RSOI/ABCT concept in Europe: enhancing speed of assembly

The key function of RSOI is to rapidly project U.S. forces and build combat power in an assigned area of operations, thus enhancing the overall speed of assembly. Per Army Technical Publication 3-35, seizing and retaining the initiative during deployment operations requires the seamless and expeditious deployment of personnel and equipment. The very nature of RSOI, where Soldiers and equipment rapidly

Figure 1. An M1 Abrams tank preps for rail haul Sept. 14, 2017, out of the port of Gdanks, Poland. The first vessel of three arrived at Gdanks to kick off the mission in Europe.

move from the air port of debarkation (APOD) and sea port of debarkation (SPOD) to intermediate staging bases (ISBs) and then move onward to the tactical assembly area, stresses unit integrity and limits the tactical commander's ability to effectively command and control his or her formation.

Thus, RSOI cannot be executed by the warfighter alone. Opening the theater and synchronizing the onward movement, sustainment and reception of forces across the battlespace requires the expertise and assistance of key enablers such as the Surface Deployment and Distribution Command (SDDC), Theater Sustainment Command (TSC), Army Contracting Command, Army field-support brigades (AFSBs) and the SBs.

Conceptually, the force flow of 2/1 personnel and equipment was simple, but the complexity grew with the use of five airports, two seaports and many rail assets across two European countries to ultimately reach seven dispersed ISBs in Poland. The tremendous work behind the scenes to make this possible demonstrated one of the greatest military logistical efforts and coordination requirements seen in Europe since the Cold War and the end of yearly Reforger exercises.

The 21st TSC served as the primary facilitator of all strategic logistical coordination for 2/1's RSOI. As the in-theater experts for logistics at the operational level, 21st TSC tasked 16th SB with providing mission-command overall sustainment in the Atlantic Resolve area of operations. This robust mission set consisted of facilitating theater opening, distribution and sustainment – the three pillars of SB functions. The 16th SB developed a concept of sustainment to enable 2/1 to project forces, enhance speed of assembly and build overall combat effectiveness within the 10-day timeline to achieve RedCon 1 status.

The execution of RSOI in the European theater is made doubly complicated by the stressors of distance, requirements of operating in sovereign allied nations and the coordination of sustainment support from the host nation (HN). The two elements of RSOI affected directly include transportation and sustainment. Equipment entering the European battlespace requires diplomatic clearances and march credits to move on roads if certain criteria are met. Also, certain vehicles carrying hazardous material require a special "ADR" or safety certification unique to Europe.

For sustainment, U.S. forces must adhere to HN protocols as well. For example, sustainers must ensure that all environmental factors are considered when establishing key nodes such as the fuel-system supply point, which is used for bulk refueling.

Figure 2. Camp Trzebien involved a massive logistical effort, housing two combat battalions, including all tracked equipment. This included contracted services such as maintenance tents, billets and dining. *(Photo by 1LT Evan Kowalski)*

More importantly, for any sustainment shortfalls not met organically, U.S. forces must leverage HN support through acquisition and cross-servicing agreements. These agreements include support such as billeting, cooking, washracks, motorpool space and other key sustainment functions. It is important to note that operating in Europe comes with an assortment of additional requirements and tasks unique to operating in the theater, all of which require prior coordination with other nations.

It is not feasible for an inbound unit to coordinate the immense amount of European-specific requirements. Rather, subject-matter experts must be placed at each node to enable facilitation and coordination. TSC and SB did just that by placing key actors at various locations across the theater.

For instance, 16th SB placed movement controllers at various national movement-coordination centers (NMCC) in countries where U.S. forces would be stationed. The NMCCs are HN elements that control the clearances and escorts for all military forces operating in their respective countries. This alleviated potential friction in processing diplomatic clearances, march credits or coordinating HN escorts. When movements were delayed or changed and HN escorts were required, these liaison officers were able to work with their HN counterparts to expedite requests for support and keep all actors informed. It also ensured that the respective HN was tied into the U.S. movement and operational plan, which was critical in overall support.

Another example of placing key actors at specific nodes was at each ISB. The 16th Special Troops Battalion (STB) equipped each ISB with an officer in charge (OIC) and contracting-officer representative, whose responsibility was to work with HN representatives and contractors to execute all planned life-support requirements. This also involved notifying HN representatives of inbound personnel and equipment to ensure a seamless process. It proved critical to tie in with the HN at all levels, preventing any unnecessary friction as well as de-conflicting any issues that unexpectedly arose.

Fusion-cell concept

The concept of sustainment for 2/1 RSOI consisted of developing a transportation and distribution plan, establishing life support and developing ISBs to serve as strategic platforms for the integration of incoming personnel and equipment. There were also other key enablers outside the auspice of SB capabilities, including military-police (MP) escorts, medical-support teams, signal assets and contractors. To create unity of effort, expedite the flow of information and streamline the decision-making process, 16th SB spearheaded a fusion-cell concept in which all of the key players in the RSOI process operated in a single location to facilitate shared knowledge, understanding and awareness of capabilities. The fusion cell included representatives from all organizations playing a role in the RSOI of the ABCT into Poland.

This in effect generated a common operations picture (COP) for commanders and staffs at all levels to see the battlespace in real time and make informed decisions when needed. This also allowed key players to gain access to information such as the status of movements or port download operations immediately and de-conflict any issues as they arose. The fusion cell, facilitated by sustainers and representatives from the supported unit, ultimately and seamlessly enabled the warfighter's ability to conduct ready-to-fight tasks.

The fusion cell initially synchronized all logistical and sustainment support. However, the delay of 2/1's strategic signal assets required them to leverage 16th SB's communication nodes, which were located in the fusion cell. Due to the proximity of the 2/1 executive officer, S-3 and S-4 with 16th SB fusion-cell staff, it was initially apparent that the sustainment community and warfighters had a different understanding of the battlespace.

For example, 2/1 had planned to move BFVs from 82nd Engineer Battalion to ISB Bolesławiec. When this concept was briefed in the fusion cell, the 16th SB movement-control experts knew this was not possible, as an overpass along the route was not suitable for tracked vehicles. This resulted in adjusting the rail build at the port and moving the BFVs to sites where they could more easily conduct their ready-to-fight tasks.

Similar scenarios played out daily affecting personnel, equipment and classes of supply, proving that working hand-in-hand with 2/1 ABCT's operations staff streamlined the entire RSOI process. This in effect allowed the warfighter to focus on the immediate ready-to-fight tasks at hand as opposed to the minutia of movement control or logistical requirements.

Also, the fusion cell paid dividends when the situation on the ground changed from the original plan due to Hurricane Harvey's disastrous impact on port operations in Texas. When the ship carrying much of 2/1's wheeled assets originally destined for the SPOD of Bremerhaven, Germany, was indefinitely delayed, there was not enough time to change the dates of the APOD movements for 2/1's port-support activity (PSA) – meaning that hundreds of 2/1 Soldiers would be stuck at a port in Germany with nothing to do, consuming the unit's readiness and key life support from the HN and 16th SB.

Noting this, the fusion cell was able to immediately flex contracted buses coordinated by 16th SB to pick up the Soldiers in Germany and take them to Poland, where they were able to assist in completing their unit's ready-to-fight tasks. The fusion cell also ensured there was transportation available (and the life support on tap) to take the Soldiers back to Germany to perform their PSA duties when the ship arrived in theater.

Investments made up front in placing key personnel into the fusion cell during operations pays dividends in the mission's success. It also ensures that information flows up and down and between organizations efficiently while allowing timely decisions to be made. During the 2/1 RSOI, the fusion cell consisted of elements from 16th SB's Support Operations Office (SPO) and S-3, 16th STB, 497th Combat Sustainment-Support Battalion (CSSB), 330th Movement-Control Battalion (MCB), 18th MP Brigade, 30th Medical Brigade and 2/1 ABCT staff. Each night, the fusion cell hosted a synch with more participants, including 4th Infantry Division Missions Command Element, 2nd Signal Brigade, 409th Contracting Command's contracting officers, ISB and mayor-cell representatives, Army and Air Force Exchange Service (AAFES), Installation Management Command-East, Morale, Welfare and Recreation and any other key players who contributed to RSOI activities. The synch de-conflicted requirements or issues for the next 72 hours and included an after-action

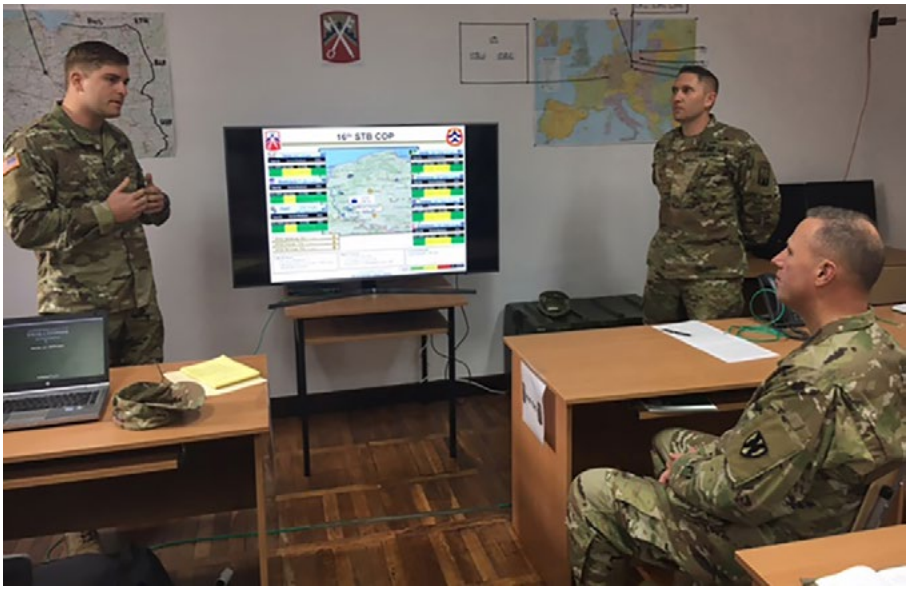

Figure 3. MAJ Jeremy Eckel, 106th Financial Management Support Unit commander, and CPT John Lakso, 16th STB operations officer, brief the fusion-cell COP Sept. 4, 2017, to BG Frederick R. Maiocco, 21st TSC's deputy commanding general and 7th Mission Support Command's commanding general. *(Photo by 1LT Evan Kowalski)*

review of all events that took place in the last 24 hours, allowing all parties to take part in the learning process of RSOI into Europe.

Bringing all associated parties into the same area allowed efficient and well-informed decision-making to take place. This also ensured that all organizations tracked the same information and that a true COP was developed horizontally among the different supporting and supported units, and vertically between the operational and tactical players in the RSOI process.

Daily synch meetings were crucial in maintaining a steady and fluid operation. These meetings took place every evening with all mentioned participants and went over the past 24 hours with any significant updates or issues. The meeting also highlighted events taking place in the next 24, 48 and 72 hours. Also, the meeting allowed commodity managers within the 16th SB SPO to provide any updates such as ammunition movements or fuel pushes. The MCB briefed incoming movements and ensured that all moves requiring MP escorts were coordinated, as well as ISB managers coordinating base access through HN counterparts. The meeting also covered all classes of supply, logistical issues and ongoing sustainment requirements.

The nightly synch provided an opportunity for all players to understand the various requirements across the board while sourcing solutions to meet each one. Most importantly, this allowed 2/1 ABCT representatives to understand the logistical support being coordinated, which ultimately enabled the brigade's combat power and ready-to-fight status and allowed 16th SB to rapidly flex support to 2/1 when it was needed.

Developing, executing and transferring the fusion cell

Setting up, executing and then transferring a fusion cell across multiple brigades to receive a unit more than 5,000 miles away is no simple task. The 16th STB took the lead of setting the stage for the fusion cell, associated parties and all 2/1 ABCT personnel and equipment. This process involved establishing seven ISBs, multiple APODs, rail ports of debarkation (RPODs) and SPODs, setting conditions for the fusion cell and 16th SB's brigade tactical-actions center (TAC)-forward, and hosting the fusion cell nightly synch. All these actions were critical in allowing unbroken RSOI operations to occur and in developing a COP.

First, 16th STB needed to understand the battlespace at the tactical level. The STB participated in two key pre-deployment site surveys (PDSS); the first occurred simultaneously with 2/1 ABCT's PDSS, and the second was a sustainment-focused site survey. The 2/1 ABCT PDSS allowed the sustainment enablers to understand the 2/1 commander's intent and provide the 2/1 leadership with an understanding of the complexity and constraints of operating in the European theater. The second sustainment PDSS was to confirm requirements with the supported unit and determine if they would be supported by the HN, contracted solutions or through organic means.

Another key aspect of the PDSS was to facilitate cross-talk, communication and relationship-building, which helped ensure a streamlined process during mission execution. These events initiated the conversation among all key players, effectively synchronizing and fulfilling the requirements associated with the fusion cell.

Following the PDSS, the STB continued the conversation by hosting weekly meetings. These meetings were critical in keeping all parties updated as the deployment plan or other conditions changed. When it was noted in one of the sync meetings by 4th Infantry Division that 3/4 ABCT would be required to stay in certain Polish ISBs for longer than originally planned (thus overlapping with 2/1), the logistics and contracting planners were able to amend the ISB plan to ensure enough beds and other life-support requirements would be available for both 3/4 and

Figure 4. LTC Brian Ketz, 16th STB commander, surveys logistical nodes at Camp Karliki, one of seven ISBs, with Polish HN representatives July 19, 2017. *(Photo by 1LT Evan Kowalski)*

2/1 when and where they overlapped. Without these key sustainment sync meetings hosted by 16th STB, this information would not have gotten to the key logistics enablers with enough time to positively affect mission outcomes.

As discussed, the fusion cell created the necessary synergy to complete RSOI operations. The final step was the dissolution of the fusion cell and transfer back to the doctrinal approach to operations. To execute a successful transfer, there needs to be a systematic approach. All the elements of the fusion cells must identify conditions that must be met by the operational unit to transfer. These conditions are not time-based but rather are based on the available capabilities being in position. In 2/1's case, this meant that 299th Brigade-Support Battalion had to integrate into the fusion cell along with the brigade S-4 and systematically relieve the sustainment enablers.

Conclusion

The U.S. Army is committed to maintaining a persistent and credible deterrent presence in the European theater. In the foreseeable future, there will continue to be an ABCT in the European theater, and we must be prepared for exponential combat power to be deployed to the theater. Execution of the fusion-cell concept at the brigade level will allow for enhanced coordination at tactical level.

The fusion cell ultimately synchronized all logistical and sustainment support, streamlining the RSOI of 2/1 ABCT. This in effect allowed the warfighter to primarily focus on the immediate ready-to-fight tasks at hand. As the battlespace remains volatile and unpredictable, the fusion cell is a concept that should be replicated across future operations. This concept creates a shared understanding in real time, which proves critical in a fast-paced environment where decision-making occurs in a short window. All this proves critical in furthering the U.S. Army's strategic mission of maintaining a persistent and credible deterrent presence in the European theater.

LTC Brian Ketz commands 16th STB, 16th SB, Baumholder, Germany. Previous assignments include executive officer for the assistant secretary (Veteran's Employee and Training Service (VETS)),

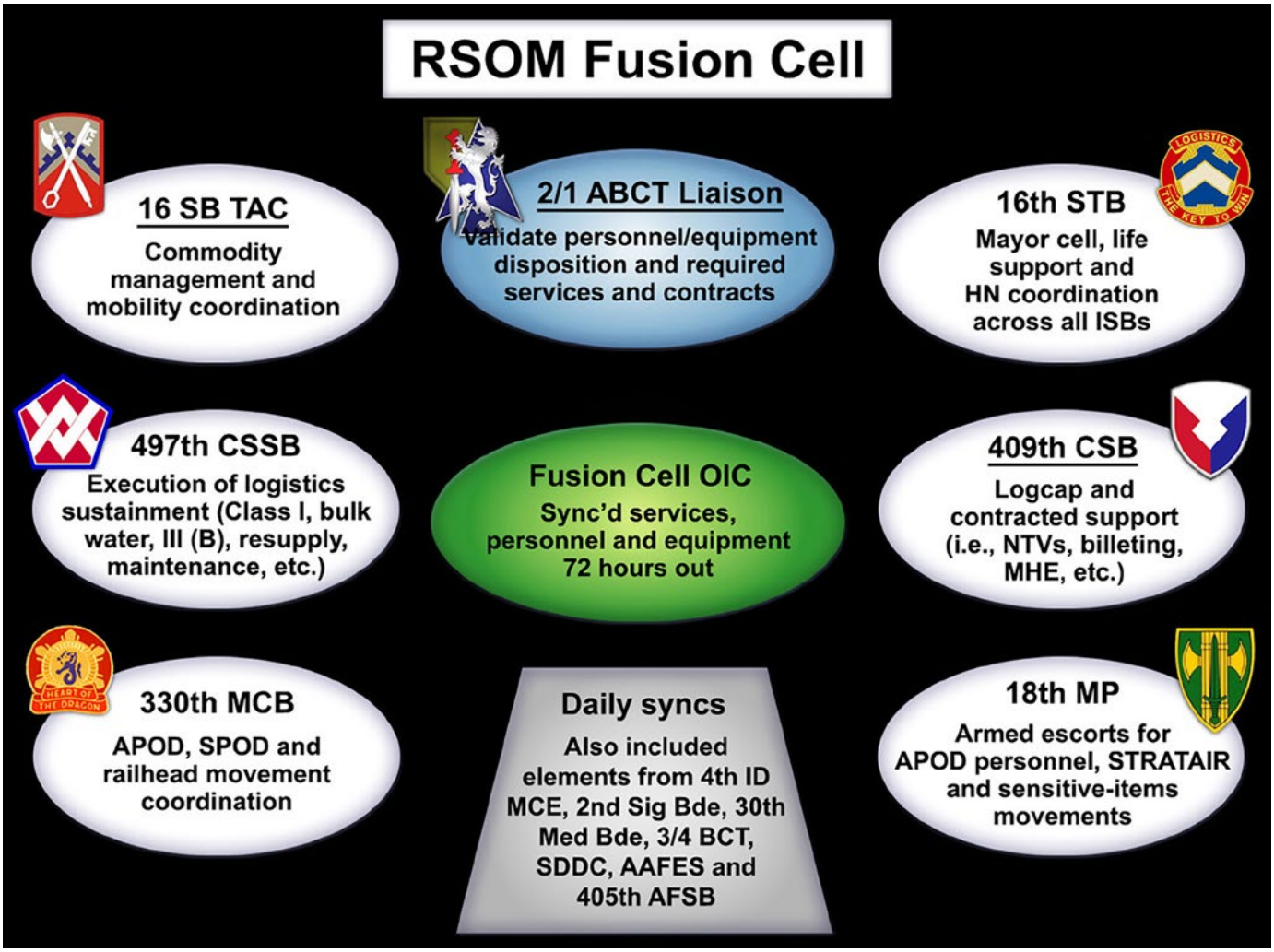

Figure 5. The integration of key sustainment enablers and maneuver elements into the fusion cell during reception, staging and onward movement (RSOM) was integral to the ABCT's ability to accomplish ready-to-fight tasks. *(Adapted from diagram by MAJ William Gumabon)*

Department of Labor, Washington, DC; chief of staff, VETS, Department of Labor; chief, Plans and Operations, Comptroller's Office, USAREUR, Heidelberg, Germany; and commander, Headquarters and Headquarters Company (HHC), 175th Finance Command, Yongsan, Korea. He is a graduate of the Armor Officer Basic Course, Finance Captain's Career Course, and Ranger, air-assault and airborne school. He holds a bachelor's of science degree in economics and business management from Norwich University and a master's of business administration in business from Seattle University. His awards and honors include the Meritorious Service Medal with two oak-leaf clusters.

MAJ William Gumabon is the executive officer, 16th STB, Baumholder. Previous assignments include brigade S-4, 16th SB, Baumholder; brigade-support operations officer and brigade S-1, 403rd AFSB, Camp Henry, South Korea; aide-de-camp to the commanding general, U.S. Army Japan/I Corps Forward, Camp Zama, Japan; supply-management officer, 35th CSSB, Sagami Depot, Japan; HHC commander and executive officer, U.S. Army Garrison-Japan, Camp Zama, Japan; and logistics trainer, Military Transition Team, Iraq. His military schooling includes Command and General Staff College and Combined Logistics Captain's Course. He holds a bachelor's of science degree in hospitality management from Johnson & Wales University and a master's degree in human-resource management from Hawaii Pacific University. Major awards include the Meritorious Service Medal (three oak-leaf clusters).

CPT John Lakso is the S-3 for 16th STB, 16th SB, Baumholder. Previous assignments include adjutant, 16th SB, Baumholder; logistics planner, NATO Force Integration Unit, Tallinn, Estonia; training officer, 16th SB, Baumholder; and executive officer, HHC, 16th SB, Baumholder. His military schooling includes the Chemical Basic Officer Leader Course. He holds a bachelor's degree in political science from Duke University and is pursuing a master's of business administration from Harvard Business School.

1LT Evan Kowalski is the S-4 for 16th STB, 16th SB, Baumholder. Previous assignments include OIC, operational-contracting-support integration, Baumholder; executive officer, 720th Ordnance Company, Baumholder; executive officer, 317th Support Maintenance Company, Baumholder; and maintenance-support-platoon leader, 317th Support Maintenance Company, Baumholder. His military schooling includes Logistics Captain's Career Course, Quartermaster Basic Officer Leader Course, Sabalauski Air Assault School and the American Service Academy Program. He holds a bachelor's degree in international history from the U.S. Military Academy.

Acronym Quick-Scan

AAFES – Army and Air Force Exchange Service
ABCT – armored brigade combat team
AFSB – Army field-support brigade
APOD – air port of debarkation
BFV – Bradley Fighting Vehicle
COP – common operations picture
CSSB – combat sustainment-support battalion
HHC – headquarters and headquarters company
HN – host nation
ISB – intermediate staging base
JOA – joint operations area
MCB – movement-control battalion
MP – military police
NATO – North Atlantic Treaty Organization
NMCC – national movement-coordination center
OIC – officer in charge
PDSS – pre-deployment site survey
PSA – port-support activity
Redcon – readiness condition
RPOD – rail port of debarkation
RSOI – reception, staging, onward movement and integration
RSOM – reception, staging and onward movement
SB – sustainment brigade
SDDC – Surface Deployment and Distribution Command
SPO – support-operations office
SPOD – sea port of debarkation
STB – special troops battalion
TAC – tactical-actions center
TSC – Theater Sustainment Command
USAREUR – U.S. Army Europe
VETS – Veteran's Employee and Training Service

Lessons Future Security-Force Assistance Brigades Should Consider

by LTC Stu James and CPT Andrew T. Kydes

The U.S. Army's security-force assistance brigade (SFAB) mission is currently in full swing at Fort Benning, GA (https://www.army.mil/article/188004/security_force_assistance_brigades_to_free_brigade_combat_teams_from_advise_assist_mission). These SFABs are tasked to conduct advise-and-assist missions for the Army in combatant theaters across the world.

The advise-and-assist mission is one the Army has arguably done for years under a different name: enable, advise and assist (EAA) teams.

One SFAB, 3rd Armored Brigade Combat Team (Bulldogs), 1st Armored Division, deployed to Kuwait in support of Operation Spartan Shield (OSS) in Summer 2016 to support regional partners with operational missions, bilateral and multilateral military exercises and theater-security cooperation activities in U.S. Central Command (CENTCOM). The Bulldog Brigade fulfilled the role of the CENTCOM commander's theater reserve, which consisted of multiple missions; however, its primary purpose was to reassure our allies of U.S. commitment to the region.

While most battalions under the Bulldog Brigade served in support of OSS, there was a small element from 1st Battalion, 67th Armor Regiment (Death Dealers), that deployed to Iraq in support of Operation Inherent Resolve. Task Force Dealer, which was attached to 2nd Brigade, 101st Airborne (Strike), was responsible for filling an armor-expertise capability gap. Task Force Dealer's mission was to advise-and-assist 9th Iraqi Army Division, which was the only Iraqi armored division in the fight to degrade and destroy the Islamic State (IS).

Task Force Dealer deployed to Iraq with about a platoon's worth of Soldiers, responsible for serving as the battalion tactical command post (TAC) and as the TAC's security element. The TAC consisted of a senior armor adviser, an intelligence section, an operations section, a fires team, a sustainment officer and a signal noncommissioned officer.

In late August 2016, Task Force Dealer, along with support from U.S. Special Operations elements, was tasked with its EAA mission: Iraqi Security Forces' seizure and clearance of Qayyarah Airfield, an airfield about 50 miles south of Mosul that later served as a

strategic logistics base for Iraqi elements during the clearance of Mosul. Following the seizure of the airfield at Qayyarah, the Iraqi Security Forces took a brief strategic pause before beginning the battle to retake Mosul in mid-October 2016. The Iraqi Security Forces successfully cleared the eastern half of the city by late January 2017.

The Iraqi Security Forces were supported by Task Force Dealer, as well as many other coalition EAA teams' intelligence, fires, air support, targeting and logistics. During its nine-month deployment, Task Force Dealer partnered with and conducted EAA missions with the Iraqi army, Iraqi Federal Police and Iraqi Special Forces elements, which were all a part of the Iraqi Security Forces.

The task force learned five valuable lessons that future EAAs or SFABs should consider to best enable and support a military-partner force in achieving its tactical, operational and strategic goals. These five lessons are:

- The power of relationships. They are the most critical aspect of a successful EAA team and should not be underestimated.
- Integrated intelligence, fires. Have an integrated intelligence and fires team proficient in intelligence, surveillance and reconnaissance (ISR) as well as close air support (CAS) assets.
- Agile mission-command suite. Needed.
- Detailed/deliberate focus on logistics and sustainment. Required.
- Mental agility. Soldiers must have the mental agility to respond to and support the rapidly changing complex environment.

Power of relationships

Human interaction is at the forefront of effective advising. From this human interaction stems a relationship, hinged on the establishment of mutual trust that can make or break an EAA team.

The first exchange between Task Force Dealer and 9th Iraqi Army Division leadership was over dinner. Prior to arriving in theater, Task Force Dealer had heard stories from Iraq veterans about how important, yet uncomfortable, it may be to break bread with a partner force. Meals with the Iraqi officers and U.S. Soldiers were significantly different. Some differences included: 1) meals lasted several hours, and conversation did not include topics about the mission or work; 2) Iraqis did not use silverware but rather ate all foods with their right hand; and 3) refusal to eat something on your plate was unacceptable.

Breaking bread with the 9th Iraqi Army forced Task Force Dealer's commander and intelligence officer out of their comfort zones and into a new cultural norm. They learned that patience and quality time spent with one's counterpart significantly strengthened the adviser-counterpart relationship, which in turn generated a more productive working alliance that benefitted all other aspects of the mission.

It is imperative that EAA teams avoid the "ugly" American advisory style. Characteristics of this style include being impatient, threatening, narrow-minded and commanding. A guiding statement by senior Army leadership that Task Force Dealer abided by was: "This can't be the Task Force Dealer plan. It needs to be an Iraqi plan with Iraqi buy-in. It's the Iraqis' war and we (the U.S.) are here supporting them."

This task was extremely challenging because the Iraqi Security Forces lacked warfighting fundamentals and doctrine that are critical in establishing any type of military plan. The 9th Iraqi Army Division relied on Task Force Dealer to generate plans for upcoming operations. Due to the Iraqis' lack of fundamentals, Task Force Dealer conducted basic officer professional development (OPD) that focused on maneuver basics as well as the characteristics of the offense and defense. The OPDs were well received by Iraqi senior commanders and facilitated them in developing thorough plans as well as procedures to assess their own plans and operations.

Advisers must work effectively with linguists (also known as translators or interpreters). Linguists are vital intercultural intermediaries and are essential for communicating with foreign counterparts. Task Force Dealer was fortunate to have two military linguists (09Ls), natives of Iraq, who understood military terminology and the commander's intent, as well as the Iraqi history and culture of which the Iraqi generals prided themselves.

Typically, linguists lack vocabulary and cultural understanding to provide beneficial translations beyond a basic level. This, in turn, presents a large problem: without effective communications, advisory missions are fated for failure. Whether linguists assigned to

Figure 1. The command team from 3rd Platoon, 1st Battalion, 67th Armor Regiment, sits down for lunch in April 2012 with O'Jan, the Afghan Local Police commander in the village of Kvahjeh Molk on the banks of the Arghandab River, Afghanistan. The 1/67 also deployed to Iraq several years later to repeat their advise-and-assist role with the Iraqi security forces. *(Photo by Petty Officer 1st Class Farrukh Daniel)*

the EAA team are military linguists or contractors, one must ensure the linguists have a robust military lexicon that can be translated and understood in the counterpart's language.

Also, linguists must understand and not overextend their role when translating conversations between two senior leaders. The linguist's role is simply to translate the conversation between both parties. Task Force Dealer had one instance when a linguist went rogue and explored his own agenda by bringing up a sensitive political issue with an Iraqi major general. This incident almost permanently ruptured the EAA team's relationship with 9th Iraqi Army Division. Therefore, as a way to eliminate any misconceptions regarding a linguist's position, it is critical that one properly coaches and mentors the linguist regarding his or her role and job expectations, especially for key-leader engagements.

Integrated intelligence, fires sections

The Iraqi Security Forces' capability gap, particularly regarding the intelligence and fires warfighting functions, forced Task Force Dealer to play a more active role in identifying enemy threats and removing those enemy threats from the battlefield. U.S. assistance to the Iraqi Security Forces relied heavily on unmanned aerial vehicles (UAVs), CAS and long-range and accurate indirect fires.

Often times, Iraqi Security Forces were hesitant to maneuver without the Coalition Force's ISR or fires coverage. It seemed that knowing a UAV was overhead brought a sense of comfort and resolve to Iraqi generals and soldiers as they prepared to enter an IS-held village or city. ISR, CAS and long-range artillery emboldened Iraqi commanders' decision-making and confidence as they understood the capabilities these assets brought to the fight.

Task Force Dealer's detailed mission analysis of the terrain and enemy drove the fires and targeting process. Task Force Dealer's senior intelligence officer provided the 9th Iraqi Army Division commander the enemy situation as it pertained to IS in a specific area, as well as intelligence priorities and focus areas for U.S. battalion and brigade intelligence assets such as Aerosandes/Portable Unmanned Aircraft, Grey Eagles (MC-12) and Reapers (MQ-9).

These focus areas that attempted to answer intelligence gaps became Task Force Dealer's and 9th Iraqi Army Division's named areas of interest (NAIs). These NAIs would often become target areas of interest for which Task Force Dealer would coordinate, integrate and deliver fires. CAS was the primary engager for high-value targets such as vehicle-borne improvised explosive devices (VBIEDs), VBIED factories, groupings of IS fighters and mortar and artillery pieces. Long-range artillery provided what the EAA teams and Iraqi Security Forces called "motivational fires" as well as provided terrain denial and illumination missions.

Simply put, the EAA team's ability to provide actionable intelligence and lethal fires was arguably the most visible measure of U.S. assistance that built instant credibility and mutual trust with the partner force.

EAA teams must deploy with a trained intelligence section focused on collection management. Each task force should deploy with a trained collection manager who has attended the Collection Manager Course at Fort Huachuca, AZ, and who understands collection-management planning and integration with U.S. Air Force aerial platforms and joint tactical air controllers (JTACs). The integration of Air Force JTACs in a Task Force Dealer intelligence and fires cell provides a critical strike capability to the Iraqi Security Forces maneuver element on the ground.

Also, the team must have an intelligence Soldier who serves as the EAA team's ISR tactical controller (ITC). The ITC is responsible for providing real-time overwatch during movement of unmanned aerial systems (UASs) to and from the target area. The 101st Airborne's Strike Brigade often allocated at least one tactical UAS to each EAA team, sometimes with the ability of sensor-tasking authority over the asset; for the EAA team to control the asset, it must have a Soldier ITC-trained.

The EAA team's success relies heavily on the team's ability to integrate intelligence and fires. Unfortunately, this integration does not typically occur. Fires and intelligence sections frequently plan in a vacuum and fail to work on the targeting process together. The most successful EAA teams must have intelligence and fires sections that work closely together and that are in constant dialogue. Such dialogue consists of answering the ground commander's priority-intelligence requirements and employing effects-based targeting across the battlefield.

Agile mission-command suite

Agile mission command is a top priority for most commanders and, in the case of Task Force Dealer, it became a necessity when enabling and assisting our partners. The ability to communicate up, down, between and across echelons stationary and on the move was absolutely critical. However, this demand was challenging for Task Force Dealer due to limited resources, a tyranny of distance and heavy reliance on upper tactical Internet such as video-teleconferences and Secure Voice over Internet Protocol.

Based on mission demands, Task Force Dealer was assigned two infantry companies in December 2016, both with JTAC and explosive-ordnance-disposal enablers, tasked to serve as advise, assist, accompany and enable (A3E) teams with the Iraqi Federal Police and Iraqi Emergency Response Division. Because A3E team commanders were responsible for accompanying Iraqi Security Forces throughout parts of eastern Mosul, the teams required the ability to interact with and provide feedback to their higher-level commanders and subordinates on the move as they were bound to the partner force's mission. A3E commanders were sometimes limited in their ability to maintain communications with their higher headquarters due to their constant on-the-move missions and often were dependent on attached U.S. Special Operations Command elements to help pass information to their higher headquarters.

Task Force Dealer's and all A3E teams' combat vehicles consisted of mine-resistant, ambush-protected (MRAP) all-terrain vehicles. These vehicles were integrated with Warfighter Information

Network-Tactical (WIN-T) Increment 2 (Inc 2) points of presence and soldier-network extensions, making it possible for A3E commanders to not just make a frequency-modulation radio call or tactical-satellite call to headquarters, but rather to send a more holistic common operating picture (COP). WIN-T Inc 2 enables commanders to connect to U.S. tactical secure/non-secure networks and the Coalition network.

The only limitation to the MRAP was its limited carrying capacity of four Soldiers compared to the Stryker's double V-hull that has the ability to move eight Soldiers with the same mission-command suite.

As a result, A3E teams and leaders must understand mission-command on-the-move (MCOM) and its importance in being able to exchange critical battlefield information between echelons. If understood and executed properly, MCOM provides the ability for Soldiers to be tethered to their respective tactical-operations centers to receive a COP. MCOM enables leaders to place themselves at the most critical points on the battlefield, such as an abandoned building or on in a remote valley, where he or she could best advise and assist a partner force. There is clearly a need for more expeditionary network communications equipment – such as inflatable satellite antennas – that can be deployed at the tactical edge of operations and as a slingloadable version of the WIN-T tactical-communications node.

Detailed, deliberate focus on logistics/ sustainment

The logistics system is critical to the success of any army. One of its most significant tasks for the EAA team during the nine-month deployment was how to train 9th Iraqi Army Division on management of its supply, maintenance and transportation systems. U.S. logistics-training advisory teams are deployed throughout Iraq to teach Iraqi soldiers how to effectively complete logistics tasks such as ordering supplies and maintaining equipment.

Task Force Dealer only brought one logistics officer forward to Iraq. As you can imagine, this individual had his hands full, as the average operation-readiness (OR) rate for the only Iraqi armor division was less than 50 percent. To combat this low OR rate, the U.S. provided Iraq train-and-equip funds that supplied the necessary assets and capabilities to achieve increasingly higher levels of partner participation. With comprehensive and consistent coalition support, partner forces steadily gained the confidence needed to fight and win against IS.

Logistics challenges were also common for EAA teams across Iraq due to the fact that they were constantly on the move in relatively remote locations and supported the Iraqi Security Force's increasing tempo. Task Force Dealer was forced to rely on third-party vendors and contractors for fuel, waste removal, water and security infrastructure (for example, berming and T-wall emplacement).

EAA logistics officers must remain proactive and integrative in the planning process to forecast contracts and mitigate potential sustainment issues. EAA commanders and executive officers must retain a deliberate focus on sustainment, as it drives the EAA team's ability to move in support of the partner force.

On many occasions it took days, sometimes weeks, before contracts were approved and funding was provided to get some of the most basic life-support essentials, including clean water. In comparison, our Special Operations partners had readily available funding that allowed them more flexibility when it came to acquiring basic life-support needs. Highly mobile Task Force Dealer Soldiers lived in Force Providers, essentially deployable base camps, that could be set up and fully operational in as little as 3½ hours. Force Providers facilitated Task Force Dealer's ability to move rapidly; however, they provided little to no survivability from enemy small arms, nor sheltered Iraqi defense forces from shrapnel.

As a result of the lack of survivability, Task Force Dealer was dependent on third-party/local-national contractors to bring in T-walls to help protect its Soldiers.

EAA logistics officers must remain proactive and integrative in the planning process to forecast contracts and mitigate potential sustainment issues. EAA commanders and executive officers must retain a deliberate focus on sustainment, as it drives the EAA team's ability to move in support of the partner force.

Mental agility

EAA-team Soldiers and leaders must remain flexible and adaptable in the unstable, unpredictable and constantly changing conditions of war. During the nine-month deployment, Task Force Dealer worked with four Iraqi partner forces: 9th Iraqi Army Division, 16th Iraqi Army Division, Federal Police and Emergency Response Division. Each organization had a unique mission in the fight to defeat the Islamic Caliphate. Task Force Dealer was originally brought forward to advise the only armored division in the Iraqi army; however, when the team received a change of mission in December to advise the Federal Police and Emergency Response Division in the clearance of eastern Mosul, it needed to quickly learn new organizations and new leaders. Despite lacking experience working with police or emergency-response units, Task Force Dealer assumed the mission and succeeded because of the team's mental agility and adaptability.

Successful EAA teams have leaders and Soldiers who can adapt to changing circumstances and environments, and who are resilient, flexible, resourceful and innovative.

In conclusion, this article highlights five vital lessons that future EAA teams

and SFABs should consider before assuming an advise-and-assist mission with a foreign partner force. These lessons include the power of relationships, an integrated intelligence and fires section, agile mission command, a detailed focus on logistics and sustainment, and the mental agility to respond to a complex environment.

The most fundamental and important of these lessons is the strength of the relationship between the specialized unit or team and foreign force. The success of the EAA team or SFAB depends on it, as it affect all aspects of mission success.

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Acronym Quick-Scan

A3E – advice, assist, accompany and enable
CAS – close air support
CENTCOM – (U.S.) Central Command
COP – common operating picture
EAA – enable, advise and assist
Inc 2 – Increment 2
IS – Islamic State
ISR – intelligence, surveillance and reconnaissance
ITC – i(ntelligence, surveillance and reconnaissance) tactical controller
JTAC – joint tactical air controller
MCOM – mission-command on-the-move
MRAP – mine-resistant, ambush-protected
NAI – named area of interest
OPD – officer professional development
OR – operational readiness
OSS – Operation Spartan Shield
SFAB – security-force assistance brigade
TAC – tactical command post
UAS – unmanned aerial system
UAV – unmanned aerial vehicle
VBIED – vehicle-borne improvised explosive device
WIN-T – Warfighter Information Network-Tactical

Unifying the Brigade Combat Team Information-Collection Effort

by CPT Bradley M. Wellsandt

Executive summary: Through decisive-action combat-training-center (CTC) rotations and the development of the military-intelligence (MI) gunnery program, the Army is exploring training-centric solutions to issues associated with the planning and execution of information collection (IC) against a near-peer hybrid threat at the brigade combat team (BCT) level. Despite these necessary endeavors, leaders must explore organizational solutions in conjunction with any training efforts. Four primary challenges present themselves in execution of BCT-level IC in decisive action: seams between units, reporting lag, rigid/inflexible collection planning vs. intent-based collection and an undefined role for the BCT's military-intelligence company (MICo). To address these issues, BCTs can consider an internal task-organization change that repurposes their MICo as a "Hunter Company" responsible for answering BCT commander priority-information requirements (PIRs). This change follows the principle of unity of command, as the cavalry squadron takes unified ownership of all elements of IC (reconnaissance, surveillance, intelligence and security operations). In turn, the BCT's analytical effort unifies as the MICo transfers its analytical capabilities directly to the BCT's S-2 section, resulting in clear delineation of efforts between the BCT S-2 (analysis) and MICo (collection).

Once the Army's CTCs transitioned to decisive-action training scenarios, the force began a necessary re-education in near-peer conventional warfare. Countless lessons from years of rotations and observations from conflicts such as those in eastern Ukraine, Syria and northern Iraq informed our leaders on the nature of such warfare and how to effectively wage it. However, these essential steps only represent one piece (or perhaps two) of the puzzle known as doctrine, organization, training, materiel, leadership, personnel and facilities (DOTMLPF, the framework for developing solutions to problems based on solution type).

A key problem for a BCT in the execution of decisive action is IC. How does a BCT collect data about the enemy, rapidly disseminate it to various personnel, process it into intelligence and make sound, timely decisions based on said intelligence? The Army, through the development of the MI gunnery program, is diligently working to address this problem as a training solution. Yet leaders must also explore organizational solutions to the problem.

The challenges BCTs face in the execution of IC result from a disjointed organizational scheme, where multiple units with different communications architecture operate semi-independently while attempting to contribute to a mutual goal of IC. To address the problem, the BCT must be task-organized to enable unity of command in the entire IC effort.[1] Until that occurs, IC plans will lack synchronization and flexibility, and BCTs will struggle to rapidly collect and process enemy-related data that drives winning decisions.

Four distinct problems exist in the execution of IC at the BCT level: reconnaissance seams, intelligence lag, task/purpose for information collectors and the MICo's role. BCTs can explore an organizational solution to address each of these problems through an internal task-organization change that reorganizes and repurposes the MICo as a "Hunter Company" solely focused on answering BCT commander PIRs.

BCT's IC challenges

The MICo is an IC element, and BCT-level leaders must constantly evaluate whether their sole intelligence unit is truly organized, purposed and equipped as such. To increase efficiency and attain unity of command for IC, the MICo must transfer the bulk of its intelligence analysts directly to the headquarters and headquarters company (HHC) brigade S-2 section (where they work in a tactical environment), reconfigure collection assets to more survivable platforms and realign with the cavalry squadron. Previous discussions at senior levels of our Army took place regarding the placement of the MICo in the cavalry squadron, but the discussion here is inherently different, as a change of organization, mission and focus should precede any MICo task-organization change. In short, MICos in their current state cannot be in the cavalry squadron, but they can once they adopt a mission focused on reconnaissance-enabling IC.

This organizational solution kills two birds with one stone, as it unifies IC efforts under the cavalry squadron and creates clear delineation of responsibilities between the BCT S-2 and the MICo. The BCT S-2 focuses on analysis and requirement development, and the MICo (aka Hunter Company) focuses on IC and aggregation (consolidation and packaging of data collected for easier consumption by analysts). Once the task-organization change occurs, the MICo takes on the role of the "Hunter Company" and the commander positions himself to actively manage forward IC, target handoff, aggregating enemy-related reporting and feeding consolidated reports to the BCT S-2 and cavalry squadron.

To better understand the endstate, we must first understand the depth of IC-related problems. There are four main IC challenges in the BCT:

- **Reconnaissance seams.** The doctrinal template of a BCT in defense or offense presents multiple seams.[2] These seams disrupt timely and accurate collection and dissemination of information. There are physical seams created by unit boundaries, communication seams created by differences in adjacent units' primary, alternate, contingency and emergency architecture and planning seams represented by non-nested IC planning at echelon. This creates a "telephone game" as reporting filters up through multiple echelons and BCT S-2s struggle to determine the veracity of any reports.

Also, the physical and organizational separation of reconnaissance and intelligence units exacerbates this problem, as units do not form habitual and formalized relationships among the intelligence company, BCT S-2, cavalry squadron and battalion-level scout platoons. The Hunter Company concept reduces seams through the concept of "aggregation" where the company command post (CP), through persistent contact with multi-disciplined intelligence collectors and cavalry units, gather singular reports, measure them against PIRs/intelligence requirements and aggregate information for analysis by the BCT S-2.

- **Intelligence lag.** Passing information among the multiple reconnaissance/IC seams without a coordination point creates stale reporting to decision makers, resulting in decisions made too late or too slowly to exploit opportunities to enable decision-based operations. The current structure of MICo ground collectors focuses on generating reports that take hours, if not days, to publish. Therefore BCTs become habitually reliant on higher-echelon collection assets to provide indications and warnings that drive decision-making. However, this habit is impractical, as an observation from a theater or division asset arrives at a tank or Bradley fighting position in a communications-challenged environment far too late to provide any value.

A restructure and realignment of existing assets within the BCT would drastically reduce this lag. The proposed Hunter concept not only streamlines IC, but it does not inhibit capabilities to generate signals-intelligence (sigint)/human-intelligence (humint) reports, as those reports still provide value once published. The concept of aggregation at the Hunter Company reduces said lag as an intelligence node with access to data geographically and temporally closer to the point of collection, and with a direct relationship with the BCT S-2; this situation immediately disseminates the information as opposed to waiting for information to flow through multiple echelons.

- **Task and purpose vs. intelligence synchronization.** The most recognizable IC product is the intelligence synchronization matrix (ISM). This matrix aligns assets in time and generally against a named area of interest (NAI). This product has reduced value at the BCT level. The ISM is appropriate when aligning ground maneuver against non-organic aerial assets but not for a BCT in a hybrid-threat conflict. The ISM fails to create shared understanding and to drive collection, as it limits the ability of subordinate leaders to take disciplined initiative within the commander's intent to answer PIR. When PIR-relevant information manifests outside of the planned sequence the ISM identifies, collectors are unable to adjust collection for fear of desynchronizing the IC plan, therefore predisposing the IC community against the principles of mission command.

Use of mission orders should apply to intelligence formations in the same manner as it applies to maneuver forces. Currently no unit in the BCT can organize to receive IC-centric task/purpose and align its collection assets against the ISM to achieve the commander's intent. Restructuring, realigning and repurposing the intelligence company addresses this.

- **MICo role in the decisive-action training environment (DATE) fight.** The MICo's current systems, training, organization and culture is more adaptable to a counterinsurgency (COIN) operation than a fight against a near-peer conventional threat with asymmetrical affiliates. As the training scenario and threat situation evolves, leaders must examine how the MICo evolves with them. The proposal is to unburden the MICo of its analytical responsibilities (thus giving it the sole mission of IC) and reorganize the company into the cavalry squadron. The MICo commander has no clearly defined role within the BCT fight, as doctrine is unclear and opinions on the subject are wide-ranging. Many often see the MICo commander as no more than a force provider and "special adviser" for ground-sensor teams, brigade intelligence-support element (BISE) personnel and Shadow tactical unmanned aerial system (TUAS).

Once task-organization changes for these elements occur, the MICo commander often has minimal influence on the company's activities and devotes most of his time and effort to employing the Shadow TUAS. Therefore, efforts to employ ground sensors (humint and sigint) fall by the wayside as maneuver battalions focus on achieving their assigned missions and sensor teams lack clear guidance for integration, collection and reporting.

Task-organization recommendations

- Explore options to remove the "IC platoon" from the MICo and place it in the brigade's HHC under the BCT S-2's direct control. This enables the BCT S-2 to oversee training and readiness for the Soldiers he leads in combat (the BISE).
- Realign 12 35F analysts assigned to the company operations and intelligence-support team to the multi-functional platoon.
- Reorganize the multi-functional platoon into two "multi-sensor platoons" with the mission to conduct ground-surveillance radar (GSR), direction-finding (DF) and small unmanned aerial system (UAS) missions. Ideally, these assets would operate on a prime mover commonly seen throughout the BCT (for example, Bradley, Stryker or gun truck), thus enabling improved integration and survivability.
- Comprise these "multi-sensor teams" (MSTs) of existing 35Fs (all-source intelligence analysts), 35Ns (sigint analysts) and 35Ps (cryptolinguists), and possibly augment them with 19D cavalry scouts or 11B infantrymen already in the BCT. The 35M (humint collectors) Soldiers then align into the "human-domain platoon."

To achieve the described multi-function capability, some equipment requisitions must take place. All the recommended systems are readily available or can be procured relatively quickly. The key systems required would be a manportable DF signals system such as the PRD-13 (common on most installations), ground radars (Manportable Surveillance and Target Acquisition Radars (MSTARs) are available in Army

inventories) and the Portable Unmanned Aircraft, or PUMA, readily available at most installations.

Other systems with similar capabilities would work as well; the PRD-13, MSTAR and PUMA purely provide examples of flexible, survivable IC capabilities that constitute an MST.

Under this task-organization, the MICo possesses multi-disciplined collection capabilities required to rapidly answer PIR as well as conduct reconnaissance handover and rapid cueing, mixing and redundancy. GSR, for instance, provides a persistent moving-target indicator of mounted or dismounted movement out to 42 kilometers, day or night and in foggy or dusty conditions. Because it is capable of scanning large areas, it serves as the ideal asset for aggregating activity across several NAIs and cuing electro-optical assets whose scan process is necessarily more deliberate. Small UAS teams can provide threat-focused route reconnaissance ahead of a cavalry troop, "talking" mechanized combat power onto successful direct-fire engagements. Sigint DF teams provide simple, tactically relevant DF signatures from positions along the BCT's forward-line-of-own-troops (FLOT), which can identify high-priority targets or exploit poor communications security.

The exact specifications or model numbers of the systems the Hunter Company employs is a nuanced discussion, but what they all share is that their design, function and implementation orients on providing tactical information of value without any requirement for Upper Tactical Internet or highly specialized (and scarcely available) technical support. Simply put, the Hunter Company, through organizational and minor materiel changes, constitutes the ability to internally and rapidly execute the IC fundamentals of cueing, mixing and redundancy, a capability not present in current BCT design.

After all aforementioned task-organization changes and equipment requisitions, the remaining element within the standard MICo is the Shadow TUAS platoon. Due to its high demand and the convenient nature of analyzing full-motion video, Shadow TUAS often becomes the sole asset within the MICo sought after for IC. Unfortunately, the Shadow TUAS requires a level, compacted airstrip for landing, which either requires securing an existing airstrip or constructing a new one through an intensive engineer effort (also requiring engineer equipment not present within the BCT). Along with that, the Shadow platoon has a sizable footprint, intensive maintenance requirements and multiple administrative/safety requirements before initiating flight operations.

All these constraints, combined with the high demand for TUAS coverage, forces MICo commanders to devote most of their time toward ensuring proper execution of TUAS operations. In the Hunter Company concept, the commander fights closer to the FLOT and will have less time and ability to focus his or her efforts on the plethora of sustainment-related issues associated with Shadow TUAS.[3] Therefore, to make this task-organization work, BCTs must task their brigade engineer battalion (BEB) with maintenance of the UAS site. This includes ensuring security, sustainment and communications support, as well as enabling TUAS launches to occur at times prescribed by the BCT and/or Hunter Company. BEB staffs, through their current relationships with MICos, have a reasonable understanding of Shadow TUAS and how to execute the aforementioned tasks from the BCT.

Hunter Company operations – actions

1. Hunter Company receives task and purpose from cav S-2/S-3.
2. Hunter Company constructs recon plan and MST/TUAS taskings.
3. Hunter Company aligns assets to ensure all physical intelligence seams are observed by one or more intelligence disciplines.
4. Hunter Company establishes Hunter CP to streamline reporting channels and tasking chain.
5. Hunter Company coordinates intelligence handover.
6. Hunter Company realigns sensors to cover lost or gained NAIs.
7. Hunter Company creates humint tasking to achieve depth and breadth of collection across the BCT AO.
8. Brigade S-2 disseminates finished intelligence and conducts informed and flexible BCT maneuver.

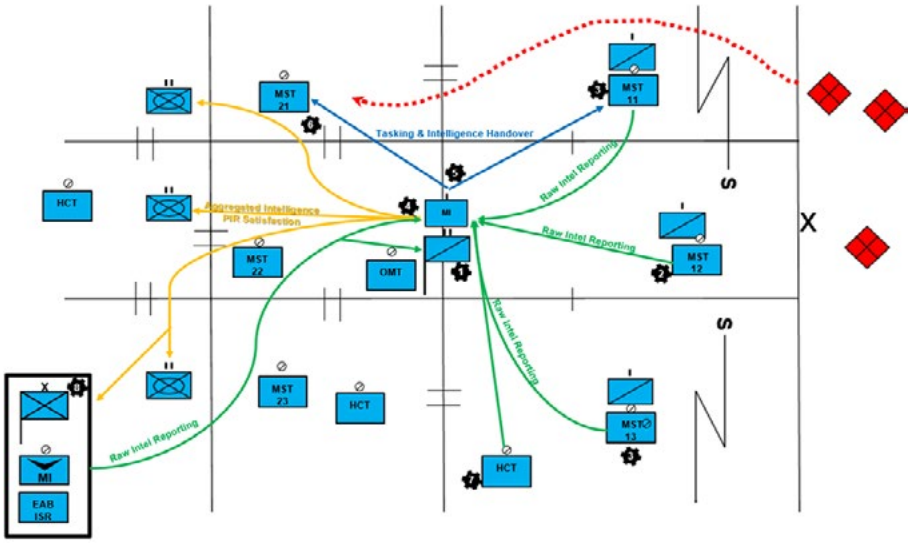

Figure 1. The Hunter Company commander locates his CP on a METT-TC basis to have voice communication with all MSTs and cavalry troops. The Hunter CP then ingests all reporting from IC elements, aggregates data into discernible information and sends consolidated reports for consumption and analysis by the BCT S-2.

The MICo (aka Hunter Company) commander would retain all other oversight, especially as it relates to maneuvering the Shadow and collecting mission-related information.

MICo to Hunter Company

The Hunter Company, once organized as described, becomes responsible for the aggregation of all relevant reporting at the Hunter CP. The commander receives task and purpose from the cavalry-squadron commander according to BCT PIRs and has control of all his/her platoons to prosecute the commander's guidance. Ideally, this guidance is no longer constrained by ISMs and task-organization orders but comes via mission orders based on commander's intent. For example: "No later than 19 2100 May 2017, identify obstacles and 2x battalions of enemy combat power east of PL Maria."

To accomplish this guidance, the Hunter Company retains tactical control of all platoons. The commander positions the 10-Soldier CP on a mission, enemy, terrain, troops, time and civilian considerations (METT-TC) basis to have communications with all MSTs, human-domain collectors, cavalry-troop screens and battalion-level scout platoons (possible locations: BCT tactical-actions center (TAC) or cavalry squadron's tactical-operations center/TAC). The Hunter CP relies heavily on Joint Capabilities Release or Joint Battle Command Platform and various radio systems to enable reporting. The Hunter CP can also serve as the net-control station for the brigade's operations-and-intelligence network to ensure synchronization of collection and reporting.

Using the commander's decision points and PIR as a guideline, Hunter CP aggregates and synthesizes reporting of immediate tactical relevance and disseminates information across the BCT.

Repurposing the company in such a manner streamlines reporting. Maneuver-unit reconnaissance formations gain access to agile and responsive organic, multi-disciplined platforms. And the BCT's IC effort is managed by a single formation (the cavalry squadron). This reduces the number and impact of IC/reconnaissance seams.

These recommendations may seem aggressive at first glance, as this is a significant departure from conventional wisdom and breaks the paradigm of who MI Soldiers are and what they do. However, there is evidence that not only would this arrangement enable tactical success, it would create a reconnaissance culture within its parent unit. To illustrate this, there is a viable test case: 11th Armored Cavalry Regiment (ACR), which employs its MICo in the Hunter Company design.

Throughout examination of MICo GSR reporting from five National Training Center (NTC) rotations, MICo ground sensors generated 210 reports (50 training days at roughly four to five reports per day). During a single phase (72 hours) of one rotation, 11th ACR's intelligence company provided 166 reports (three training days at more than 50 reports daily). By these numbers, one can ascertain that 11th ACR's MICo markedly improved its report-processing capability simply by redesigning its intelligence formation.

The 11th ACR has not always employed its intelligence formation in the Hunter Company design, but in the roughly two years since the design's inception, 11th ACR has experienced marked improvement in reporting, situational awareness, reconnaissance culture and sound tactical decision-making. The increased success that 11th ACR experienced shortly after adopting a Hunter Company design leads one to believe that the same success can be replicated within a BCT.

Point/counterpoint

Point: 11th ACR enjoys extreme advantages, including "home field," multiple repetitions and fewer burdens from a higher headquarters, so its success in this endeavor is not transferrable to BCTs.

Counterpoint: While 11th ACR does enjoy reasonable advantages over rotational-training units, these alone do not explain a tenfold difference in intelligence reporting. Also, any argument based on discrediting 11th ACR success does not address the salient points of seam reduction, aggregation, intelligence lag, internal cueing/mixing/ redundancy, etc.

Point: The cavalry squadron should be focused forward and not multi-directionally, as is required to maintain rear-area collection.

Counterpoint: Through the application of mission command, the cavalry-squadron commander and staff can relay all rear-area collection requirements to the Hunter Company with minimal work on their part. The Hunter Company then takes ownership of said tasks and oversees execution, primarily by the human-domain platoon (humint collectors). Lastly, the reduction of seams brought forth by the Hunter Company increases the ability of units to conduct target handoff with one another, thus reducing the ability of the enemy to infiltrate the rear area, diminishing the requirement for rear-area collection.

Point: The cavalry squadron S-2 is already responsible for sending consolidated reconnaissance observation reports to the BCT S-2.

Counterpoint: Battalion-level intelligence officers constantly juggle a series of specified and implied tasks; chief among them is answering requirements for their battalion/squadron commander. Doing this while simultaneously chasing down and packaging information for BCT-level consumption is a bridge too far. The constitution of Hunter Company and its execution of aggregation creates a delineation of effort between it and the cav S-2 for collection/aggregation (Hunter) and analysis (S-2).

Point: How does Hunter Company apply to stability operations?

Counterpoint: When questions such as this are posed, COIN operations in Iraq/Afghanistan and their associated framework come to mind. However, future stability operations may not be applied in such a way that units semi-independently manage "battlespaces" to improve local governance/security/ etc. Regardless of whether similar conflicts occur in the future, the concepts of unity of command, seam reduction, organic cueing/mixing/ redundancy and aggregation still apply to any other imaginable framework. More discussions are also necessary to examine whether assigning cavalry squadrons "battlespace owner" missions was appropriate. Perhaps a unified, passive

reconnaissance and IC mission across a BCT area of operations (AO) could have worked better for cavalry squadrons? It's worth exploring.

Point: The current MICo organization works when its personnel are properly trained and a proper level of IC planning occurs for each mission.

Counterpoint: Leaders must consistently explore training solutions to known problems, but not all problems can be solved simply through "better training." Innovative leaders must continuously examine solutions across the DOTMLPF spectrum and be willing to explore answers beyond training improvement. Also, the IC challenges (seams, intelligence lag, task/purpose for collectors and defining a role for the MICo) can only be mitigated through training, not solved.

Conclusion

BCTs face challenges in the execution of nested and synchronized IC plans within the framework of decisive action. This problem is born of a disjointed organizational concept, where multiple geographically separated units with different communications architecture operate semi-independently while attempting to contribute to a mutual goal of IC. This problem transcends leadership; the Army must not ask talented leaders within a BCT to overcome organizational inefficiencies – the Army must instead address them.

To truly address the problem, the BCT must be task-organized to enable unity of command in the entire IC effort. If a BCT was to restructure, reorganize and re-equip its MICo into Hunter companies, it would achieve unity of command for IC planning and execution. The cavalry squadron would certainly improve, and it would increase the BCT's ability to be a flexible, intelligence-driven organization.

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Notes

[1] There are four elements of IC: intelligence operations, reconnaissance, surveillance and security operations.

[2] A seam is defined as a point in which information, tasking or other coordination must take place for mission accomplishment – in this case, the identification and tracking of enemy formations, obstacles, etc.

[3] Countless Shadow TUAS issues occur during each NTC rotation, almost all of which directly relate to extremely complex maintenance issues and/or issues associated with operating on an isolated airstrip away from higher headquarters. For these and many other reasons, the Army should explore options to field BCTs a more expeditionary TUAS solution that is less sustainment-intensive, does not require an airstrip to land on and is not as loud during flight operations. Existing systems such as ScanEagle and Aerosonde are much more agile and more effective in a DATE.

Acronym Quick-Scan

ABCT – armored brigade combat team
ACR – armored cavalry regiment
AO – area of operation
BCT – brigade combat team
BEB – brigade engineer battalion
BISE – brigade intelligence-support element
COIN – counterinsurgency
CP – command post
CTC – combat-training center
DATE – decisive-action training environment
DF – direction-finding
DOTMLPF – doctrine, organization, training, materiel, leadership, personnel and facilities
EAB – echelons above brigade
FLOT – forward-line-of-own-troops
GSR – ground-surveillance radar
HCT – humint collection team
HHC – headquarters and headquarters company
Humint – human intelligence
IC – information collection
ISM – intelligence synchronization matrix
ISR – intelligence, surveillance and reconnaissance
METT-TC – mission, enemy, terrain, troops, time and civilian considerations
MI – military intelligence
MICo – military-intelligence company
MST – multi-sensor team
MSTAR – Manportable Surveillance and Target Acquisition Radar
NAI – named area of interest
NTC – National Training Center
OMT – operational-management team
PIR – priority-information requirement
PL – phase line
PUMA – portable unmanned aircraft
Sigint – signals intelligence
TAC – tactical-actions center
TUAS – tactical unmanned aerial system
UAS – unmanned aerial system

Maneuvering the Armored Brigade Combat Team in Restrictive Terrain

by COL Steven J. Adams

Achieving synchronization in an armored brigade combat team (ABCT) is challenging and requires quality repetitions. Maneuvering an ABCT in a country slightly larger than the state of Virginia with an estimated population of 25 million people, where the terrain is dominated by hills and mountains separated by narrow valleys, is a herculean task that requires its own discussion.

The mountain ranges of South Korea generally run north and south, creating highly restrictive maneuver corridors. Road networks run through the valleys and cross back and forth over rivers, requiring an extensive network of bridges along the route that may not be rated for the weight of heavy combat vehicles. This problem set posed by such terrain requires special consideration by ABCT staffs and commanders.

The ABCT is a combined-arms organization that is fully manned and equipped to conduct decisive action in all types of environments. Its role is to close with and destroy the enemy using fire and movement, to repel enemy attacks and to control land, populations and resources.[1] Mobility, protection and firepower are the ABCT's greatest strengths. To realize an ABCT's full potential, the commander must create shared understanding and effectively synchronize the brigade's operation across all warfighting functions. Synchronization is more complex when the terrain restricts movement and limits the commander's options. Key considerations for maneuvering the ABCT in restrictive terrain are: terrain management, reconnaissance, security, mission command, mobility, transitions and sustainment.

Terrain management

Due to the incredible amount of terrain an ABCT occupies, it is imperative that planners carefully consider how to appropriately array forces on the battlefield. An ABCT has more than 4,000 Soldiers, 400 tracked vehicles and 800 wheeled vehicles. Even without allowing space between march units, an armored brigade with 100 meters between vehicles has a column length of more than 120 kilometers.

Brigades typically require at least two routes, which would reduce the column lengths to just 60 kilometers, but this is still incredibly long. Increasing the number of routes and reducing the distance between vehicles decreases the overall length of the formation. However, in restrictive terrain with limited routes, it is not hard to imagine the challenges that would ensue from the size of this formation. This is particularly apparent as the ABCT transitions from movement to maneuver at the appropriate time.

Planners must even consider routine tasks such as how the brigade uncoils from the assembly area, the time required to move and set in attack positions and the movement times from attack positions to the line of departure. What this highlights is the necessity to clearly think through the terrain management of the ABCT in time and space, especially when space is a premium. Terrain management must essentially become its own planning effort.

Reconnaissance

Reconnaissance is a mission to obtain information about the activities and

resources of an enemy or characteristics of a geographic area.[2] Restrictive terrain mandates dedicated reconnaissance assets to determine the best suited routes and key terrain for the ABCT. In an area with limited routes or specific water-crossing sites, the brigade must be able to employ reconnaissance assets forward of the main body to determine traffic-ability and classification of bridges, a skill all our scouts must practice. A true understanding of the operational environment, enabled by effective reconnaissance operations, is necessary for the commander to make sound decisions and effectively maneuver the force.

Security

The ABCT must first adhere to the basic principle of "always secure yourself first."[3] Security is the most important priority of work and is a continuous process. Security operations are conducted to provide early and accurate warning; provide reaction time and maneuver space; orient on the force or facility to be secured; perform continuous reconnaissance; and maintain enemy contact.[4] In an environment where enemy forces may hide in restrictive terrain, it is understandable that some of these forces may be bypassed by ground maneuver forces. This puts supply lines and softer targets within the formation at greater risk.

Regardless of the scenario, the ABCT must first ensure that security is in place and the team is arrayed to protect critical assets and decisively deal with any threat that dares present itself. The commander should strive to maneuver units into a position of relative advantage so the ABCT is always ready for a fight while it is still protecting its logistical assets.

Mission command

"If you can't talk, you can't win."[5] Extended distances and mountainous terrain both complicate the brigade's ability to communicate and conduct command and control. Mission-command nodes with redundant forms of communication on the upper and lower Tactical Internet and a combination of line-of-sight and non-line-of-sight communications are all essential to the success of the ABCT. This must also include a well understood primary, alternate, contingency and emergency communications plan that ensures the correct information is transmitted to the right people.

The goal of this effective communication architecture is to convey a common operational picture and to provide the commander with relevant information at the right time to make sound decisions with respect to the friendly and enemy situation and the terrain. The staff plays an essential role in this process. The staff supports the commander in "understanding situations, making and implementing decisions, controlling operations, and assessing progress by providing timely and relevant information and analysis."[6]

The commander, informed by the staff and subordinate commanders, drives the operations process and seeks to create situational understanding across the formation. This shared understanding enables flexibility and the synchronization of all warfighting functions to achieve the commander's intent and accomplish the mission.

Mobility

Mobility of the ABCT is a source of strength. However, restrictive terrain affords the enemy opportunities to degrade the mobility of the brigade in narrow passes, river-crossing sites or dense urban areas. With limited routes to maneuver the ABCT in these areas, mobility becomes critical for maintaining momentum. This should drive specific information requirements during planning about the terrain, routes, bridges and mobility assets to enable freedom of movement for the brigade.

The ABCT has robust breaching capabilities but is limited in terms of organic bridging capability. To successfully negotiate water obstacles, the ABCT requires augmentation of bridging assets. This focus on mobility is not new to the force. Mobility is generally the priority effort for engineers in armored units during offensive operations. Nevertheless, it's worth spending time and effort on planning how the ABCT will conduct multiple water crossings and what assets they will need to do so.

Transitions

Success not only equates to the BCT's ability to accomplish its assigned missions but to how well it transitions from one mission task to the next. Transitions require detailed planning and preparation to ensure the unit always maintains a position of advantage. The movement of ABCT forces routinely takes much longer than you

Figure 1. An M1A2 Abrams tank from Company B, 1st Battalion, 8th Cavalry Regiment, 2nd Armored Brigade Combat Team, 1st Cavalry Division, conducts a situational-training exercise (STX) Nov. 13, 2017. Company B conducted platoon STX lanes to improve and hone skills in preparation for its upcoming gunnery qualification tables. *(Photo by SGT Patrick Eakin, 2nd ABCT Public Affairs)*

Figure 2. An M1A2 Abrams tank from Bravo Company, 1-9 Cavalry, fires its 120mm cannon during qualification Table XII at Rodriguez Live Fire Complex Aug. 4, 2017. *(Photo by SGT Patrick Eakin, 2nd ABCT Public Affairs)*

would expect. So, if the team hasn't clearly planned for what's next, the brigade will lose valuable time and expend tremendous energy resetting the force for the next mission. The brigade will also lose momentum and miss opportunities to exploit the initiative gained by previous actions.

The brigade must plan for the transition between offensive and defensive tasks to allow time to reconstitute combat power and take care of critical sustainment operations to maintain its operational readiness. Aggressive leaders, ensuring the tasks are understood and supervised, make transitions work.

Figure 3. A 120mm round from an M1A2 Abrams tank impacts one of many targets during the qualification course at Rodriguez Live Fire Complex Aug. 4, 2017. *(Photo by SGT Patrick Eakin, 2nd ABCT Public Affairs)*

They also seek every opportunity to transition back to the offense to gain and maintain the initiative.

Sustainment

Sustaining the ABCT is not easily accomplishable. In addition to taking up lots of space, an ABCT consumes large amounts of supplies, particularly fuel, requiring a push every eight to 10 hours. The ABCT is also dependent on a continuous flow of maintenance repair parts to keep systems operational and in the fight. Long supply lines and congested routes complicate this process and may result in a loss of momentum.

Effective logistical support ensures freedom of action and extends operational reach until the unit can accomplish the mission. Retaining the initiative requires flexible plans and routine short halts for refueling operations and maintenance. Having two-way traffic available and secure lines of communication greatly enable operational success.

Throughout history armored formations have found themselves operating in complex restrictive terrain, and today's modern force is no different. Restrictive terrain may provide an adversary with a temporary opportunity to mitigate our decisive mobility and

firepower, but an ABCT is expected to deploy, fight and win in any environment. Careful planning, preparation and quality repetitions under these conditions will set the unit up for victory. Carefully addressing each of the considerations laid out above will enable an ABCT to approach restrictive terrain with the same tenacity and speed for which it was designed.

COL Steve Adams commands 2nd Brigade, 1st Cavalry Division, in the Republic of Korea, assigned to 2nd Infantry Division. Previous assignments include G-3, National Training Center and Fort Irwin, CA; and battalion commander, 1-22 Infantry, Fort Carson, CO, and Camp Buehring, Kuwait. He holds a bachelor's of science degree in operations research from the U.S. Military Academy, a master's degree in public administration from Harvard University, a master's in military studies degree from the Marine Corps University and a master's degree in strategic studies from the Army War College.

Endnotes

[1] Field Manual (FM) 3-96, ***Brigade Combat Team***, Washington, DC: Department of the Army, Oct. 8, 2015.

[2] Ibid.

[3] LTG Paul Funk, "Funk's Rules" (#1), June 2016.

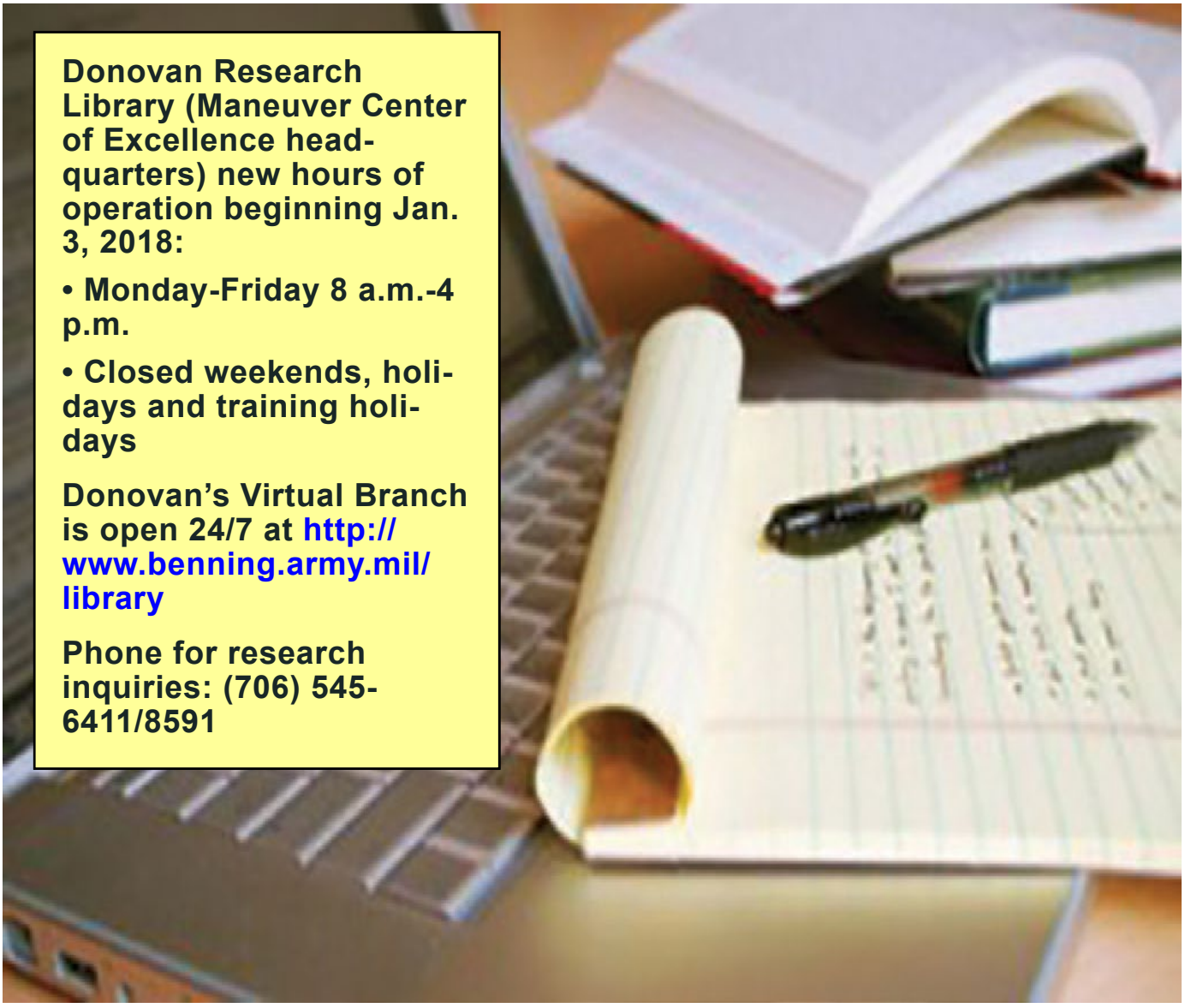
[4] FM 3-96.

[5] "Funk's Rules" (#2).

[6] Field Manual 6-0, ***Commander and Staff Organization and Operations***, Washington, DC: Department of the Army, May 5, 2014.

Acronym Quick-Scan

ABCT – armored brigade combat team
FM – field manual
STX – situational-training exercise



Reconnaissance-in-Force Russian Style

by Lester W. Grau

Разведка Боем*: Reconnaissance-in-force* [literally: reconnaissance by battle] *is the collection of information on the enemy by attacking with specially selected subunits. It is used in those instances where other attempts to obtain information about the enemy have failed. Reconnaissance-in-force may be conducted by designated reinforced motorized rifle or tank battalions/companies and reconnaissance subunits supported by aviation strikes, artillery fire and other means. Commanders in whose zones or sectors reconnaissance-in-force is conducted observe the conduct and evaluate the results of the effort, and therefore are prepared to exploit achieved success.*[1]

Historically, reconnaissance-in-force involves a serious effort by an attacking force to develop information about an enemy. The attack requires substantial aviation and artillery support as well as ground activity to convince the defender that the attack is genuine and threatening, requiring the full commitment of the defense to defeating the attack. The U.S. Army first officially recognized reconnaissance-in-force in its 1939 edition of ***Operations***.[2]

An example of its use was during early September 1944, when MG Lawton J. Collins conducted a major reconnaissance-in-force with his VII Corps, employing three divisions on-line to conduct a limited attack to penetrate the enemy defenses in the Aachen-Stolberg corridor and to seize bridgeheads over the Roer River in preparation for exploitation advances into Germany. The operation failed to achieve its initial objectives; however, it did develop intelligence about the defending German forces that paid future dividends.[3]

The practice of reconnaissance-in-force dates back at least to the Napoleonic wars. However, it came to prominence as a distinct form of combat during World War I and was incorporated into the Red Army's field regulations [полевой устав] in 1936. The regulations envisioned combined-arms combat involving reconnaissance battalions of a division, reinforced with tanks and artillery and additional infantry subunits.

The widespread Soviet use of reconnaissance-in-force during the Great Patriotic War (World War II against the Germans) refined the concept. The scope and size of Soviet reconnaissance-in-force attacks expanded dramatically as they successfully revealed the enemy forward defenses, integrated fire system, engineer obstacles and the withdrawal of enemy forces from their forward positions into their defensive depths. Soviet reconnaissance-in-force attacks also served to mask the activities of their own forces and to screen the main attack. During the final Berlin operation, two reinforced infantry battalions preceded each front-line division and attacked simultaneously across the entire front to develop necessary reconnaissance information and to prevent German determination as to the axis of the main attack in time to commit the reserve.[4]

Impact of Great Patriotic War experience

During the latter period in the war, when German forces were mostly defending, the Germans began holding the bulk of their defenders back from the forward edge of the defenses. In that way, the bulk of the Soviet artillery preparation would fall on empty ground. Following the artillery preparation, the defenders would rush forward to occupy their fighting positions and combat the Soviet attack. Therefore, in organizing a reconnaissance-in-force in this period, it was very important to determine the most advisable time for it: immediately before, several hours before or several days before the attack. Experience showed that the enemy managed to change his combat laydown and fire plan if a reconnaissance-in-force was conducted several days before the beginning of an attack. Reconnaissance-in-force immediately before an attack deprived him of this opportunity.

It also was important to determine the most advantageous time of day for a reconnaissance-in-force. Conducting it during the first half of the day permitted supporting it more effectively with artillery and having the main body exploit success. Conducting a reconnaissance-in-force at night required more artillery as well as illumination rounds to illuminate the terrain.[5]

The Soviets determined that conducting a reconnaissance-in-force in individual narrow sectors at different times did not reveal enough of the enemy laydown and defenses in the main attack sector. Simultaneous reconnaissance-in-force attacks on a broad front gave a fuller picture of the enemy and misled him regarding the axis of main attack and the beginning of a general offensive. Moreover, the enemy often took such an attack to be the main attack.[6]

During the Great Patriotic War, a division-level reconnaissance-in-force in a division would be organized and conducted by the division commander, often under authorization of his senior commander. After the division commander made his decision on the scheme of maneuver, the operations department (section) would implement the coordination for the plan. The chief of intelligence and chiefs of combat arms would be involved in compiling the plan, and it would be approved by the army commander.

There was no strict format for a reconnaissance-in-force plan, but it included the following: objective and missions of the reconnaissance in force; time for beginning and ending reconnaissance; composition of reconnaissance entities; means of reinforcement and

support; preparation measures; the assembly area and time for occupying it; missions of combat arms and their coordination by lines; composition and missions of the reserve. A supplementary network of observation posts would be set up during the preparation period to study the enemy's behavior, fire plan, engineer structures and battlefield laydown.[7]

The success of reconnaissance-detachment actions was dependent on timely suppression of the enemy by artillery and other weapons; disruption of the enemy communications and command and control system; surprise attack; and the swift advance of the attacking subunits into the depth of the enemy defense. If the reconnaissance-in-force took place directly before the main attack, it was observed by first-echelon units and those that were to operate subsequently on that axis. At the end of the reconnaissance-in-force, the intelligence-section chief would collect and update all information obtained and compile a comprehensive report of observations. This would be given to the chief of staff or commander. After necessary processing, it would be sent to the next higher staff.[8]

A reconnaissance-in-force would also be used in the defense. The primary objective of such reconnaissance was to capture enemy prisoners and documents; collect the most reliable and accurate information on the enemy's composition, status, battle formation, fire plan and readiness for attack; and determine the axis of main attack as well as combat missions. A Russian reconnaissance-in-force from a defense was often conducted:

- When there was an expectation of an enemy attack from a position of direct contact, but there was no opportunity to collect such intelligence using other sources;
- When friendly artillery counter-preparation fire was being prepared to preclude enemy artillery strikes against deeper targets;
- When friendly artillery counter-preparation fire was being conducted and fire strikes were being delivered in front of the Soviet forward edge of the defense to determine the combat effectiveness of the enemy grouping and to create disorder within enemy units that were poised or deployed for an attack against the Soviet defenses.[9]

Reconnaissance-in-force in maneuver combat

The Soviet/Russian Army has recent experience in fighting guerrilla and limited wars (Afghanistan, Chechnya, Georgia, Ukraine, Syria), but large-scale maneuver conflict under nuclear-threatened conditions is its most potentially dangerous external threat. Fighting a peer or near-peer modern force presents distinct challenges in which reconnaissance in force may play an essential role.

Today's enemy defenses are so complex and diversified that they can only be revealed in their entirety, with sufficient validity and completeness, in the course of battle. When faced with a strong attack, the enemy is forced to use all the assets he has concealed carefully and simultaneously reveal his dispositions on the forward edge. In addition, having penetrated the enemy disposition, attacking subunits have the opportunity of determining the actual status of his defense and – from captured prisoners and documents – to check or reconfirm the affiliation of defending enemy troops.[10]

As a rule, a motorized rifle or tank battalion (company) is assigned to conduct a reconnaissance-in-force. Necessary reinforcements include tanks, tactical-intelligence subunits (platoon, squad) or a team of specially selected reconnaissance personnel from the reconnaissance battalion or reconnaissance company of the brigade (regiment) in the zone in which the reconnaissance in force is being conducted.[11] Support is provided by artillery and anti-tank guided missile (ATGM) fire, rocket-propelled flamethrower subunits and other weapons, as well as air strikes. On the evening before a reconnaissance-in-force, the battalion (company) occupies an assembly area, leaving enough daylight for familiarization with the terrain, the enemy dispositions and attack objectives.[12]

At the appointed time, the battalion (company) launches an attack during a

Figure 1. A Russian air-defense battery in December 2015 in the Syrian Arab Republic. (A Pantsir-S1 close-range defense system and two launch vehicles for S-400 long-distance flight missiles at Latakia.) At the appointed time, the Russian unit conducting a reconnaissance-in-force launches an attack during a brief fire preparation. Under cover of fire of artillery and weapons in direct lay, battalion (company) subunits swiftly attack the enemy, break into the forward edge of the enemy defense, seize and consolidate at designated lines or the lines they have reached and determine the enemy grouping, weapons and fire plan. *(Photo by Russian Ministry of Defense, attribution: mil.ru)*

brief fire preparation. Under cover of fire of artillery and weapons in direct lay, battalion (company) subunits swiftly attack the enemy, break into the forward edge of the enemy defense, seize and consolidate at designated lines or the lines they have reached and determine the enemy grouping, weapons and fire plan. They capture prisoners, documents, arms and equipment. In accordance with the senior commander's orders, when the enemy begins to withdraw, the battalion (company) either continues the attack by pursuing the enemy or consolidates at the designated line.[13]

In most cases, subunits conducting the reconnaissance-in-force are assigned the mission of seizing and holding certain lines or points in the enemy defense to improve positions of friendly troops or create an area from which to launch an offensive. With the successful advance of the reconnaissance-in-force, the main forces assigned to the attack are introduced into the breakthrough area to exploit success. Thus a successful reconnaissance-in-force can develop directly into an offensive battle or operation.[14]

If the enemy launches a counterattack after friendly troops seize the designated line, the battalion (company) repels it while continuing to conduct reconnaissance. If it is impossible to hold the designated line due to the counterattack, the battalion (company) can withdraw to the assembly area at the command of the senior commander who authorized the reconnaissance in force.[15]

Before and during a reconnaissance-in-force, special attention is given to organizing a system of observation that includes all combat arms and special troops. In the sector where the reconnaissance-in-force is planned, a maximum amount of observation posts and points are set up, and all subunit commanders are at their command-observation points and personally study the enemy battle formation and his fire and obstacle plan. Narrow sectors of observation are normal for this type of close observation. Observation targets within these sectors can be assigned. Reconnaissance helicopters can be used for observing the enemy defensive depth, and unmanned aerial vehicles can conduct reconnaissance over enemy territory that extends well past the territory on which the reconnaissance-in-force battalion (company) will fighting. Therefore, special attention is devoted to detecting counterattacking enemy subunits and units capable of attacking in front of their forward edge of defense.

All tactical reconnaissance – including electronic, artillery, aerial, anti-aircraft, engineer, radiation, chemical and biological – is activated throughout the period of the reconnaissance-in-force. Optical-thermal imaging systems provide 24/7 weather and target-designation surveillance by combining thermal and optical imaging while determining target coordinates for further observation.[16] Units in close contact with the enemy may use the 1L277 Sobolyatnik and the 1L111M Fara-VR radar to assist their observation.[17]

A reconnaissance-in-force is not the initial reconnaissance but is essentially the final reconnaissance effort by troops on an axis. In addition to performing its immediate missions, reconnaissance-in-force provides an opportunity to confirm enemy information collected by all other reconnaissance methods.

Example

A Russian motorized rifle battalion is defending from positions in direct contact with the enemy. The enemy strength is uncertain, and there are some two kilometers between forces. The terrain is fairly open, trafficable and interrupted by occasional stands of deciduous trees in full foliage. The brigade's tank-battalion commander was directed to conduct a company-sized pre-dawn mounted reconnaissance-in-force. The company's mission is to determine enemy strength and dispositions, capture documents and prisoners and determine the strength and route of the counterattack force. The company will plan on withdrawing after one hour unless the enemy withdraws. If so, the company will provide support to a follow-on attack/pursuit. An artillery howitzer battalion and a motorized rifle platoon will provide support to the company.

The tank-battalion commander decides to employ his second company to conduct the reconnaissance-in-force. It will conduct an attack from the march from a company attack area forward of the brigade's second-echelon defensive area. The artillery battalion will conduct a 20-minute artillery preparation in advance of the attack and plan to conduct deeper fires, on-call fires and standing barrage fires on the flanks of the attack. The artillery battalion, motorized rifle battalion, reconnaissance company and engineers will establish observation posts overlooking the attack.

The attack commences before dawn following the artillery barrage with two tank platoons on-line. After breaking through the initial defensive line, the trailing platoon continues deeper to establish a support position. The right and left flank platoons reverse to begin their exploitation and possible withdrawal while determining and destroying the location and extent of enemy positions. The motorized rifle platoon dismounts, searching for prisoners, documents and enemy crew-served weapons. The enemy launches a counterattack, which is stopped by artillery fire and the forward tank platoon.

Upon the command to withdraw, the reconnaissance-in-force company will withdraw, normally under a particulate smoke screen. Upon the command to defend, the company will dig in as a supporting position for a follow-on battalion or brigade attack/pursuit.

Reconnaissance-in-force in contemporary combat

Currently, reconnaissance-in-force receives less attention in military circles. This is due to the creeping perception that incorporation of state-of-the art reconnaissance systems will determine enemy composition, status, combat formations, planning and probable courses of action. The Gulf War clearly fed this perception, which lasted up to the Kosovo campaign. Kosovo demonstrated that a thinking enemy and difficult terrain can offset technological advantages.

Undoubtedly the new reconnaissance systems are welcome additions that assist planning and targeting – particularly when strong armies that are better equipped with state-of-the-art

systems are fighting a less technically and combat-capable enemy. However, the experience of the Coalition of Western States against the Islamic State of Iraq and the Levant, or ISIS, in the city of Mosul (2016-2017) demonstrated that once an enemy has gone to ground in an urban (or mountainous) environment, high-tech reconnaissance systems are not as effective.

The Russians say that U.S. and Iraqi soldiers resort to the tactics of a unique "mini-reconnaissance" in force even when fighting against a less-equipped enemy. Inasmuch as it is very difficult to discover the enemy's battle formation and fire plan within a city's blocks, the Americans and Iraqis carried out assaults by small teams to lure the ISIS fighters to counterattack. After the terrorists emerged from cover, American aviation and artillery delivered a strike against them.

"This method of fighting terrorists in Iraq indicates that in fighting a determined and trained enemy, not even the most state-of-the-art equipment will permit obtaining precise coordinates of the disposition of his weapons in the battle formation," write V. Kiselov and A. Kostenko in their article "Разведка боем в современных условиях" ["Reconnaissance-in-Force under Contemporary Conditions"]. "Consequently, the study and use of old, tested reconnaissance methods supported by new technology is an important factor in preparing to conduct reconnaissance when other methods have not provided a proper result."[18]

Today, reconnaissance-in-force is a variety of attack conducted by small forces whose missions are to determine the composition, status, battle formation, fire plan, engineer obstacle plan and capabilities for counterattacks at the tactical level. They collect the most complete and reliable information on the enemy and on the nature of his defenses, both at the forward edge as well as in the immediate tactical depth. Reconnaissance-in-force is one method of tactical reconnaissance.[19] Tactical reconnaissance uses many other methods of collecting necessary information on the enemy, the main ones being observation, probing attack [поиск], raid and ambush. Aerial reconnaissance using unmanned aerial vehicles, signals intelligence, radar, electronic intelligence and imagery intelligence produce good results.[20]

Each method has its positive points. A well-organized observation system provides reliable information on the disposition of the visible enemy, his movements and actions, and the location of surface-weapon emplacements and defensive structures. Accurate information about the enemy on a specific axis or in a specific area can be collected with a skillfully executed probing attack or ambush. Interrogation of prisoners and a study of enemy documents are an exceptionally valuable source of information on the enemy. Signals intelligence, radar and electronic-intelligence collection permit tracking the location of main enemy subunits in real time.[21]

The preceding forms of tactical intelligence may reveal the affiliation and intentions of the enemy; the disposition of enemy personnel and weapons, especially artillery; the changes in enemy defensive formations; and the morale of enemy troops. Imagery of a terrain sector occupied by the enemy provides the commander with information on the actual condition of the objective at a given moment. The value of these tactical reconnaissance methods is indisputable, but it does not provide a full picture of an enemy defense, especially the disposition of his first-echelon companies and battalions.[22]

What is a reconnaissance-in-force trying to accomplish? First, determine the actual location of the forward edge of the enemy defenses. Second, activate the entire enemy defensive plan. Third, determine enemy boundaries and flanks. Fourth, determine positions, routes, fire support and deployment lines for enemy counterattacks. Fifth, capture prisoners and documents.[23] Sixth, seize and retain positions advantageous for continued reconnaissance or exploitation during an actual attack.

An experienced enemy will not want to disclose the frontline trace and positions of his defense, as that will attract accurate artillery fire. The enemy will create dummy, temporary firing positions, combat outposts and forward defensive positions in front of the actual defense. The dummy positions are built so they can be detected and draw off artillery fire. The actual positions will be well hidden from ground and air observation. Combat outposts, temporary firing positions and forward defensive positions are also concealed and are designed to shape the battle and inflict damage on an attacker in front of the actual defenses. The reconnaissance-in-force needs to determine the forward edge of the enemy defenses, particularly the location of anti-tank weapons, tanks and infantry fighting vehicles. The enemy defense may include a dummy forward-defensive position to which the enemy will withdraw under attack, leading the attacker into a fire sac where defensive fires are concentrated and into which a counterattack is planned.[24]

A successful reconnaissance-in-force should activate the entire enemy defensive plan. A skilled enemy will employ duty weapons in temporary firing positions to deal with patrols, probing fire and probing attacks. Artillery, mortar, ATGM and automatic weapons in temporary firing positions should have no relation to their positioning in the main defense. Counterbattery radar, such as the U.S. AN/TPQ-36 and AN/TPQ-37 systems, will be camouflaged and shifted. Artillery firing positions and command posts will change positions periodically to avert detection.[25] The reconnaissance-in-force should convince the enemy that the attack is a genuine, all-out attack and cause the activation of all electronics, reveal enemy firing positions, disclose movement, trigger protective smoke and uncover engineer obstacles.

Determining enemy flanks and boundaries is an important mission of a reconnaissance-in-force since they are the most vulnerable locations in a defense. Knowing their location helps determine the main axis of any future attack and how to unhinge the enemy defense. Prisoners and captured documents are important in determining flanks and boundaries as well as troop strength and morale.[26]

An enemy usually uses counterattacks to restore a lost position. Since enemy counterattacks are conducted using battalion and brigade reserves or second echelons, once a reconnaissance-in-force is counterattacked, it can

determine the counterattack force composition, routes for conducting counterattacks and the lines of deployment of counterattacking units and subunits. Even in those cases where the enemy does not commit his tactical reserves, their disposition area is invariably discovered through the activity usually associated with reserve locations (stepped-up movement of personnel and equipment, radar activation, smoke and electronic denial).[27]

A reconnaissance-in-force can be conducted from defensive positions in direct contact with the enemy or from the march. A reconnaissance-in-force is carried out to determine the composition of the enemy grouping or discover changes in it, and to determine or update the location of his forward edge of defense. Most importantly, it is done to preclude fire preparation of the attack against unoccupied, temporarily abandoned or insufficiently defended enemy positions. Reconnaissance-in-force must be conducted so the enemy is unable to ascertain when troops are launching an attack and will be unable to determine the axis of the main attack. As a rule, a reconnaissance-in-force is conducted on different axes and at different times of day for this purpose. But most importantly, the enemy must not realize this attack is only a reconnaissance-in-force.[28]

Example

A Russian motorized rifle battalion is defending from positions in direct contact with the enemy. The enemy is defending along a railroad embankment with secondary positions about 100 meters behind the forward defense. The terrain is marshy. The battalion commander was directed to conduct a company-sized pre-dawn dismounted reconnaissance-in-force in the vicinity of Elevation 235.3. The company's mission is to determine the enemy strength and dispositions, capture documents and prisoners, and determine the strength and route of the counterattack force. The company will plan on withdrawing after one hour unless the enemy withdraws. If so, the company will provide support to a follow-on attack. A tank platoon will provide direct fire support to the company and be prepared to move behind the attacking company.

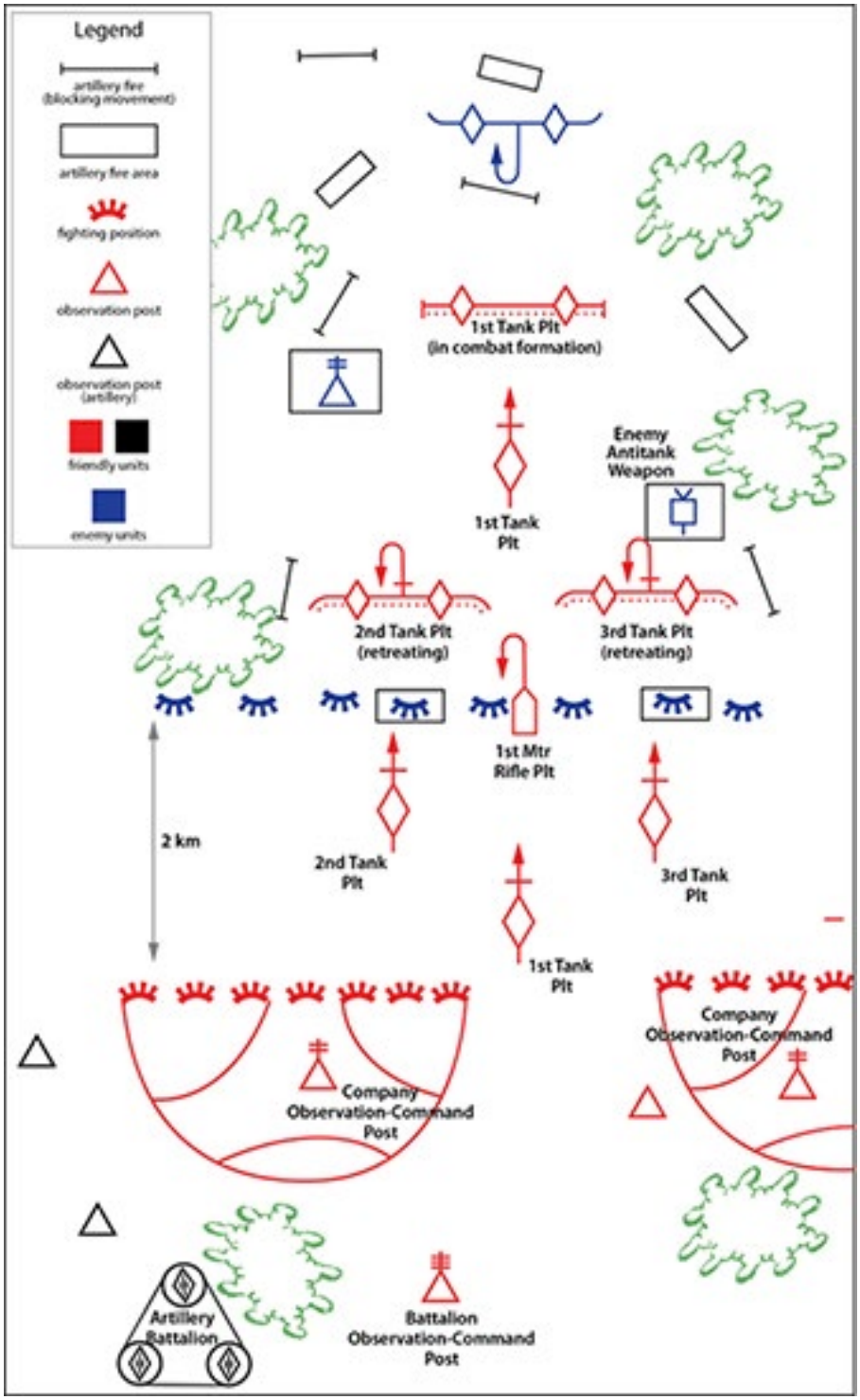


Figure 2. Russian deployment of forces for reconnaissance-in-force. *(Graphic courtesy of Chuck Bartles)*

The battalion commander decides to employ his second-echelon company to conduct the reconnaissance-in-force. He designates a company attack area between two leading platoons in a forward company. Since the company must cross 300 meters of fairly open ground before reaching the enemy position, the brigade commander has assigned an artillery battalion to support the attack. The artillery battalion will conduct 10-minute artillery preparation in advance of the attack and plan to conduct deeper fires, on-call fires and standing barrage fires on the flanks of the attack. The artillery battalion, motorized rifle battalion, reconnaissance company and engineers will

establish observation posts overlooking the attack.

The attack commences at dawn following the artillery barrage with three platoons on-line. After breaking through the initial defensive line, the middle platoon continues deeper to establish a support position. The right and left flank platoons begin their withdrawal, searching for prisoners, documents and enemy crew-served weapons. The enemy launches a counterattack which is stopped by artillery fire and the middle platoon.

Upon the command to withdraw, the reconnaissance-in-force company will withdraw, normally under a particulate smoke screen. Upon the command to defend, the company will dig in as a supporting position for a follow-on battalion attack.

Looking to near-term

What is specifically missing in this Russian discussion of reconnaissance-in-force is its main drawback. A reconnaissance-in-force can result in heavy casualties with less-than-optimum results. During World War II, the Soviet Union lost more than 20 million military and civilians. Military losses were between 8.7 and 14 million. The Red Army soldier may not have loved the communist system, but he/she loved Mother Russia; Soviet military lives were spent prodigiously to stop the German advance, especially during the early days of the war. Few other nations have demonstrated the capacity to suffer so many losses without disintegration.

Today, the Soviet empire is past and a truncated Russia has a smaller population with a smaller proportion of service-eligible youth. New Russian equipment is far more concerned with ergonomics and preserving life than in the past. Before, it was the tanks that must be preserved or repaired while the deceased crews were replaced. Now, the philosophy seems to be to preserve the warrior's life and skills even with the sacrifice of the combat system. Net-centric warfare and robotics may support this philosophy.

The joint use of a motorized rifle (tank) battalion and reconnaissance subunits supported by the new Armata T-14 tanks is a promising development supporting the conduct of a reconnaissance-in-force. The T-14 provides target designation and adjusts the direct fire of its own escort of T-90 tanks as well as the Koalitsiya-SV 152mm self-propelled howitzers and short-range and medium-range air defense systems to its rear. This is an important implementation of the concept of net-centric warfare.

Further, the use of robotic complexes for various purposes – both combat ones for direct conduct of the attack as well as reconnaissance-combat ones used both for combat operations and only for reconnaissance operations – is an important direction for developing further methods of conducting a reconnaissance-in-force.[29]

Integrated fires, rapid detect-destroy systems and the controlled, merciless onslaught of smaller robot tanks and assault vehicles may rip through robust defenses to determine the true nature of the defense and prepare the main attack to totally dismantle it. To the Russian way of thinking, the reconnaissance-in-force remains a viable method of tactical intelligence. Learning how to employ it optimally is the current challenge.

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Notes

[1] Ministry of Defense of the Russian Federation, Военный Энциклопедическнй Словар [***Military Encyclopedic Dictionary***], Second Volume, Moscow: Ripol Klassik, 2001.

[2] Robert G. Fix, ***Reconnaissance in Force: A Key Contributor to Tempo***, Fort Leavenworth, School of Advanced Military Studies monograph, 1992, http://www.dtic.mil/dtic/tr/fulltext/u2/a264418.pdf, accessed July 26, 2017. *Probing attack* is a term that is sometimes used interchangeably with *reconnaissance-in-force* but differs in that the primary mission of a reconnaissance-in-force is to develop a more complete intelligence picture, whereas a probing attack is limited to determining strong and weak points in the

enemy defense.

[3] Ibid. There was a sardonic U.S. soldiers' observation that "[t]hey called the operation a 'reconnaissance-in-force,' a term used to minimize disappointment over the failure of an attack." Cited in Fix's monograph and attributed to Ned Russell, ***Springboard to Berlin***, 1943.

[4] Ministry of Defense of the Russian Federation, "Разведка Боем" [Reconnaissance by Battle], Военная Энциклопедия [***Military Encyclopedia***], Volume 7, Moscow: Voyenizdat, 2003.

[5] V. Kiselov and A. Kostenko, "Разведка боем в современных условиях" ["Reconnaissance-in-Force under Contemporary Conditions"], Армейский сборник [***Army Digest***], July 2017.

[6] Ibid.

[7] Ibid.

[8] Ibid.

[9] Ibid.

[10] Ibid.

[11] These reconnaissance elements determine the density of enemy personnel and weapons in strongpoints, trenches and connecting passages; observe areas of disposition of his closest reserves; determine the strength of defensive structures; capture prisoners, documents and models of arms, combat equipment and gear; and conduct reconnaissance through intercepts of enemy telephone conversations by connecting to his wire lines of communication.

[12] Ibid.

[13] Ibid.

[14] Ibid.

[15] Ibid.

[16] The Russian authors are being too general here. Night-vision devices are affected by heavy rain, heavy snow and sandstorms.

[17] Ibid. Russia's next generation of man-portable short-range reconnaissance radar, the 1L277 Sobolyatnik, the 1L111M Fara-VR and the new Kredo-1 are found at company and battery level and higher.

[18] Kiselov and Kostenko.

[19] Ibid.

[20] Ibid.

[21] Ibid.

[22] Ibid.

[23] Ibid.

[24] Ibid. The article does a lot of mirror imaging of Russian defensive practices.

[25] Ibid.

[26] Ibid.

[27] Ibid.

[28] Ibid. Example created by author from a study of numerous Soviet and Russian examples.

[29] Kiselov and Kostenko.

Acronym Quick-Scan

ATGM – anti-tank guided missile
FMSO – Foreign Military Studies Office
ISIS – Islamic State of Iraq and the Levant

The Military Decision-Making Process: a Blueprint for Developing Your Unit's Mission-Essential Task List Crosswalk

by CPT Jonathan Hawkins

The U.S. Army has developed and maintained a set of doctrine since its inception. It has constantly expanded and refined this doctrine to ensure it remains a relevant point of reference in an ever-changing environment. Despite having unlimited access to this doctrine, however, leaders are often quick to look elsewhere to address a problem or challenge. Conducting a thorough and applicable mission-essential task list (METL) crosswalk is one of these "problems" leaders face – a problem that can be solved through the application of a commonly used piece of doctrine.

The most effective method of executing an accurate METL crosswalk that facilitates training management within a unit is through the use of the military decision-making process (MDMP). Executing a METL crosswalk using the MDMP in turn facilitates the execution of troop-leading procedures (TLPs) at the company/troop/battery level.

Each unit has a list of tasks, dictated by the Army, that it is expected to be able to perform. This list of tasks, known as a METL, is the guiding force behind a unit's training and should be an integral part of the training-management process. Conducting a crosswalk of these tasks down to the individual level is critical to a unit's ability to plan, execute and manage meaningful training that effectively builds proficiency in those Army-directed tasks. Once an accurate crosswalk is executed, it can be applied in several ways that facilitates parallel planning and builds efficiencies within a unit's training-management system.

This article identifies critical gaps in the typical method of executing a METL crosswalk; proposes an alternate, doctrinal-based method; and provides practical ways to apply the crosswalk in everyday operations.

Crosswalk steps

A thorough METL crosswalk is executed in two steps: inform and conduct. Too often these two steps are merged into one and leadership fails to be applied to the process. The "inform" step is what most are accustomed to: accessing the Combined-Arms Training Strategies (CATS) Website (https://atn.army.mil/dsp_CATSviewer01.aspx#) or another resource and researching, by task, what individual tasks are nested within a collective task according to that particular source.

While this process is important, it is only the initial step toward executing an accurate crosswalk of mission-essential tasks (MET). The second step, "conduct," is what gets left out most of the time. This step requires leaders to be more subjective, looking specifically at their mission set and applying the knowledge and experience held within their organization to ensure tasks are properly nested. This is where the application of the MDMP is most effective, enabling leaders at echelon to account for all factors and allowing commanders to remain central throughout the process. It is through "informing" and "conducting" that accurate METL crosswalks are built and proper nesting of tasks between echelons can occur.

The first step in building a METL crosswalk is to "inform." During this step, commanders and other leaders look objectively at what individual tasks must be trained to service a collective task. By doing so, leaders establish a base of understanding into the training that must be executed, at echelon, to build proficiency in their respective METs. Here, commanders implement the science of control, which is "based on objectivity, facts and empirical methods"[1] and is critical in building an accurate association between collective and individual tasks.

There are several resources available to help facilitate this process. These resources, which include CATS, Digital Training Management System (DTMS) and training circulars (TCs), break down collective tasks into a list of individual or lower echelon tasks, making it easy to document and use as a reference moving forward.

CATS, in particular, organizes tasks based first on branch or unit type, then by echelon. CATS not only breaks down collective tasks to individual tasks but also provides training and evaluation outlines that list the performance measures required for each task to be trained.

CATS and similar databases are phenomenal resources that leaders should reference while developing a crosswalk, but not solely rely on. As with anything else, these resources have gaps in capabilities that make the second step in the crosswalk process absolutely critical.

There are several capability gaps in the resources used in the "inform" step that prevent commanders and other leaders from exclusively relying on them to execute their METL crosswalk. The largest deficiency is that these resources are void of any subjective analysis and fail to apply factors that might affect a particular unit's crosswalk. One way this is evident is how tasks are prioritized. Executing a crosswalk purely using CATS or another resource typically causes leaders to rank the importance of their tasks based on the number of collective tasks that are serviced instead of what might be uniquely important for their particular unit.

For example, Table 1 depicts an armor company's high-to-low payoff tasks based on the commander's crosswalk. "Conduct TLP" is at the top, as training that task at the platoon level services the most supporting collective tasks (SCTs) at the company level. "Conduct a movement-to-contact," meanwhile, is prioritized at the bottom of the list

1-4	Low-payoff collective task
5-9	Medium-payoff collective task
>10	High-payoff collective task

	Platoon CCTs
1	Conduct TLPs (171-121-4045)
2	Conduct rehearsal (07-2-5009)
3	Integrate direct fires (07-2-3027)
4	integrate indirect-fire support (07-2-3036)
5	Conduct tactical movement (07-2-1342)
6	React to contact (07-3-D9501)
7	Conduct consolidation and reorganization (07-2-5027)
8	Conduct a passage-of-lines as the passing unit (07-2-9006)
9	Evacuate casualties (08-2-0004)
10	Treat casualties (08-2-0003)
11	React to indirect fire (07-3-D9504)
12	Conduct a movement-to-contact (07-2-1090)
13	Conduct area defense (07-2-9003)
14	Occupy an assembly area (07-2-9014)
15	Conduct attack-by-fire (07-2-1256)

Table 1. An example of an armor company's high-low payoff tasks. Also see TC 3-20.15, *Tank Platoon Collective Task Publication*, July 2013.

because, due to the narrow focus of the task itself, it only services a small number of SCTs.

Relying on CATS alone to do a METL crosswalk removes the commander from the process and instead relies on quantitative data to determine what tasks are most important. Given some analysis, this commander could determine that, although "conduct a rehearsal" is an important task, his platoons' ability to conduct a passage-of-lines is more important based on his company's mission.

CATS shortcomings

Another gap in the capabilities of these resources is the failure to account for unique units or units in uncommon situations. Currently, CATS and similar resources serve as a "one size fits all" database that treats every like unit the same. This, however, is clearly not the case for several units. For example, one armor company in every armored brigade combat team (ABCT) across the Army has moved under the cavalry squadron as part of the Army's K-series modified table of organization and equipment. This creates an obvious difference in mission set, responsibilities and expectations of that armor company. It also does not take into account the mission for the squadron and how it differs from that of a combined-arms battalion.

Other examples include the forward-support companies (FSCs) and artillery batteries.

One of the several changes that came with the Army's K-series redesign is the movement of one armor company to the cavalry squadron in each ABCT. Among other things, this changed that armor company's mission from being one centered on closing with and destroying the enemy to one focused on reconnaissance and security. CATS has failed to account for this change. As a result, conducting an objective METL crosswalk using only the first step of the process will yield results focused on tasks critical to a standard armor company, not one task-organized within a cavalry squadron.

It could be argued that the armor company's METL itself must change to properly nest its efforts within the cavalry squadron. While this may be true, the commander's ability to execute an accurate METL crosswalk will help mitigate the effects of having a standardized METL and will focus training within the company on the tasks necessary to accomplish its new mission set.

An accurate crosswalk assists in identifying tasks that are common to both cavalry and tank organizations. For example, "integrate indirect-fire support" and "conduct tactical movement" are critical collective tasks (CCTs) for both scout and tank platoons. Identifying and prioritizing these tasks allows the company to simultaneously service both their Army-directed METs and the tasks necessary to accomplish their mission within the squadron.

Another way an accurate crosswalk helps is by effectively breaking down tasks to the individual level so the company is prepared to capitalize on training opportunities as they arise. Depending on how the squadron is task-organized with the integration of scouts and tanks, for example, the company might never have the opportunity to train a tank pure platoon to "conduct an attack." However, a tank section operating in support of a scout platoon can train on "conduct an attack-by-fire," a supporting task to "conduct an attack" that was identified through a proper crosswalk.

Capitalizing on this training opportunity builds proficiency in that task at the section level, which, when built upon, ultimately leads to an increase in platoon proficiency and beyond. This level of analysis is something commanders cannot find on CATS.

Similar to the armor company in a cavalry squadron, FSCs do not have a METL that supports their specific mission set. The Army-directed METL for an FSC is generic, not tailored to fit the particular formation the FSC supports. The Delta FSCs in an ABCT, for example, are constructed to support the cavalry squadron. However, there are no METs addressing sustainment in a guard or screen, two essential tasks in the cavalry squadron's METL.

Also, the SCTs for four of the FSC's six

METs ("conduct sustainment support in a movement-to-contact," "conduct sustainment support in an attack," "conduct sustainment support in an area defense" and "conduct sustainment support in area security") are identical. There is no delineation in how sustainment is trained to build proficiency in each of these tasks.

Many of these SCTs are the same as units in the brigade-support battalion and sustainment brigade – two formations with entirely different missions. Strictly using CATS to perform this crosswalk results in the identification of literally hundreds of crew and individual tasks with no prioritization. Applying subjective analysis that CATS or similar databases cannot provide is critical in developing an accurate crosswalk within an FSC.

Another unit that CATS does not accurately account for is the self-propelled artillery battery. If a battery commander executed a METL crosswalk strictly using CATS, critical tasks would be left out. "Operate an M109A6 driver's night-vision device" and other driver-related tasks, for example, are not covered. Tasks associated with basic or advanced driver's training obviously need to be a focal point in a battery's training plan, especially one that contains self-propelled artillery.

Other tasks left out are associated with communications. Artillery batteries have an inherent requirement to communicate long distances to deconflict airspace and process fire missions in support of units external to their formations. Specific communications tasks like "operate an AN/PRC-150C Harris radio" are not included under the artillery battery in CATS or similar databases.

Training on these tasks enables the battery to establish secure long-range voice and digital communications, which is especially critical when firing in support of a unit conducting a guard or other operations at increased distances. While it is true that these tasks do not have to be included in a METL crosswalk for a unit to train on them, excluding them from the crosswalk decreases its utility and limits its applicability to the unit's training management system.

Applying MDMP

The "inform" step is crucial in developing an accurate METL crosswalk. It not only identifies the breakdown of each collective task but also creates a shared understanding within the unit of what tasks are necessary to train on to build proficiency at a higher echelon. The end product of this step is a spreadsheet that clearly shows the relationship between tasks at each echelon (Table 2[2]). This step, however, is typically the only one leaders complete when executing their crosswalk. This standard method of conducting a crosswalk fails to apply a level of subjectivity that comes with a commander's analysis. For this reason, the second step of "conduct" is critical in developing an accurate crosswalk.

The "conduct" step is where a unit's METL crosswalk goes from an objectively developed spreadsheet to an integral part of the way training is managed and conducted. It is during this step that commanders implement the art of command, defined in Army Doctrinal Publication (ADP) 6-0 as "the creative and skillful exercise of authority through timely decision-making and leadership."[3] The application of this leadership is the key difference between "conducting" and "informing" a crosswalk. This step is best accomplished through the use of MDMP.

MDMP provides an excellent framework that can help guide commanders and other leaders to conduct an accurate crosswalk that can be practically applied in several ways. The first thing the MDMP does is it enables the commander to drive the process. The first principle of Army unit training is that commanders and other leaders are responsible for training.[4] This responsibility makes their direct involvement in this process critical.

The other benefit of using the MDMP is the doctrinal structure it provides. Although MDMP is typically conducted at the battalion level or higher, commanders at all levels can use the steps to ensure they thoroughly and deliberately create their crosswalk.

Step 1 of the MDMP is "receipt of mission." By this time, commanders and other leaders have already objectively developed the spreadsheet and should have a firm understanding of what needs to be done to complete the crosswalk.

Step 2 is "mission analysis" (MA). One of the primary steps within MA is the identification of specified, implied and essential tasks. This step forces commanders to look at their units specifically and determine what tasks must be trained to accomplish their assigned mission.

Specified tasks, as they relate to a METL crosswalk, are the unit's Army-directed METs. These tasks are specifically assigned to the unit and serve as the base of tasks to be analyzed. Implied tasks are the subtasks that the unit must train to build proficiency in their specified tasks.

A lot of these tasks were identified in the "inform" step using CATS and other resources but, as stated earlier, it is likely that key tasks were missed with the absence of any subjective analysis. An effective way to identify implied tasks is to draw a sketch or set of graphics that depicts a collective task as the objective and outlines the supporting tasks necessary to accomplish the mission. This helps the commander conceptualize all the tasks his subordinate element will have to execute to properly perform that collective task.

Take Figure 1, for example. The specified task the commander is analyzing is "conduct an attack." By drawing a sketch, the commander is able to work backward to determine what his unit will have to do to successfully conduct an attack on Objective Lions.

Creating sketches of tasks as they would a set of graphics forces leaders to think of all the tasks tied to each graphical control measure or operational graphic. This method also helps to apply some practicality to the process. A database might identify "plan for an improvised explosive device threat" as a supporting task to "conduct zone reconnaissance" but, by drawing out the specified task, a commander may find it unnecessary to train that implied task. As a result, this task could be prioritized lower than other supporting tasks or disregarded as an implied task altogether.

Implied tasks can also be added based

Platoon CCTs	Conduct tactical movement (07-2-1342)	Conduct a rehearsal (07-2-5009)	React to indirect fire (07-3-D9504)	Occupy an assembly area (07-2-9014)	Conduct area defense (07-2-9003)	Conduct a passage-of-lines as the passing unit (07-2-9006)	Conduct a passage-of-lines as the stationary unit (07-2-9007)	React to chemical attack (03-3-D0035)	Treat casualties (08-2-0003)	Evacuate casualties (08-2-0004)	Conduct TLPs (171-121-4045)	Integrate direct fires (07-2-3027)	Conduct consolidation and reorganization (07-2-5027)	Conduct a bypass (07-2-9002)	React to contact (07-3-D9501)	Integrate indirect-fire support (07-2-3036)	Conduct a movement-to-contact (07-2-1090)	Conduct attack by fire (07-2-1256)	Conduct support by fire (07-2-3000)
Integrate direct fires (07-2-3027)	1	1			1						1	1	1		1	1	1	1	1
Conduct support-by-fire (07-2-3000)	1	1	1	1					1	1	1	1	1		1	1			1
Integrate indirect-fire support (07-2-3036)		1									1	1				1			
Conduct TLPs (71-2-5100)		1									1								
Conduct an attack-by-fire (07-2-1256)	1	1		1		1			1	1	1	1	1		1	1	1	1	
Employ obstacles (07-2-1396)		1			1						1	1				1			
Employ deception techniques (07-2-6045)		1			1						1					1			
Conduct a security patrol (07-3-9022)	1	1	1	1		1			1	1	1	1	1		1	1	1		
Secure routes (07-2-1450)	1	1	1			1			1	1	1	1	1	1	1	1			
Secure civilians during operations (07-2-4054)		1							1	1	1								
Conduct roadblock and checkpoint (19-3-2406)		1	1		1			1	1	1	1	1	1		1				
Plan unit-deployment activities upon receipt of warno (55-2-4828)		1									1								
Perform staging activities (55-2-4826)	1	1		1		1					1		1						
Perform deployment-alert activities (55-2-4801)	1	1									1								
Conduct a passage-of-lines (07-2-9007)	1	1	1			1	1				1	1			1	1			
Conduct a follow-and-support	1	1	1			1	1		1	1	1	1	1	1	1	1	1	1	1
Total supported tasks	9	16	6	4	4	6	2	1	7	7	16	10	8	2	8	10	4	3	3

Table 2. Reproduction of a spreadsheet example of tank-platoon CCTs crosswalked against company SCTs, the resulting product of the "inform" step.

on the commander's analysis. "React to indirect fire" or "treat a casualty" are potential implied tasks for "conduct an attack." This same concept can then be applied to each implied task identified to further break them down to lower echelons. Through this process, commanders are able to clearly identify and prioritize their specified and implied tasks.

Once specified and implied tasks are identified and leaders within the organization have an understanding behind the purpose for accomplishing each task, essential tasks are identified. Essential tasks are determined based on what tasks must be executed to accomplish the overall mission.[5] These tasks are unique to individual units and should determine the training focus and allocation of training time. In some cases, these tasks are directed from a higher headquarters.

For example, 5th Squadron, 4th Cavalry Regiment, 2nd ABCT, 1st Infantry Division, received specific guidance from the brigade commander on what tasks he wanted the squadron to be able to execute proficiently: "conduct a guard" and "conduct a reconnaissance-in-force." These two tasks became the squadron's essential tasks, serving as a focal point of training and assisting in how the squadron manages its time and resources.

After identifying specified, implied and essential tasks, commanders execute a commander's dialogue with their higher headquarters. The commander's dialogue, described in Army Doctrinal Reference Publication (ADRP) 7-0 as a critical step in completing MA,[6] allows commanders to discuss the tasks they have identified with their leadership to confirm or adjust results prior to moving forward with their crosswalk. This dialogue serves as a conditions check and ensures subordinate commanders are nested within their higher

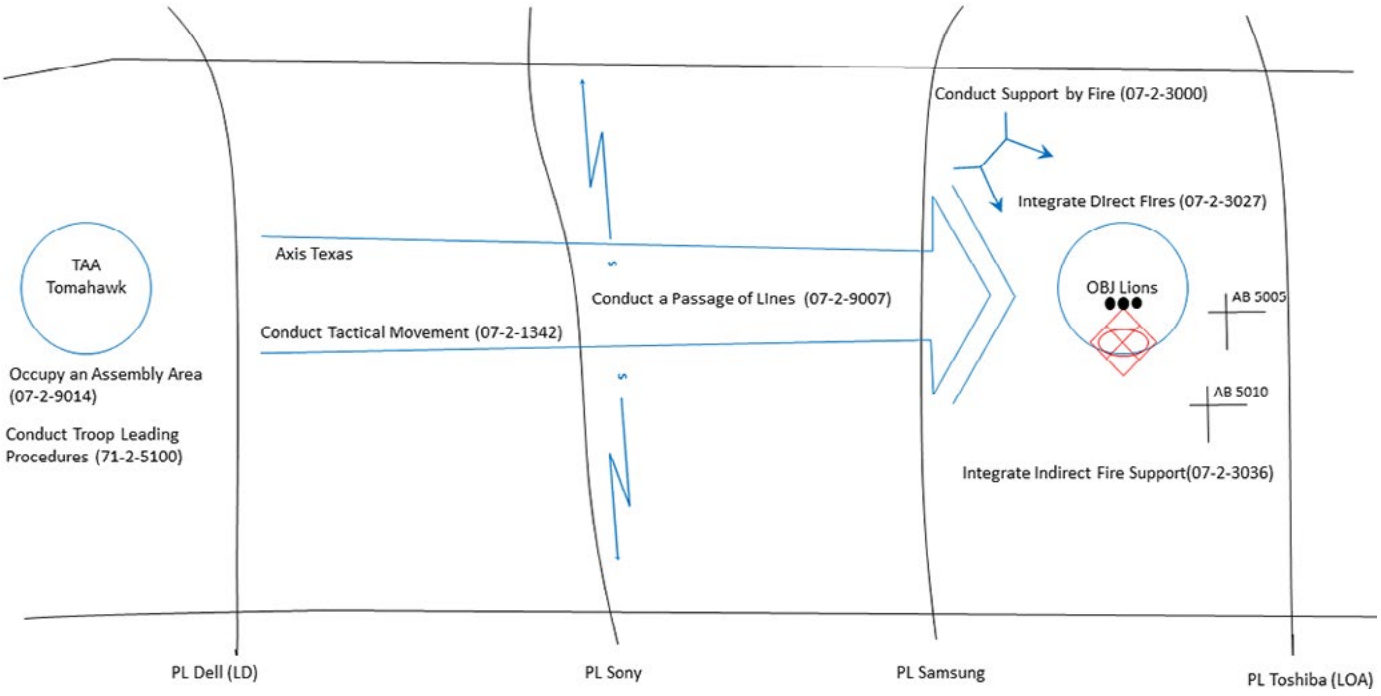


Figure 1. A sketch identifying implied tasks when conducting an attack (07-2-9001).

commander's intent. The results of this dialogue and the rest of MA are then applied in course-of-action (CoA) development.

Step 3 of the MDMP is CoA development. During this step, commanders nest their tasks vertically with their higher headquarters and laterally with adjacent units, developing potential CoAs to be applied given certain missions.

Figure 2 depicts what tasks would be executed at echelon if the brigade was conducting a movement-to-contact. With the application of the specified, implied and essential tasks identified through MA, this commander outlined what mission his unit would be expected to perform. In this particular example, the troop commander has determined that when the squadron is executing a reconnaissance-in-force, his troop would more than likely be conducting a zone reconnaissance. With the squadron's task organization, the tank troop would typically be assigned route reconnaissance as a specified task.

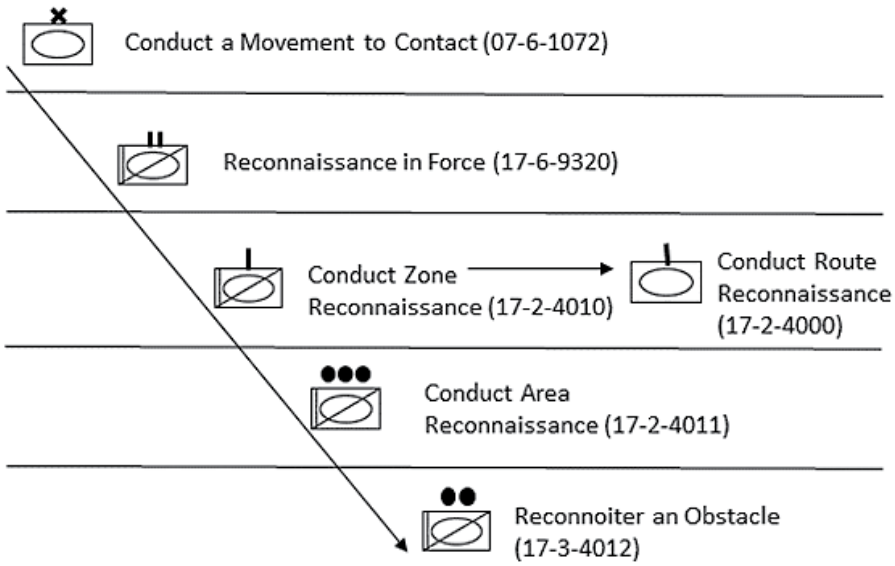


Figure 2. METL nesting diagram.

This level of analysis helps commanders anticipate requirements and better prepare to meet them. The tank-troop commander knows that if the brigade is doing a movement-to-contact, he needs to plan for the possible employment of engineer reconnaissance teams and mount mine plows on his wing tanks. Using the MDMP drives this preparation.[7] This also, again, increases the applicability of the METL crosswalk and makes the time spent developing it worthwhile. Developing these CoAs translates almost directly into the creation and refinement of the METL crosswalk, as tasks are broken down from the highest echelon to the lowest.

MDMP's last steps; TLPs

The remaining steps of the MDMP guide the commander through the refinement and production of the METL crosswalk. In CoA analysis and CoA comparison, commanders and other leaders compare their crosswalks with like units, widening perspectives and highlighting differences to trigger discussion. This is a critical step in the crosswalk's development, as it allows the crosswalk to be looked at by leaders external to the unit who hold similar positions. Comparing crosswalks gives commanders an outside, unbiased look at their crosswalk that could

potentially identify something that was missed.

CoA approval and orders production are the final two steps. It is during these steps that the METL crosswalk is approved by the higher commander, finalized and published. The final product does not look much different from what was developed during the "inform" step in terms of format, but the content has been refined and ultimately built through the analysis of the commander and other leaders within the organization.

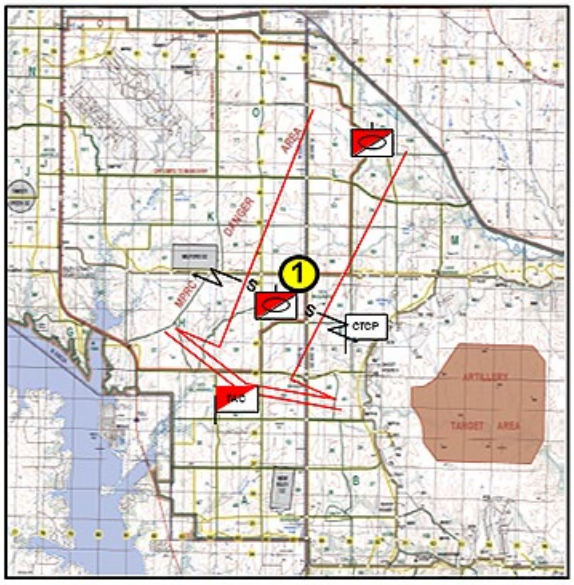
Using the MDMP is the most effective way to develop an accurate METL crosswalk that can be easily integrated into a unit's training-management process. Developing a crosswalk by first "informing" and then "conducting" creates a product that has several applications. First, the crosswalk facilitates TLPs at the company/troop/battery level and below. It equips units at lower echelons with the tools necessary to conduct parallel planning. It can also be used as a doctrinal template (doctemp), which can be turned into a situational template (sittemp) upon designation of a mission. Finally, an accurate METL crosswalk can be integrated into training meetings and other everyday operations. The MDMP is capable of producing a crosswalk with several applications.

One of the greatest applications is how a METL crosswalk can facilitate TLPs and enable parallel planning at lower echelons. With a carefully developed METL crosswalk, Steps 1 and 2 of the TLPs can be completed simply by knowing the essential task of one's higher unit. As stated earlier when discussing CoA development, referencing the unit's crosswalk will enable the commander to receive the mission, or at least a piece of it, and issue a warning order (warno) based on the task his higher headquarters must execute.

Following a brief warno, commanders can move immediately into Steps 3 and 4: "make a tentative plan" and "initiate movement." A crosswalk done from MET down to individual task outlines what must be done at each echelon to successfully accomplish the mission. For example, if a cavalry squadron is tasked with a guard mission, the tank-troop commander knows it is likely the troop will be tasked with an area defense.

Following the crosswalk for that MET, platoons know they will have to integrate indirect-fire support so they can begin planning indirect-fire targets with the troop fire-support officer. Sections know they will have to establish fighting positions, so they can begin rehearsing the identification and occupation of fighting positions. Individual crewmen can begin preparing camouflage to use on the tanks and range-card templates to expedite the development of sector sketches once in position.

Units typically do not receive a lot of time to plan, especially at lower levels. This expedites TLPs at the company/



5-4 CAV SQUADRON TRAINING FOCUS			
SABER FOCUS			
5-4 CAV SQUADRON MET SUPPORTED			
Conduct Area Security Conduct Area Reconnaissance			
Troop	Troop MET Supported	PLT	BRO Time Training
HHT	Operate a Command Post Conduct the Mission Command Process	Medic	Provide Battalion Aid Station Support
		Staff	Perform Sustainment Functions (S1, S4, 1SG)
A	Conduct Area Security (07-2-1324) Conduct Area Reconnaissance (17-2-4011)	Red	Prepare a SITREP (171-121-4051) Integrate Indirect Fire Support (07-2-3036)
		White	Establish an Observation Post (07-3-9016)
B	Conduct a Screen Conduct Area Reconnaissance	Red	Establish an Observation Post (07-3-9016) Conduct TLPs (71-2-5100)
		White	Conduct LOGPAC (171-133-5023)
C	Conduct a Screen Conduct Area Reconnaissance	Red	Conduct TLP's (71-2-5100) Integrate Indirect Fire Support (07-2-3036)
		White	Establish an Observation Post (07-3-9016) Conduct Area Reconnaissance (17-2-4011)
T	Conduct Area Security (07-2-1324) Conduct an Area Defense (07-2-9003)	1st	Conduct Troop Leading Procedures (71-2-5100)
		2nd	Integrate Direct Fire (07-2-3027)
		3rd	Integrate Indirect Fire Support (07-2-3036)
D/299	Conduct an Area Defense (07-2-9003) Conduct Sustainment Support in a Movement to Contact (63-2-1072)	Mech	Conduct Maintenance Support Operations (43-2-0029)
		Distro	Defend Convoy Elements (55-2-4006)

	M: 03OCT	T: 04OCT	W: 05OCT	T: 06OCT	F: 07OCT	S: 08OCT	S: 09OCT
5-4 CAV	1 SABER FOCUS 1x AGTS				BDE Run/Pay Day Activities	Columbus Day Weekend	
HHT	SABER FOCUS				Saber Focus Recovery		
A	Saber Focus O/C-T Mission						
B	100% Inventories SABER FOCUS						
C	Saber Focus OPFOR Mission						
T	AGTS Saber Focus OC/T Support						
D/299	Scheduled / Unscheduled Maintenance FTCP Displacement Saber Focus Sustainment Support						

Figure 3. A slide from the weekly training meeting in 5-4 Cav. It depicts T+1 squadron concept of operations for Week 1 of a training cycle.

troop/battery level and triggers almost immediate movement.

Doctemp, sittemp

Another practical use of a METL crosswalk is maintaining it as a doctemp. A doctemp is a model depicting how an element, typically a threat, operates when unconstrained by the effects of the battlefield environment.[8] When environmental effects like terrain are placed over the doctemp, it changes into a sittemp, which depicts how the element will operate under those specific effects.

In this case, the METL crosswalk serves as a doctemp, a model that depicts how a unit will fight void of any external factors. Once a factor is implemented – a designation of mission, for example – the doctemp turns into a sittemp, serving as a blueprint for what specifically needs to happen for that unit to be successful. This application makes the crosswalk a living document, capable of taking on several shapes given the condition under which the unit is placed.

Training meetings

The final major application of a METL crosswalk is its integration into training meetings and other daily operations. To ensure a unit's crosswalk plays an integral role in training management, it must be tied into the one weekly meeting purely dedicated to training. This ensures the tasks identified as high importance are being allocated the proper time in the training schedule. It also creates a shared understanding among the leadership on what specifically the unit needs to focus training on for that week.

Figure 3 depicts a slide from the training meeting in 5-4 Cav. Each week, a squadron MET is identified as the training focus for that period. In turn, troops identify troop METs that are nested within the squadron MET as their training focus. The same thing is done during troop training meetings, ensuring the individual tasks being trained each week during Sergeants' Time training are vertically nested with the squadron's MET. This also serves as a system of record, documenting when and how often each MET was addressed through training.

A unit tying their crosswalk into their training meetings helps operationalize the process, which facilitates a smoother transition from garrison to a field environment. A unit that constantly discusses, plans and trains around their METs will be familiar with everything from terminology to specific requirements for each task when employed in a tactical scenario.

'Yellow space' management

Another way the crosswalk can be integrated into everyday training management is by using it as a tool to manage "yellow space." Yellow space refers to windows of time where units can train tasks concurrent to other operations that are not part of the primary training focus. This is not to be confused with white space, which is extremely rare if not non-existent in most units.

Being able to capitalize on yellow space and manage it effectively is what elevates units to the next level. Having a well-developed METL crosswalk can assist with managing yellow space, providing pre-prioritized tasks at echelon to reference when the opportunity arises.

Figure 4 illustrates how a unit used its METL crosswalk to identify tasks from 10-level to platoon-collective that they could train concurrently while executing a platoon situational-training exercise (STX). Having these tasks clearly broken down equips commanders with the tools necessary to make an informed decision on what tasks should be the focus of concurrent training. The early identification of these tasks – battle drills in this particular example – then enables subordinate leaders to plan ahead to ensure the training is valuable and not poorly prepared. A thoroughly developed METL crosswalk serves as a tool that can be integrated into training management.

There are several resources that assist leaders in creating a METL crosswalk. These resources – which include CATS, TCs, DTMS and other databases – are fantastic tools that help identify and clearly define supporting tasks and how they are associated with collective tasks. These tools, however, cannot replace a commander's involvement or subjective analysis. To do this, commanders and other leaders do not have to look any further than the nearest Army publications library.

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CPT Hawkins notes that Troop D, 5-4 Cav, is a tank company that transitioned from combined-arms battalion to cavalry squadron while he was in command. The transition gave him "phenomenal insight" into the challenges a tank unit serving in a cavalry organization may face and the effect the Army-directed METL has on a unit's training plan.

Notes

[1] ADP 6-0, ***Mission Command***, May 2012.

[2] Troop D, 5-4 Cav METL crosswalk (platoon CCT), June 2016.

[3] ADP 6-0.

[4] ADRP 7-0, ***Training Units and Developing Leaders***, August 2012.

[5] Field Manual (FM) 5-0, ***Army Planning and Orders Production***, January 2005.

[6] ADRP 7-0.

[7] ADRP 5-0, ***The Operations Process***, May 2012.

[8] FM 34-130, ***Intelligence Preparation of the Battlefield***, July 1994.

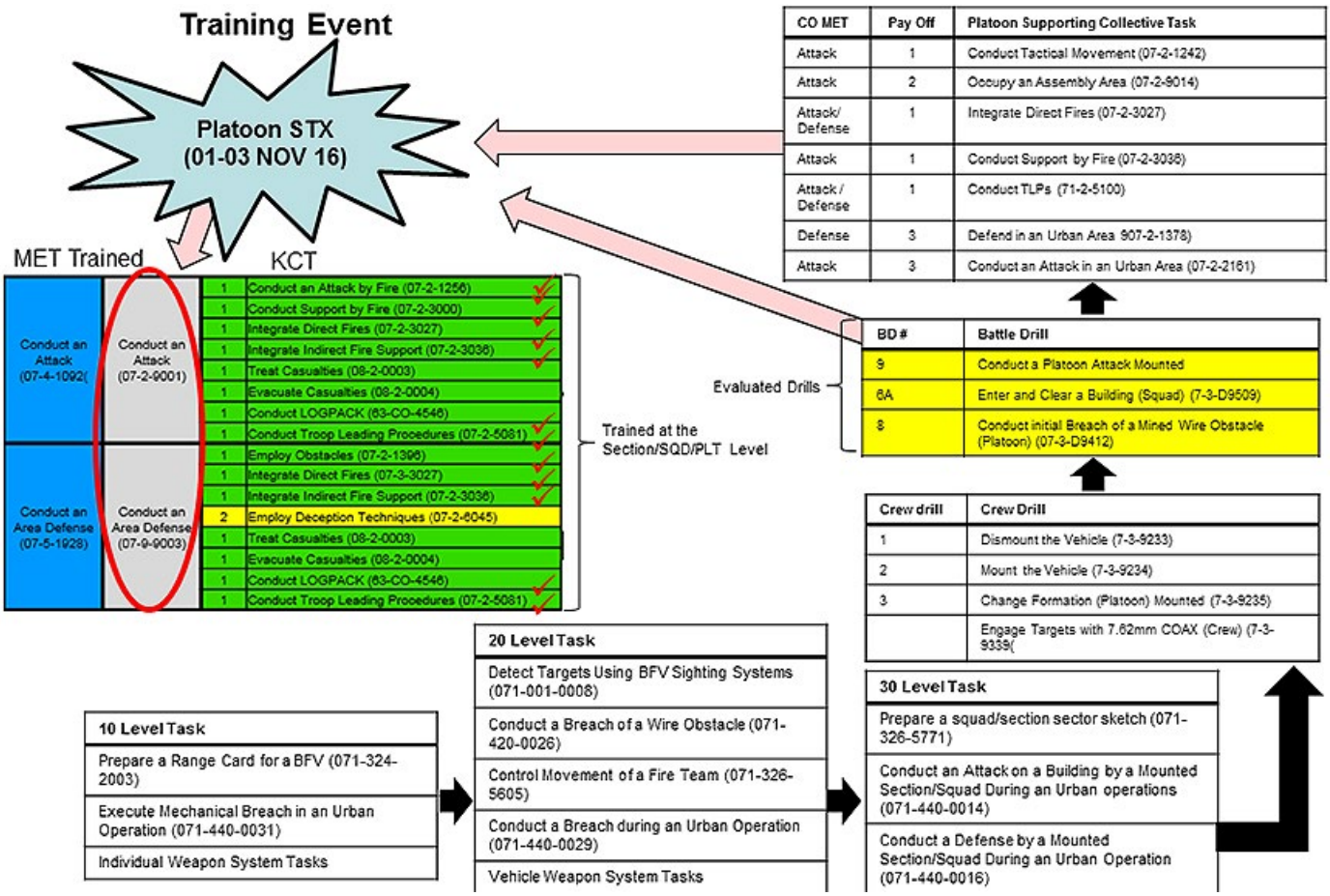

Figure 4. An illustration of how one unit plans to manage yellow space (briefed at a quarterly training brief to the 2nd ABCT, 1st Infantry Division, commander).

Acronym Quick-Scan

ABCT – armored brigade combat team
ADP – Army doctrinal publication
ADRP – Army doctrinal reference publication
BD – battle drill
BFV – Bradley Fighting Vehicle
CATS – Combined-Arms Training Strategies
CCT – critical collective task
CoA – course of action
Doctemp – doctrinal template
DTMS – Digital Training Management System
FM – field manual
FSC – forward-support company
HHC – headquarters and headquarters company
KCT – key collective tasks
LD – line of departure
LoA – line of advance
Logpac(k) – logistics package
MA – mission analysis
MDMP – military decision-making process
MET – mission-essential task
METL – mission-essential task list
PLT – platoon
SCT – supporting collective task
Sitrep – situation report
Sittemp – situational template
STX – situational-training exercise
TAA – tactical assembly area
TC – training circular
TLP – troop-leading procedure
Warno – warning order

Instituting Organizational Change at Company Level

by CPT Daniel Rowe

Instituting organizational change is one of the hardest tasks for commanders to plan and execute, even when circumstances are ideal. When they aren't, the challenges can seem insurmountable. Fortunately, there's help: Dr. John Kotter's "8-Step Process for Leading Change." I used the process to transform a dysfunctional and demoralized tank company into the most lethal unit rotated to the Republic of Korea. This article explains what I did at each step.

On a cold December morning at Camp Hovey, South Korea, I assumed command of Delta Company, 3rd Battalion, 8th Cavalry Regiment. I was nervous, and for good reason. I was thrust into command of a tank company, one of the most destructive units in the U.S. arsenal. Specifically, I was replacing a commander who had been relieved in part for fostering a negative command climate. This command would determine my career. I would repair the broken company or suffer my predecessor's fate. After the assumption-of-command ceremony, I met with my Soldiers for brief introductions and released them for the holiday weekend. It was Christmas Eve 2014.

My immediate concern was to improve the command climate and prepare the company for an event that's everything to tankers: gunnery. The company was unlikely to perform unless things turned around in a hurry. Gunnery was scheduled for early February, only weeks away.

Figure 1. Kotter's eight-step process. *(Copyright www.kotterinternational.com; used by permission.)*

As I planned, I remembered the tools I studied a year earlier for my master's degree in organizational leadership,[1] which I completed while at the Maneuver Captain's Career Course (MCCC). Kotter's eight-step process stood out as the best template to follow.

The "big opportunity" for my company, the center of Kotter's graphic, was to transform the unit into the most lethal tank company on the Korean Peninsula. Our rotation to Korea provided this easily identifiable opportunity. The unit fell in on a specified mission that was already understood by most Soldiers, and they knew what needed doing. Hundreds of lives depended on our ability to quickly react and provide security should hostilities on the peninsula resume.

Although our battalion was from 1st Cavalry Division, we were assigned temporarily in Korea to 2nd Infantry Division, which had about six months left in its rotation. This gave me little time to make sweeping changes if the company was to have a successful rotation. Therefore, I knew I must act quickly and decisively to put the company on the right track. Soldiers are willing to work harder and longer during training and gunnery than they are during reset operations. So if the changes didn't take hold before we redeployed, they were unlikely to stick once we returned to the United States. Knowing the next six months were critical, I focused first on planning for stabilized gunnery just six weeks away.

Step 1: create a sense of urgency

The first step in Kotter's process, creating a sense of urgency, is essential to ensuring a change initiative gains traction. Without it, Soldiers tend to lose interest and motivation, and the even the best initiative can stagnate.

The first step was perhaps the easiest because our limited timetable forced a sense of urgency on the company. We had only six weeks to conduct

inventories, train and prepare our vehicles for gunnery. As gunnery was our battalion's culminating event, it forced the Soldiers to focus on their jobs and proficiencies. With a shortened timeline and the pressure that comes with preparing for gunnery, the Soldiers easily saw that a change needed to occur within the company, and it needed to occur right away.

The company lost the "top tank company" streamer during the previous gunnery, which served to fuel their competitive spirit. Also, they had served for many months in a dysfunctional, not-well-respected unit. They wanted to repair their damaged reputation and knew performance during gunnery could begin to do this.

Step 2: build a guiding coalition

Here the leader driving change needs buy-in from other leaders. Attempting to produce organizational change singlehandedly is most often doomed; one person's forceful personality isn't enough. When the leader leaves the organization, it slips back into its old ways. A guiding coalition ensures that other leaders will sustain the change initiative.

In the Army, identifying the key members of any guiding coalition is usually easy. It's the leaders. In my case, they were the company's first sergeant, platoon leaders and platoon sergeants. Without their buy-in, the unit's culture wasn't going to change. The previous commander had created distrust and animosity between him and the company. To repair that fractured relationship, I worked to win over all my leaders.

I wanted to show the first sergeant that we were a team, and our company's physical layout provided the perfect opportunity. Between the commander's office and the first sergeant's was a wall with a sliding-glass window that was painted over. The first time I walked into my office, I opened the window. This simple gesture immediately prompted my first sergeant to tell me the previous commander had kept the window closed, saying that his business was his own. I replied that I wanted the window open because I would constantly be seeking his counsel and, more importantly, that we were a team and would have no secrets. I told him I'd knock down the wall between our offices if I could to make communication easier, but for now I'd settle for the small window. That was all it took. From that moment on, we were an inseparable team.

I also had to win over the three platoon leaders, who had been marginalized by the previous commander. He had micromanaged down to the Soldier level, undermining the authority of the platoon leaders and alienating them. I started a mission-command system that allowed platoon leaders to execute their tasks as they saw fit. I interfered only if I believed their plan jeopardized safety. Failure was acceptable as long as the mission didn't suffer and Soldiers learned from it. This meant that I had to assume the risk and responsibility that went with providing freedom to fail. Letting subordinate leaders do things their way was hard for me, but I knew it showed my trust in them and would inspire their confidence in me.

The first opportunity to implement my mission-command system came when I issued my executive officer guidance for change-of-command layouts. The guidance called for laying out all basic-issue items (BII)/components of end items (COEI) beside the equipment and including with each item a shortage annex prefilled out with all shortages. It also called for putting like items together to avoid double counting. My guidance ended there. Although my guidance was generic and contained nothing groundbreaking, it helped set the stage for my command.

My executive officer and platoon leaders were used to a commander who micromanaged down to the smallest details, often specifying the exact layout for all items and BII/COEI. When I didn't go there, they asked if I wanted certain items laid out in certain ways. I told them this was their mission, and as long as they met my intent, they could execute it however they saw fit. I noticed a change in them as they set about drafting ***their*** plan. Inventories proceeded smoothly, and though items were not laid out exactly my way, their way was quite good enough. For the first time in months, the platoon leaders had carried out their own plan rather than just executing the commander's. By giving my platoon leaders the opportunity to lead, they quickly became the next members of my coalition.

Finally, I knew buy-in from my three platoon sergeants was paramount. Fortunately, I had ignorance going for me. I had been a platoon leader and executive officer of a dismounted-infantry company, so I knew little about tanking. The last time I had set foot in an Abrams was Armor Officer Basic Course (AOBC) more than five years earlier. Now I had to prepare a company to conduct tank gunnery on a range whose terrain differed vastly from Fort Hood's.

I met with the platoon sergeants, each with some 15 years of tank experience, and laid out our problem. We had only a few weeks to prepare the company for gunnery and to educate me in the process. After an awkward silence, one platoon sergeant asked what I needed. I said I needed the experts, meaning them, to develop the gunnery train-up plan and brief me on what resources they needed and how much of the available weeks we had before the gunnery they needed to conduct the training. I was met with three beaming smiles and an almost synchronized, "Roger, sir, don't worry about it. We've got you covered." Just like that, all three platoon sergeants were on board. They knew I needed them; failure during gunnery might end my command and career. But seeing my honesty and trust in them, they responded in kind.

In a few short weeks, my guiding coalition of first sergeant, platoon leaders and platoon sergeants had taken shape.

Step 3: form strategic visions and initiatives

Today's Soldiers want the "why" to every order. Older Soldiers like my first sergeant hate this; they expect Soldiers to execute. But to get the most from Soldiers, I've learned to explain why certain tasks matter and why Soldiers should care. They perform better if they know how their actions help achieve the overall company vision.

Shortly after assuming command, the company participated in an awards ceremony where it received the maintenance-excellence streamer for the previous year. The ceremony gave me an opportunity to address the company. I began by praising their accomplishments over the past year, highlighting their hard work and dedication that led to the streamer. Then I spoke about my vision for the company. First and foremost, we would win "top tank company" during the upcoming gunnery, and with the streamer back with Delta Company, we'd set our sights on the rifle-qualification streamer.

My first sergeant stopped me mid-sentence. He reminded everyone that we were tankers and that the most important event for us was the upcoming gunnery and winning the gunnery award. My first sergeant had just disagreed with me in front of the entire company. I had a decision to make that would have long-lasting effects. Instead of arguing with my first sergeant, I used the moment to further refine the company vision. I asked the company what they saw as the most important events and standards. Multiple Soldiers and noncommissioned officers (NCOs) answered using nearly identical terms. Delta Company believed it was capable of being the best-trained and best-maintained tank company in the battalion. I told the company I would make it my goal to align all company actions to support this vision. Because we were in Korea, I spoke of the importance of readiness and rolled "fight tonight" under the umbrella of best-trained tank company.

Because the Soldiers had defined much of the company vision, they accepted my readiness caveat. Although their vision didn't align perfectly with what I had planned, it met my intent and excited the Soldiers. I have found no better way to motivate Soldiers toward a common goal than to allow them to help create the goal in the first place.

At every opportunity, I related our daily operations to our shared vision, further motivating the Soldiers to perform. At one meeting, Soldiers complained about having to start the tanks every two hours, even on the weekends. My reply: to remain ready and lethal, our tanks needed to start at any time and in any weather. During Korea's cold winters, batteries drain at an astonishing rate, and failing to perform starts every two hours would quickly lead to dead batteries, extra maintenance and decreased company performance. Word of my explanation spread, and complaints stopped.

Step 4: enlist a volunteer army

Whereas Step 2 calls for a coalition of leaders, this step involves getting buy-in at all levels. Without broad and deep support, changes often fail to take hold if the change champion leaves.

Before I arrived, Delta Company was a unit that people tried to avoid or leave. Its call sign, "Dragoon," had become poisoned by the actions of the previous command and, in one Soldier's words, was "basically a swear word." It expressed the dissatisfaction, frustration and anger Soldiers felt toward the unit and its leadership. I needed something to distinguish myself and my command climate from the past. I decided to change the call sign. "Dragoon" had been used as far back as the Iraq War. Simply choosing a new call sign myself would not achieve the desired results. I needed the Soldiers to buy in and have a vested interest in the new direction of the company.

Across several weeks, I talked with Soldiers about whether to replace "Dragoon" and what call sign to use if we did. Once I sensed some willingness to change, I put it to a formal vote with platoon leadership tallying their numbers. About 80 percent favored a new call sign. Soldiers and the platoon leadership suggested 10 names, and I narrowed them to a more manageable four. Then each platoon voted for its favorite, and we were down to two: "Doom" and "Death Dealers."

One morning immediately after physical training (PT), I took the formation from my first sergeant and put the two names to a vote. What I had expected to take five minutes took 20 as people argued for one name or the other. Two NCOs held out for the old "Dragoon" and refused to vote, a frustrating stand that showed me who would be barriers to change. After much arguing and several friendly insults, the company voted. Soldiers in favor of "Doom" moved to my right, while those in favor of "Death Dealers" moved to my left. And so we had a new call sign: "Doom." (I had preferred "Death Dealers.") Now Soldiers had more evidence that their opinions played a part in company decisions, and I was closer to having my volunteer army.

My army also grew through frequent praise and rewards for accomplishments. I bought company coins and handed them out to deserving Soldiers each week at closeout formation. Mechanics got extra time off after services were complete. Soldiers who were expecting a child returned home for the birth. Finally, I praised the accomplishments of individual Soldiers during formation. These actions helped to ensure almost all the company became part of my volunteer army. Soldiers began engaging me on a frequent basis. Complaints about mission requirements nearly disappeared. Most importantly, the Soldiers began bringing sensitive issues to the chain of command for help. The company began functioning like a team once more.

Step 5: enable action by removing barriers

Every commander is in the barrier-removal business, whether it's clearing time on the training calendar, helping to secure resources or ensuring Soldiers get their benefits. Changing my company's culture involved its share of removing and reducing barriers.

Seeking to curb off-duty drinking in Korea, 2nd Infantry Division promoted healthy recreational events in the form of the Commander's Cup. Because the division promoted the Cup so heavily, so did the battalion, which encouraged Soldiers to participate even during duty hours. But the hours consumed by these Commander's Cup events were barriers to my training plan. When I briefed my training schedule to battalion each week, I was asked why no Commander's Cup events were scheduled, and each week I explained that I needed the hours to prepare for gunnery – and I got them.

Another barrier to change was the expectation that, like the previous commander, I would show up at training and rework the training plan. Instead, I explained my intent to the leaders

and let them plan and execute using Kotter's eight-step training model. I might have conducted the training differently, but as long as it met my intent, it was acceptable. After I inspected several training events and the leaders realized they needn't worry about the commander reworking their plans on-site, their confidence grew and the quality of training improved dramatically. In essence, I transitioned the company away from command-and-control and established mission command as our guiding principle.

Then there were the two NCOs who wouldn't vote for any new call sign. They had been with the company the longest and continually expressed their dissatisfaction with the "new" one. They had served through multiple combat deployments as Dragoon and didn't appreciate a new commander changing their company's identity. However, when the company redeployed to Fort Hood, TX, the two NCOs became my biggest change agents.

Knowing their long connection with the company, I assigned them an additional duty: unit historians. The two NCOs gathered photos of the unit's deployments, complete with names, dates and locations. Then they framed the photos and hung them in the company conference room, where the two spent many hours telling war stories to new Soldiers about the unit's deployments.

The Dragoon name didn't vanish from company life. I ordered that Dragoon memorabilia be kept in the company beside Doom memorabilia. I also created a quarterly company competition for the "best dragoon award," which went to the Soldier who had the best average PT score, M-4 qualification, M-9 qualification and fastest 12-mile ruck time. An award plaque was engraved with the name of the winner, who received a four-day pass.

In the end, these two Soldiers became two of my strongest supporters and advocates for the company. One even offered to buy a company coin for $300. I refused, but he later earned one for his excellent conduct and still greets me as "Doom 6."

Step 6: generate short-term wins

Soldiers are more willing to support a change if they see it is producing positive results. This is key in expanding the volunteer army. Short-term wins help cement the organizational-change behaviors and continue to drive the unit in the direction of change.

As tankers, we get only one chance every six months to demonstrate our proficiency in our military-occupation specialty. That chance is gunnery. It lets Soldiers display their skills and gives the winners bragging rights for the next six months. Even before taking command, I knew success during the gunnery would be the defining event of my organizational-change initiative. The company was still bitter about losing the "top tank company" streamer a year before. The Soldiers wanted to win and win big. If that happened, most Soldiers would buy in to the change I wanted to instill. The company wanted to be the most lethal organization on the Korea Peninsula, and they knew this was an essential step.

During the weeks prior, I shifted the company's focus completely to gunnery preparation. I made a concerted effort to remove all events from our calendar that were not related to gunnery or gunnery prep. For three straight weeks, the Soldiers did nothing but prepare for gunnery. Having not trained on a tank myself since AOBC, I found myself completely dependent on my senior NCOs for training; I became just another Soldier training for the upcoming gunnery.

This decision produced two things. First, it allowed me to focus on training and prepare myself to fire my first tank gunnery. Second, it demonstrated the great faith I placed in my senior NCOs, my guiding coalition. They saw I would allow them to do their job, and I would support them with anything they needed: resources, time, etc. I enabled them, and in return, they enabled us to be successful.

After deploying to Rodriguez Live Fire Range, we began final preparations for the qualification table. With only a few days before Table VI, the first sergeant and I faced a critical shortfall: steak and eggs. Tanker tradition calls for the unit to provide a breakfast of steak and eggs to each crew after its qualification run. It's the tanker's celebration feast. Only now did we hear that the battalion had turned down the food request we submitted weeks earlier.

The first sergeant and I refused to accept this outcome, and with help from the S-4, we bought steak and eggs on the local economy. Word spread that despite the battalion not providing a steak-and-egg breakfast, the company leadership had pulled it off. This small gesture, one meal, provided a last-minute spark for the Soldiers to work just a bit harder. It provided a short-term win.

Properly trained and motivated, the company excelled during gunnery, earning awards for top tank in the brigade, top tank platoon in the brigade and top tank company in the battalion. This was exactly the win the company desperately needed to provide a spark and continue to drive the change. Back at Camp Hovey, we created streamers that the acting battalion commander placed on the company guidon, a sign to the Soldiers that their hard work had paid off.

Step 7: sustain acceleration

Sustaining acceleration is harder than generating short-term wins because it demands much more long-term planning. Once the organization discovers what it can achieve, the leader must find missions and other ways to challenge the Soldiers and visibly demonstrate their improvement.

After gunnery, I turned to sustaining the momentum started by our short-term win. To cultivate the desire to excel at everything we did, I publicly praised Soldiers for their hard work and accomplishments. An opportunity came after platoons completed gunnery assessment in the simulators at the Close-Combat Tactical Trainer (CCTT). They earned two of the top scores in the battalion. I praised each platoon in front of the company, complimenting them on their individual strengths during the assessment. But more time went to praising the platoon that had earned the overall highest marks in the battalion. I reminded the Soldiers that in war, there is no prize

for second place. So every mission was to be executed to the absolute best of our abilities, and our expectation was always to be the best. The CCTT performance was just another example of our ability to win consistently.

We continued to excel by creating ammunition-upload procedures for rotational units, earning praise from the brigade and division commanders. The company came up with an unorthodox but effective way to upload ammunition that allowed us to retrieve our combat load, upload and conduct linkup with our higher headquarters within the allotted time without interfering with other units. This was no small feat given that every unit on Camp Casey/Hovey already had a well-ingrained alert procedure except for the two rotational companies. Through a careful terrain analysis, some out-of-the-box thinking and quality observations from several junior-enlisted Soldiers, we planned, tested and published procedures for all follow-on rotation units, despite us not receiving direct support from a higher headquarters.

Our redeployment to Fort Hood provided an opportunity to continue sustaining our acceleration. I continually hounded the Soldiers about the importance of maintenance, especially while in Korea, and it paid off when we signed over all our equipment to the follow-on company without issue or loss. But the real test came as our company began to leave and our replacements took ownership and executed their first full alert. Our replacements were the only company in their battalion to have 100 percent of their vehicles operational and staged on time. This legacy of success was yet another opportunity to recognize Soldiers for the hard work that made Delta Company the most efficient and lethal unit on the Korean Peninsula.

Step 8: institute change

During this final step in the Kotter process, leaders need to see whether lasting change has taken hold. Do Soldiers voluntarily act in ways that support the change? Have they come to own the change?

Ownership began to occur around the time we redeployed to the United States, six months after I took command. The first time I realized the change I had originally envisioned for my company had indeed become institutionalized was when my junior leaders began to question actions or orders that seemed to cut corners. When told to conduct maintenance on all the company's tanks in a single morning, the gunners questioned the order. Their inspections would be substandard, they said. It would be maintenance just for show.

Junior leaders showed a similar commitment to excellence. Missions became competitions between platoons or against our sister company. Junior leaders became more involved in everything from PT to CCTT exercises. They drove not only accomplishing the mission but to be the best at it.

Our original opportunity had finally manifested in the company's junior leaders. Although we were no longer on rotation to the Republic of Korea, the Soldiers internalized the mission of being the most lethal tank company in the Army. They understood the significance of extra work and being the best vs. looking the best. As a commander, I saw it as my job to differentiate between what might make us look good and what would help us to be good. Sometimes these line up, but at other times I was forced to make the unpopular choice and focus more on training and less on appearances. Ultimately, this philosophy paid dividends whenever the unit conducted field training or evaluations. We remained the best at executing our main mission: to close with and destroy the enemies of the United States.

Final thoughts

Though Kotter's process for creating organizational change wasn't created for the military, its eight steps worked for me. As a junior captain seeking to turn around an ailing company, they gave me a checklist to follow. Still, the process doesn't fit the military perfectly.

If any step made me wish I was in a business, it was No. 5 (enable action by removing barriers). A business can remove personnel who are barriers more easily than military organizations. When a business seeks to change its culture or undergoes a merger/acquisition, often a major barrier is the employees who resist the new ways. A business can fire employees who are not "on the bus." In the military, though, removing similarly obstinate personnel is harder, so the military leader must find creative ways to mute their opposition – or even better, to convert those voices to the change.

Many traits considered essential for a change agent are already captured in the Army's definition of leadership. The responsibility of command forces the role of change agent upon a commander. He or she is less likely to task a middle manager or hire a consultant to bring about change as a business might, though the military commander can make a proposed change an essential mission for the unit.

Another difference between a business leader and military one is turnover. Military leaders may be reassigned after just 12-18 months, giving them no time to see a change through. A business leader can be kept in a position until a change is complete.

Despite these qualifications, Kotter's eight steps provide a fine place to start. They are reminders that business organizations and Army ones have a lot in common, and that change doesn't just happen. It takes deliberate steps by determined leaders and a sound plan like Kotter's.

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Notes

[1] The Military Master Degree Program began a few years ago at MCCC. Each course selects a limited number of captains to

earn their master's of science degree in organizational leadership from the Turner College of Business, the fully accredited business school that is part of Columbus State University. Interested Soldiers should contact MCCC directly.

Acronym Quick-Scan

AOBC – Armor Officer Basic Course
BII – basic-issue item
CCTT – Close-Combat Tactical Trainer
COEI – components of end item
MCCC – Maneuver Captain's Career Course
NCO – noncommissioned officer
PT – physical training

Figure 2. Gunnery is an event that's 'everything to tankers.'

Their Leadership and Ownership: Concepts for Warfare By, With and Through

by COL J. Patrick Work

In January 2017, 2nd Brigade Combat Team (BCT), 82nd Airborne Division, deployed to bolster the Iraqi Security Forces (ISF) in the campaign to annihilate the Islamic State of Iraq and Syria (ISIS) and its so-called caliphate. Task Force Falcon joined the coalition advise-and-assist (A&A) effort with two weeks remaining during the 100-day offensive to retake east Mosul, and for the next eight months, we wrestled a complex environment with a simple framework: help the ISF and hurt ISIS every day.

Naturally, we had missteps, but our team also served ISF and coalition commanders well on some terribly uncertain days. We mixed innovative concepts and straightforward tactics to attack ISIS by, with and through the ISF, yet the entire effort always centered on our partners' leadership and ownership of exceptionally nasty ground-combat operations. Several of our candid and contextualized perspectives on organization, mindset and skillset offer useful examples and angles for leaders to ponder as we consider future excursions with this style of high-intensity security-force assistance.[1]

Imperfect analogy

Anyone who has experienced a combat-training-center (CTC) rotation has a useful model for comprehending Task Force Falcon's core organizational and operational concepts. Fundamentally, the CTC's observer-coach-trainer (O/C/T) network wraps itself around a rotational unit with a parallel structure connected by dependable communications and disciplined information flows. The O/C/T network's goal is to help unit commanders improve their warfighting craft, largely by helping them see the opposing force (opfor), see the ill-structured environment and see themselves. The O/C/T network may even feel intrusive at times as its nodes maintain contact with the rotational unit at every echelon. Finally, assuming competence is the O/C/T network's anchor point; many of the same traits that make A&A teams effective also distinguish the most useful O/C/Ts. Empathy, humility and patience truly matter.

Perhaps most importantly, the O/C/T network is not embroiled in "fighting" the opfor nor has the burden of external evaluation. Therefore O/C/Ts routinely achieve a level of shared understanding that outstrips the rotational unit's understanding. Of course, they are not all-knowing; plenty of conversations occur without O/C/T oversight, and they periodically misread events, personalities or trends. Still, the O/C/T network is well-postured to provide vertically aligned insights, perspectives and ideas that help the rotational unit advance against the opfor in an uncertain environment.

This is an imperfect analogy, for sure, but thus far we have only discussed similarities that attend to the "advice" side of A&A operations.

As for the "assist" aspects of A&A, start by picturing the same O/C/Ts armed with enormous amounts of secure bandwidth, intelligence capacity and strike capabilities. Moreover, imagine that this lethal O/C/T network's mission – even ***moral obligation*** – also includes attacking the opfor relentlessly to ensure the rotational unit wins. Now visualize this "lethal O/C/T network" as only one among equals in an aggressive ecosystem that includes special operations, joint and other coalition stakeholders who are also united in their desire to thrash the opfor.

As inadequate as this comparison may be, we all reason by analogy: Task Force Falcon operated like this fictional, lethal O/C/T network, only the stakes were infinitely more deadly and complex. Our field-grade commanders wore two hats, advising ISF corps or division commanders in addition to their traditional responsibilities. Likewise, our company-grade commanders advised Iraqi army or federal-police (fedpol) brigades. Combat advising at these echelons maintained a natural distance between our teams and the savagery of close combat, and this space probably reinforced our focus on helping our partners see the enemy, the environment and themselves rather than doing the fighting for them.

'6 As' of A&A operations

Through the "lethal O/C/T network" analogy, we introduced a handful of the concepts inherent to A&A operations. "A3E" or *advise, assist, accompany* and *enable* entered the coalition lexicon before Task Force Falcon arrived in Iraq. The "third A" of A3E, *accompany*, ostensibly delineated the riskier forward-posturing of combat advisers to help accelerate the counter-ISIS campaign. For Task Force Falcon, we never knew the difference – there was no before-and-after *accompany* perspective for us to have. Because we transitioned while the ISF was still fighting in east Mosul, our combat advisers had to cultivate relations with ISF generals while in contact. Thus, close proximity to ISF commanders on the battlefield was always a signature component of our mission, so we may have intuitively leaned toward a handful of A's other than *advise, assist* and *accompany* as we honed our A&A mindset and skillset in Mosul's cauldron of violence.

All six A's, and the nuanced concepts and challenges they represent, are security-force-assistance lessons we learned fighting by, with and through the ISF.

Advise: Our teams helped ISF commanders think through their tactical and logistics problems with an eye

toward exploiting opportunities, assessing risk and making sober decisions on how to apply their finite resources. Through nested multi-echelon engagement, Task Force Falcon pressed consistent messages at every echelon.

In fact, we frequently helped the Combined Joint Task Force (CJTF) or Coalition Joint Forces Land Component Command (CJFLCC) commanders be our "finishers." Both of them were key drivers of coalition combat advising as they engaged at the executive levels to influence ISF activities, all the while reinforcing our nested message from the top down.

Assist: Our partners rarely used the "red pen" before designing a scheme of maneuver. Therefore, some of our most important assistance to them was coaching intelligence-driven operations. First, our A&A network shared intelligence information and products to the extent we were allowed. As we helped the ISF prepare to attack Tal Afar in August 2017, we actually arranged the entire brigade intelligence enterprise to help them understand which attack axes exploited ISIS's most vulnerable defenses.

The value of our advice was found in their execution: our partners dominated ISIS in a 12-day blitz to retake the city. More on military intelligence (MI) later, but I often employed our talented S-2, MAJ Kevin Ryan, as a finisher for our best military advice: Staff LTG Abdul Amir Yarallah al-Lami (known as sLTG A3), the Government of Iraq's (GoI) overall joint-forces commander, always had time for Ryan's insights. Even more telling, the fedpol corps commander, a three-star in charge of more than 60,000 troops, frequently sought 2LT Dave Moehling's perspectives on ISIS. Moehling, the assistant S-2 for 1-73 Cavalry and a tremendous MI mind, always gave informed advice. This consistent, intelligence-driven A&A gave our teams a sharper, more credible edge.

Assist's lethal expression was obviously precision fires. After ISIS conquered Mosul, it prepared a formidable defense for more than two years before the ISF launched the counterattack in October 2016. The defense involved a monstrous mortar capacity; a legion of

Figure 1. An ISIS unmanned aerial vehicle captured by Iraqi federal police rests on a table at an intelligence-sharing meeting at the Joint Operations Center at Qayyarah West Airfield. Deployed in support of CJTF-OIR, coalition forces enable their Iraqi security force partners through the A&A mission, contributing planning, intelligence collection and analysis, force protection and precision fires to achieve the military defeat of ISIS. CJTF-OIR is the global coalition to defeat ISIS in Iraq and Syria. *(Photo by SSG Jason Hull)*

suicide car bombers whose high-payoff target list was topped by ISF tanks and engineering assets; and droves of ISIS infantry. The ISF stubbornly moved through this medley of violence for nine months, reinforced by coalition strikes from artillery, attack helicopters, jets and bombers.

Meeting the ISF requirement for responsive and precise fires, more so than other form of assistance, gave our partners confidence on the hardest days. I will share more on fires later, but our targeteers, cannoneers and radar specialists of 2-319 Airborne Field Artillery Regiment, led by LTC Dan Gibson and CSM Omari Ballou, helped devastate ISIS' centrally controlled batteries in Mosul and Tal Afar. Our company and troop commanders, backed by Air Force joint terminal attack controllers (JTAC) and sufficient bandwidth, frequently observed and directed these attacks from within ISF command posts.

Accompany: As discussed previously, our task force was operating forward with ISF brigade, division and corps commanders upon arrival in January. Predictable and persistent contact with ISF commanders was crucial to building relationships of trust and accountability, but accompanying them also fed our efforts to assure, anticipate and be agile. Accompanying the ISF gave our combat advisers a "fingertips" sense for the combat's direction and intensity. This helped our "lethal O/C/T network" provide timely and useful assistance at the point of decision while also pumping perspective to promote shared understanding and unity of effort.

Assure: During my last battlefield circulation with MG Joe Martin, former commanding general of CJFLCC-Operation Inherent Resolve (OIR), before he departed in July, I offered my observation that the "third A" in A3E should stand for assure, not accompany. We have countless examples of how our physical presence, ideas or fires – or a confluence of these inputs – gave ISF commanders the confidence to keep attacking. In fact, I now have a new paradigm for what non-lethal contact can mean. In OIR, when I was not with sLTG A3, we maintained contact. For the very reason of assurance, quality translators mattered immensely to us. During frequent times of crisis, we encouraged all our advisers to continually remind the ISF they could count on us and their success was our success.

As Mosul's ferocious drama neared its end in July, ISIS attempted to break out of a troubled triangle called the Hawijah Pocket when it seized the

historically vulnerable village of Imam Gharbi along the Tigris River. The Battle of Mosul churned, but we quickly repositioned a platoon of M777 howitzers and deployed CPT Mike Beum's (company commander) A&A team from A/2-325 Airborne Infantry Regiment (AIR). We also put our artillery-battalion executive officer, MAJ Steve Ackerson, in charge of a JTAC-enabled strike cell at the Salah ad Din Operations Command's (SADOC) forward command post. After witnessing the following demonstration of coalition leverage, CPT Zach Beecher, the forward coordinator for the Iraqi Train and Equip Fund and one of 407th Brigade-Support Battalion (BSB)'s most cerebral leaders, coined the phrase "targeted assurance."

Targeted assurance described an adviser's subtle choice between competing ISF partners or agendas, always keeping CJFLCC's and sLTG A3's goals front of mind. During the ISIS incursion to Imam Gharbi, I chose to publically critique an Iraqi army general who was underperforming and embolden the SADOC commander, who was serious about attacking. It worked. Together, the SADOC's *ad hoc* team of Ministry of Interior forces, supported by a small Task Force Falcon strike cell, took charge of the unraveling situation and applied an A&A mainstay: "stimulate and exploit." Our A&A network's commitment of less than 50 coalition troops, a 24-hour orbit of unblinking full-motion video (FMV) collection with solid analytics and some vicious precision fires were enough to help the ISF retake the village from the desperate enemy just five days after the targeted-assurance episode.

Anticipate: As we discussed the A3E profile previously, I mentioned my proposal for a more relevant "third A," but there is more to the story. MG Martin actually countered with another insightful candidate, a*nticipate*. To be clear, the ISF we enabled during OIR did not issue combat orders nor rehearse operations. In fact, senior commanders normally returned from Baghdad just in time for the start of another bloody phase of the attack. When our partners departed northern Iraq during the transitions, we continued to overcommunicate and maintain a disciplined battle rhythm to ensure our A&A network's shared understanding in spite of lapsed Iraqi communications. In fact, during these periods, our partners only occasionally felt compelled to call us with essential updates, so we relied heavily on the CJFLCC commander and senior staff in Baghdad to help us posture our A&A capabilities.

Even as we transitioned the A&A mission to 3/10th Mountain Division, the ISF plan was evolving daily as the start of the Hawijah offensive approached. As we departed, CJFLCC was organizing a medical-evacuation architecture without absolute certainty of ISF intentions. The incoming team was arranging its fires architecture and basing posture with an eye toward maximum flexibility to absorb late change.

Nothing was first-order in Iraq's political-military environment. As stated previously, Task Force Falcon could never fall in love with a plan, and we continuously challenged our own assumptions. Our A&A network had to always listen, maintain contact with our counterparts and apply the fundamentals of mission command to make the best decisions we could. However, when we sensed increased risk, the commanding general or I would direct clarifying questions to sLTG A3, discussing resource trade-offs with him in a very transparent manner.

Agility: One of Task Force Falcon's guiding ideas was that ISF should never have to wait for us. Our commanders and teams nimbly changed directions in response to updated GoI decisions or emergent opportunities to damage ISIS. In fact, 2-325 AIR's support to 15th Iraqi Army Division near Badush is a superbly illustrative example. While the Battle of Mosul still raged, sLTG A3 decided to press the ISIS disruption zone to the east of Tal Afar. He shared his thinking with us during a routine key-leader engagement on a Monday evening, and by Friday morning, Task Force White Falcon, led by LTC James Downing and CSM Santos Cavazos, was on the move.

In a matter of four days, we synchronized logistics as Downing's team met its new partner, displaced nearly 30 kilometers, began building a new assembly area and integrated a battery of 155mm howitzers that were previously based with our cavalry squadron. We kept it simple during these frequent jumps: there were no "routine" patrols, and teams lived out of rucksacks initially. The priorities were always establishing the defense and long-range communications.

Fights at echelon

Supporting ISF decisive action required Task Force Falcon to synchronize effects across the warfighting functions to create advantageous situations for their ground-combat operations. Thus I viewed our headquarters' chief responsibility as organizing the key capabilities resident in the brigade's artillery, support and engineer battalions, the half of the BCT that does not ordinarily maneuver against the enemy. In addition to our usual obligations to prioritize, resource, synchronize, inform, empower and manage risk, myself and our Task Force Falcon staff also had "four fights" to continually synchronize: sustainment, intelligence-driven A&A, lethal targeting with precision fires and counter-fire and, as always, risk management.

Therefore, another way to look at fighting by, with and through in this context is that we did for ISF commanders what we should normally do for our own maneuver battalions. We synchronized materiel, intelligence collection and analysis, and strike support around the ISF's attack against its own near-peer competitor, ISIS. Not only did the ISF commanders embrace their spearhead roles in the fight, but their maneuver drove the circle of "stimulate and exploit" moves that ultimately allowed them to advance, seize ground and liberate their countrymen.

Most missions we prepared for in training were transferable to this OIR context. Rather than synchronizing the combat potential of the BCT to provide our battalions with tactical overmatch, we massed effects for ISF brigades. Thus, our training doctrine – an approach that builds trust through realistic mission-essential task list-driven work and prepares BCTs for decisive-action wartime requirements – also developed the essential skill sets needed for this muscular style of security-force assistance.

Sustainment

Logistics was a balancing act of trade-offs for us. Our unambiguous priority was to help the ISF win, but more than half our logistics specialists and 90 percent of our property did not deploy. Clearly, much of our A&A network's agility depended on our flexible and tireless logisticians. Also, key CJFLCC-OIR logistics planners, contracting officers and the deputy commanders were decidedly committed to the fight in Nineveh despite living in Baghdad. Together, the coalition logisticians, another team that believed ISF should never have to wait for us, thought fast and fought fast to keep pace with the battle's relentless dynamism.

Even though we had a limited organic ground-distribution capacity to meet the mission's decentralized and simultaneous logistics requirements, LTC Elizabeth Curtis, commander of 407th BSB, and her team worked closely with logisticians at every echelon to generate distribution options through a combination of host-nation contracting and our own finite assets. Most moves required security, and some also called for deliberate route clearance.

Perhaps self-evident, but our density of deployed supply specialists, food-service Soldiers and maintenance technicians really mattered. First, one can imagine the supply expertise necessary to steer accountability of organizational and theater-provided equipment (TPE), routine supply transactions, numerous change-of-command inventories and budget execution. Keep in mind that we only deployed about half our team overall, so there were similar requirements across our brigade at Fort Bragg as well. Specifically, we divided the BCT's already stretched property-book office for about two-thirds of our nine-month deployment because of the split responsibilities.

An obvious implication of deploying so little of our organic property was a vast dependence on TPE. Meanwhile, the Army's automated system of record, Global Combat Support System-Army, also updated during the Mosul operation, increasing churn. All these activities or programs required command emphasis and consistent supervision.

We also depended heavily on contracting of equipment and materiel to move and sustain the distributed artillery positions and A&A nodes. A critical aspect of this was certainly the need for anticipation and agility in our decision-making; we were comfortable being uncomfortable and could never wait too long to commit. As previously mentioned, one of our foundational attitudes was that we had no extra Soldiers, and many of our leaders made memorable contributions while filling nontraditional roles.

The host of junior officers who catalyzed our vital contracting enterprise were a sterling example of this. In fact, our BCT food-service tech, CW3 Jason Page, masterfully managed these contracting-officer representatives (COR), particularly LTC Sebastian Pastor's (commander, 37th Brigade Engineer Battalion (BEB)) CORs, who bounced all over northern Iraq coordinating scopes of work for contractors, protection requirements and other engineer targets.

Change was the norm as Task Force Falcon fed adviser teams and artillery specialists who operated from many austere and temporary patrol bases while ISF operations progressed. On a couple of occasions, all it took was an accurate enemy mortar round or two to force teams to move their patrol bases twice in a week. Also, our combat-vehicle fleet swelled during our first 60 days in Iraq, so on top of the other untried TPE, our team's maintenance enterprise depended on field-service representatives (FSR) for everything from essential ground-mobility platforms to counter-unmanned aerial systems (UAS) technologies. Therefore, our team was never truly self-sufficient with key communications, protection and mobility systems, and we carefully managed a throng of FSRs to meet both programmed and emergent maintenance requirements.

Finally, we had to maintain our people. This required preventative and reactive capacity in addition to the CJFLCC's supporting cast. We managed a small pool of chaplains, environmental-health professionals and behavioral-health specialists centrally. Eventually, we also included a dentist to round out our arrangement of medical doctors from the Army's professional-filler system. We were aware that our task force's distributed forces and the human dimension of our Soldiers in a hazardous environment came with risk, so we strove to maintain our counseling, integration and health-promotion practices in Iraq and at home station. Every loss is a loss, and we needed to keep every Soldier in the fight.

Intelligence-driven A&A

When people have asked me what the hardest aspect of our A&A mission was, I have never hesitated nor overthought my response: it was ISIS. As stated previously, the ISF very rarely ran intel-driven operations of their own, so we drove a regime of intel-driven A&A. The partners certainly understood ISIS tactics and the broad anti-government and sectarian underpinnings of ISIS. They also proved to be capable collectors. For example, much of 92nd Brigade, 15th Iraqi Army Division, was comprised of Tal Afar natives who were also based at Tal Afar airfield as the ISF attack approached in August 2017. Many of the ISF's tips and atmospherics were immediately helpful, but they struggled with assessment.

By March 2017, we had seen enough in Mosul to begin arranging a useful threat model for ISIS's complex and layered defense. The model generally held for Tal Afar as well. It became apparent that ISIS's defense depended on four critical factors:

- Suicide vehicle-borne improvised explosive devices (SVBIEDs);
- Scores of five-man infantry fighting squads;
- Centralized command-and-control (C2); and
- ISF inactivity.

Our understanding of how ISIS fought also revealed insights to our contextualized targeting process; because of the "stimulate and exploit" interplay of current operations in Mosul, most of our collection and analytic capacities focused on finding and fixing ISIS within several city blocks of the ISF forward-line-of-troops (FLoT). Dynamic targeting to protect ISF units against ISIS SVBIEDs, infantry ambushes or mortar batteries along the FLoT was crucial for assistance and assurance.

On the other hand, as the ISF

transitioned from Mosul to Tal Afar in July, we adjusted the task force's reconnaissance and thinking to feed a deliberate targeting process. We also pursued a methodical intelligence preparation of the battlefield (IPB) unlike anything we could have achieved in Mosul's ever-shifting slugfest.

ISIS tactics typically came to life in a disruption zone marked by loosely coordinated indirect fires (IDF); roads pocked with dirt berm, ditches, derelict vehicles or static VBIED obstacles; and limited commercial-off-the-shelf UAS reconnaissance. The battle zone may have been organized into multiple defensive belts or sub-battle zones where ISIS infantry units shouldered a heavy burden, producing "sniper-like effects" even if they were poorly skilled. ISIS also learned to compress its exposure to coalition detection, shrinking the distance from SVBIED staging bases to strike zones, an innovation that Les Grau and Timothy Thomas referred to as "hugging" in their analysis of Chechen fighters during Grozny 1.[2]

Also, fighting in support zones could be vicious. ISIS senior commanders clearly inspired their charges with their physical presence as evidenced by the ISF's month-long brawl to take al Juhmuri Medical Complex, the "ISIS Pentagon" of Mosul.

In its military prime during the Battle of Mosul, SVBIEDs intimidated even the fastest and nastiest of the ISF fighters. ISIS appeared to pursue a high-payoff target list topped by ISF tanks and engineer blade assets with furious agility. ISIS commanders also frequently guided their SVBIEDs with small UAS, another manifestation of centralized C2. By tunneling through the internal walls of large structures, ISIS was able to make a handful of trained or untrained fighters appear as "snipers everywhere," a somewhat common report by the ISF on the most violent days. In July's closing days in west Mosul, we had to attack ISIS infantry small units with the same intensity as we had previously unleashed against SVBIEDs.

Furthermore, ISIS was more or less an Arab-styled army like our partners; it fought with remarkably centralized C2 at times. Along these lines, when senior commanders were present on the battlefield, they made a difference. ISIS mortar-battery commanders also seemed to exercise strict control over target selection as well as ammunition breaks.

Finally, ISIS took full advantage when the ISF did not press the attack; sLTG A3 agreed that after fighting each other for several months, ISIS knew every signal that ISF troops were inadvertently sending when their attacks had stalled.

Our contributions to coalition IPB were important, but not because our analysis was exact or we had an innate understanding of ISIS's military capabilities, capacity or intentions. In fact, there was always much more we did not know than we did know. During the fight for west Mosul, every 25-30 days we released a classified one-page set of intelligence judgments that described how we evaluated ISIS tactics, capabilities, capacity and intentions in the changing environment. My hidden agenda with these projects was training while we fought, specifically pressing our talented analysts to report evidence-based arguments concisely and precisely. These IPB efforts spurred coalition dialogue – it helped get commanders and staffs talking. If we put our assessment out there, at least it caused other coalition stakeholders to critique it. These stakeholders included the ISF. Our IPB stirred their "red pen," too.

We periodically used a method that we dubbed "intel Armageddon" to energize our thinking. This approach played to our battalions' inherent competitive nature, and the brigade intelligence-support element (BISE) was always one of the contestants. "Intel Armageddon" was simple: when our analytics had lost altitude or needed a jump start, I sought three independent assessments of the same tactical problem.

For instance, as we began our focused IPB of Tal Afar while the fighting in Mosul wound down, we had two of the battalions and the BISE compete. We invited MG Pat White, former commanding general of CJFLCC-OIR, to participate in this session, and these three assessments fed our overall task-force IPB that we shared up-and-out, particularly with the ISF.

Our parent division at Fort Bragg, NC, also ensured our tactical UAS (TUAS) platoon's full manning with operators, and CJFLCC-OIR weighted the ISF fight in Nineveh Province with plenty of unarmed FMV capability. Foremost, we did not spend energy lamenting gaps in FMV coverage but rather focused on avoiding redundancies and fusing the available intelligence overlays we had. For perspective, these FMV assets provide commanders and analysts with a "soda straw" perspective of the battlefield. They are not magic. They do not find the enemy – humans do. The most critical aspects of FMV collection are the thinking behind where and when to place a sensor to increase odds of detection, as well as an analyst's ability to recognize the signatures that answer information requirements (IRs). In fact, these airborne military robots can create a counterproductive illusion of understanding, so we always drove to emphasize the analyst over the asset.

Over the course of nine months we generated more than 5,000 hours of TUAS FMV collection for the counterfire fight, dynamic and deliberate targeting, IPB and ISF security operations to consolidate gains. With so much information coming in, we obviously had to meticulously prioritize analytic efforts to discern the answers to IRs. Because of the brutality along the FLoT, dynamic targeting consumed more than half our FMV collection and analytics during the Battle of Mosul, and I typically approved our BCT S-3's proposal or gave direction for the next day's intelligence-collection plan as late as our evening "operations, fires, intelligence, adviser" videoteleconferences. For dynamic targeting, TUAS was typically our "fixing tool," cross-queued off another intelligence source – whether an ISF unit in contact, a radar acquisition or an ISF human-intelligence (humint) tip.

Moreover, we already discussed how crucial Task Force Falcon's signaleers were in connecting this intricate network, but so were a bevy of other players. Behind the scenes, a host of mechanics, logisticians, engineers and

tactical controllers fought to keep precious TUAS sorties in the fight.

We actually employed multiple government and contracted sensors based from several locations, allocating FMV reconnaissance to A&A teams by using hours as our unit of measure. Our message was "hurry to think, not to plan," as we considered how to optimize and prioritize our finite collection assets. We never accepted the harmful egalitarianism of the proverbial "peanut butter spread" when prioritizing sensors, connectors and analysts. SLTG A3's main-effort attack axis always mattered because "stimulate and exploit" was the backbone of dynamic targeting during current operations. Philosophically, we also erred on the side of driving an aggressive strike tempo, directing sensors and analytics toward ISIS patterns we could take advantage of to maximize the lethal return on our investment.

Whenever practical, our targeting also integrated our task force's persistent threat-detection system (PTDS) based at the coalition's largest base in Nineveh. The 37th BEB once memorably used the PTDS to find and fix an ISIS small unit crossing the Tigris River, setting up Pastor to approve a fixed-wing strike that finished the startled enemy.

TUAS collection and analytics also contributed hugely to deliberate targeting. For example, our task force targeteers developed 30 deliberate-strike nominations leading up to the ISF attack on Tal Afar alone. Unlike our dynamic process, the TUAS served more as the "finishing tool" for our deliberate targeting, confirming or denying our assumptions about civilian presence prior to coalition strikes on ISIS sanctuaries, lines of communication, C2 nodes or caches. Our deliberate process complemented the special operations and CJFLCC-OIR efforts and, perhaps predictably, the coalition's intelligence-sharing and shared understanding improved as we transitioned from Mosul's dynamism to the deliberate isolation of Tal Afar.

Across the task force, A&A teams thickened the larger collection plan with their own organic fleets of small UAS, and the Iraqi army did similarly with off-the-shelf quadcopter drones. For example, 2-325 AIR's layered FMV reconnaissance for the ISF attack on Tal Afar was a framework employed similarly by all our field-grade A&A teams during the operation. First, company-level advisers used Raven and Puma small systems, complemented by Iraqi army quadcopters and queued by Iraqi army humint, to protect 15th Iraqi Army's units from close-in threats. Meanwhile, Shadow TUAS helped Task Force White Falcon's analysts identify ISIS fighting positions, obstacles and engagement areas near south Tal Afar's outer edge. Finally, the advisers may have also had operational control of long-dwell armed assets to hunt ISIS SVBIEDs staged within several blocks of the city's outer obstacle belts. All the while, signal bandwidth and power generation were in high demand.

LTC Sean McGee and CSM Scott Brinson, the team who led 1-325 AIR, may have contributed on an even greater scale than the rest of us. Task Force Red Falcon served under the operational control of CJFLCC-OIR and helped the Baghdad Operations Command (BOC) protect the capital by hunting down ISIS threats before they materialized in Baghdad. Perhaps most importantly, this A&A team helped the BOC implement a monthly G-2 conference, a forum for ISF intelligence officials to share information with each other. Before implementing the rhythmic G-2 conference, disparate Iraqi army commands funneled their reports back to the Ministry of Defense, a remarkably hierarchical approach that stymied timely decision-making and exacerbated gaps and seams along the figurative and physical boundaries.

With MG Martin's support, McGee's team capitalized on GoI concerns about Ramadan threat streams to persuade sLTG A3 to support the first conference in May 2017. CPT Tom Seagroatt, battalion S-2 for 1-325 AIR and a uniquely gifted MI Soldier, also did a lot more than crank out releasable products for our partners. These advisers wielded outsized influence with BOC influencers, helping the ISF fuse intelligence in-depth across the country as the coalition also added its intelligence overlay.

As we departed, the ISF certainly had a great deal of work to do to hone processes that promote unity of effort and shared understanding, but Task Force Red Falcon helped prod an initial paradigm shift in how ISF commanders shared and communicated among themselves. Their intellectual fingerprints on partner decision-making should not be taken lightly, and the proof was evident in the ISF's performance. During almost nine months of McGee's A&A partnership with the BOC, ISIS only struck Baghdad nine times. The ISF's determined security was impressive, particularly as ISIS increased attempted attacks by 300 percent following the fall of Mosul in July.

Two of our goals were to keep every MI Soldier and every sensor in the fight. As I stated previously, our BCT S-2, like several of his battalion-level counterparts, was also a valued finisher with military advice for us. Moreover, we have already described several examples of how we rolled our intelligence enterprise into multi-echelon engagement. Across the task force, we expected young MI talent to simplify the complex, communicate with clarity and give potent advice to highly educated and experienced generals, all through an Arabic translator.

Lethal targeting

Coalition targeting devastated the enemy's IDF capacity in northern Iraq while maintaining strict standards that protected civilians and critical infrastructure. Unsurprisingly, surface-to-surface lethality also depended on superb long-range communications and sound ammunition-supply practices. As importantly, our IPB was entirely contextual. For example, Mosul required dynamic IPB, targeting and decision-making processes suited to the violent slog in dense urban terrain. ISIS seemingly turned most homes, schools and religious sites into fighting positions or caches and perniciously coerced civilians into action as human shields. It was a grinding, 150-day test of wills and uncomfortably close combat.

On the other hand, the ISF attack on Tal Afar offered the coalition more than 30 days to focus IPB on identifying most obstacle belts, conduct precision shaping and preparatory fires, and reposition assets that helped whittle

down the ISIS disruption zone well before the ground attack began Aug. 20, 2017.

Implications of urban terrain

With years to prepare the defense of Mosul, ISIS commonly buttressed its cover and concealment by using firing positions in sensitive sites or the upper stories of tall structures. As just one prominent example, days before ISIS regrettably destroyed the al-Nuri Grand Mosque in the Old City district, it began firing mortars from the grounds' courtyard. Such recklessness was the norm for ISIS, so our team relied on precision munitions and high-angle attacks that could overcome the Mosul's jumble of intervening urban crests.

Also, Task Force Falcon leaned on sensible weapons solutions such as Excalibur, fired at very high angles and set to delay, or M1156 precision-guided kits for urban counter-fire missions. In retrospect, however, we consistently struggled to adequately arrange our sensors to exploit strikes, and assessing battle damage in complex urban terrain was always a challenge as ISIS continually adjusted its tactics frequently.

Counter-fire

The fires fight in Mosul taught us that Q-53 radar acquisitions provide a critical overlay. ISIS fought its mortar platoons in a remarkably centralized manner, noticeably changing priorities or shifting ammunition around as the fight progressed. Over time, radar acquisitions fed our running estimates of ISIS's eroding capabilities and morphing intentions. We also saw patterns we could exploit. Still, our radar acquisitions provided just one overlay, and we only detected a fraction of the shots fired in Mosul's dense urban terrain. Finally, ISIS was a thinking enemy, bent on survival: it adjusted its tactics frequently.

Our counter-fire fight aimed to assure the partner. This challenge required us to threat-model ISIS artillery and mortar teams, burning a number of intellectual calories to understand how they moved, commanded and supplied their teams. We used Q-53 radar acquisitions as a baseline overlay but added ISF reporting, FMV analysis and Q-50 radars our A&A teams often employed.

Also, we frequently fought multiple FMV assets simultaneously under the task force counter-fire cell. Integrated and predictive analysis set us up to focus the team's FMV "soda straws," the handful of fixed-wing reconnaissance robots we controlled, in predicted positions of advantage to find and fix the enemy's IDF assets. Meanwhile, we used everything from coalition jets to rockets to attack ISIS as we worked with and through the one-star airspace and strike coordination teams at combined joint-operations centers in Erbil and Baghdad. Indeed, we even counter-fired with M142 high-mobility artillery-rocket systems at times.

Figure 2. SPC Jesse Patchell, SPC Ben Richmond, SPC Zachary Folsom, SGT Kraig Bradley and 1LT Maurice Manning, mortarmen deployed in support of CJTF-OIR and assigned to 2nd BCT, 82nd Airborne Division, fire mortars in support of 9th Iraqi Army Division during the offensive to liberate West Mosul from ISIS. CJTF-OIR is the global coalition to defeat ISIS in Iraq and Syria. *(Photo by SSG Jason Hull)*

Artillery-fire support

As revealed previously, senior ISF commanders did not do detailed planning, and there were no ISF combined-arms rehearsals of any sort. Going back to the six A's, we *assured* them with our detailed fires planning, *anticipated* their schemes of maneuver by leveraging the "lethal O/C/T network" and our A&A battle rhythm, and we remained *agile* by shifting artillery and radar positions and priorities on imperfect information. I suspect that only very senior ISF generals ever really had a surface-level understanding of our fires plans, and they never shared these details down-and-in. However, sLTG A3 was counting on Gibson's Black Falcons to synchronize the French contingent's 155mm Caesar cannons, other coalition strike assets and American howitzers through exhaustive coalition rehearsals.

Moreover, there was always some level of *assist* to *advise* as we previously discussed. SLTG A3 valued Gibson's detailed briefings, making our BCT fire-support coordinator another prominent finisher at times. In fact, we used pre-assault artillery fires to suppress enemy fighting positions, but because the ISF rarely started attacks at planned times, we learned to use another round of "with assault fires" that were synchronized with the ISF's actual crossing of the line of departure.

We applied similar thinking for the employment of rotary wing, rocket and fixed-wing assets.

In their own way

It was a privilege to represent our Army and our storied division with the coalition during OIR. We are also honored to have served under two tremendous divisions during the drive to help the ISF dominate our nations' shared enemy. We could not have been prouder of our partners as we departed Iraq in September; the ISF had liberated well over 4 million people and 40,000 kilometers of terrain, and more than a quarter-million people had returned to their homes in Mosul. Perhaps the most heartening aspect was that sLTG A3 and the ISF accelerated the campaign against ISIS following their victorious Battle of Mosul.

During our mission to help ISF and hurt ISIS every day, we never lost sight of the coalition's interests. We kept a consistent azimuth guided by five big ideas and a disciplined battle rhythm. We had to produce results to retain the ISF's trust; there was always much more to serving the ISF and coalition well than merely advising and assisting. A learning organization, Task Force Falcon tinkered with its approach over time, eventually interpreting a formula that practiced all six A's of A&A: advise, assist, accompany, assure, anticipate and agility. Still, the campaign was incurably human, and naturally, relationships mattered. Solid relationships kept everyone goal-oriented on frustrating days, and our connections introduced a deeper accountability to the partnership.

By breaking down ISIS in their own way, the ISF's leadership and ownership of the Battle of Mosul embodied the essence of warfare by, with and through a partner whose success was the very measure of our success. I still clearly remember the day I sensed the ISF's mass was finally toppling the enemy's Juhmuri Hospital fortress in west Mosul. It was the visible beginning of the end for ISIS, and our partners were still leading the day's deadly work. They continue to do so today.

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Notes

[1] Joint Publication 3-20, ***Security Cooperation***, May 23, 2017, cites Department of Defense Instruction 5000.68 while describing security-force assistance: "With, through and by. Describes the process of interaction with foreign security forces that initially involves training and assisting. … The next step in the process is advising, which may include advising in combat situations (acting "through" the forces)."

[2] Timothy L. Thomas and Lester W. Grau, "Russian Lessons Learned from the Battles for Grozny," ***Marine Corps Gazette*** 84, No. 4 (April 2000), https://www.mca-marines.org/gazette/2000/04/russian-lessons-learned-battles-grozny.

Acronym Quick-Scan

A&A – advise and assist
A3E – advice, assist, accompany and enable
AIR – airborne infantry regiment
BCT – brigade combat team
BEB – brigade engineer battalion
BISE – brigade intelligence-support element
BOC – Baghdad Operations Command
BSB – brigade-support battalion
C2 – command and control
CJFLCC – Coalition Joint Forces Land Component Command
CJTF – combined joint task force
COR – contracting-officer representative
CTC – combat-training center
Fedpol – federal police
FLoT – forward-line-of-troops
FMV – full-motion video
FSR – field-service representative
GoI – Government of Iraq
Humint – human intelligence
IDF – indirect fires
IPB – intelligence preparation of the battlefield
IR – information requirement
ISF – Iraqi Security Forces
ISIS – Islamic State of Iraq and Syria
JTAC – joint terminal attack controller
MI – military intelligence
O/C/T – observer/coach/trainer
OIR – Operation Inherent Resolve
Opfor – opposing force
PTDS – persistent threat-detection system
SADOC – Salah ad Din Operation Command
SVBIED – suicide vehicle-borne improvised explosive device
TPE – theater-provided equipment
TUAS – tactical unmanned aerial systems
UAS – unmanned aerial systems
VBIED – vehicle-borne improvised explosive device

The Improvised Explosive Device of 2025

by SSG Kyle E. Brown

George Santayana, a famous Spanish philosopher, once said, "Those who do not remember the past are condemned to repeat it." With respect to the improvised explosive device (IED) threat, this is the state at which our force currently sits. As we have shifted our training back to combined-arms maneuver, we are now at the cusp of potentially repeating the same problem. We have transitioned back to a time where a decisive-action conflict reminiscent of the Fulda Gap is a reality. Now is the time to examine how we train to defeat the unconventional obstacle – our reconnaissance forces must undertake a fundamental mindset shift and begin thinking of IEDs as obstacles.

Our Army has been in conflicts that span almost every continent for the past 16 years. According to some, this is the only timeframe in which we have dealt with the IED – in other words, the IED has only just been introduced to warfare within the last two decades. In reality, this weapon in the enemy arsenal has been around since the invention of explosives. Since this weapon has so much success in the operational environment, who is to say this unconventional tactic is progressing any less than that of direct-action near-peer doctrine?

IEDs on battlefields

As early as 1914, there have been documented cases of the IED being used in both conventional and non-conventional ways. For example, during World War I, IEDs were left for the advancing American forces as the German army retreated. During World War II, the Russians commonly used improvised charges to derail German supply trains.

At a symposium on technology and the mine warfare, Harry N. Hambric and William C. Schneck said that in the Vietnam War, 33 percent of U.S. casualties were attributed to mines and the use of IEDs.[1] Throughout the global war on terrorism, we have all seen how the IED has impacted the battlefield.

How should we approach a threat that has been around since World War I?

IED training

An IED is a weaponized obstacle; the intent of those employing it incorporate many attributes of modern warfare such as denying a route, using it in

propaganda and employing it to maim, kill, destroy, harass and disrupt.

The IED is an obstacle that cannot be identified without proper training. Similar to a conventional obstacle, per Army Technical Publication (ATP) 3-20.98, conducting reconnaissance of an obstacle follows a list of steps that include:

- Detection;
- Local security and reconnaissance;
- Reconnaissance of obstacles and restrictions;
- Selection of a course of action (CoA); and
- Recommendation/execution of a CoA, including bypass.

The problem we face as a fighting force today is the lack of concurrent training involved in our key mission-essential task list (METL). After we reviewed the standardized METL for Cavalry squadrons in infantry brigade combat teams (BCTs), armored BCTs and Stryker BCTs, we saw that there are no specific tasks on how to defeat the IED. There are isolated doctrinal IED manuals, all of which are not widely distributed.

The principles and fundamentals of these documents should be incorporated as a discussion within our own ATP 3-20.98. We train for the conventional obstacle, but the relationship to the unconventional obstacle is no longer a focal teaching point in today's advanced doctrine. It is true, most IEDs are found with the naked eye; however, the training on how to discover these devices is lacking at best.

Consider a reconnaissance platoon conducting a route reconnaissance within an IED environment: this would completely change the threat analysis of how the platoon executes its mission.

Change tasks

All Cavalry tasks associated with area, route and zone reconnaissance need to be supplemented with changes to supporting collective and individual tasks that reflect the IED threat. Specifically, 17-PLT-4012 (reconnaissance of an obstacle) needs to be updated to reflect the threat aspect during the planning portion. Also, we need to change how we negotiate these obstacles; Step 11 does not include reacting to the detonation while trying to detect the device.

Currently in the Armor Advanced Leader's Course, there are zero hours of training pertaining to the IED. In the Armor Basic Officer Leader's Course, only four hours of classroom instruction are dedicated to this task. The leaders of the future force simply cannot put the lessons-learned through hardship to the side. If a threat presents itself, we must train to defeat this threat. Therefore IED-defeat training must expand in our leader development. Many Army leaders remember five to 10 years ago when multiple days were dedicated to this threat tactic.

Conclusion

The current threats we face as a force span the globe. Enemy tactics, techniques and procedures (TTPs) change daily based on our actions and reactions. If an enemy TTP is put into place, our force will adapt to the changing threat, whether it be from a new piece of equipment or a change to current doctrine. The threat of IEDs is no different.

The process by which we combat these devices is a game of cat and mouse. In the early years of Operation Iraqi Freedom, passive infrared sensors were being used as the switch to set off IEDs from a vehicle's heat signature. The Army responded with a new piece of equipment which was quickly overcome by a change in enemy TTPs. There are now countless examples of reactionary corrections to both friendly and enemy TTPs; the IED's success is now more common throughout the world than ever before. Given the effectiveness of the weaponized obstacle, we now see the IED being employed in areas where they were not traditionally used.

Bottom line: as scouts, it is our job to paint the picture for the commander on the battlefield. This can be frustrating if we cannot see the picture to begin with. We do not know what the IED of 2025 will look like, but we know it will be prevalent and widely used on battlefields across the globe. Surely, if we cannot learn from mistakes that have shed the blood of our brothers and sisters, we are bound to make the same mistakes again. This weapon of our enemies is now a permanent fixture in any conventional, hybrid or unconventional warfare, based off the enemy success we have observed. Therefore, we must internalize this threat and train for it accordingly as part of our reconnaissance mission – IEDs are a modern obstacle.

Acronym Quick-Scan

ATP – Army technical publication
BCT – brigade combat team
CoA – course of action
IED – improvised explosive device
METL – mission-essential task list
TTP – tactics, techniques and procedures

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Notes

[1] The speech can be viewed at https://www.hrw.org/reports/1997/gen1/General-03.htm.

The Hammelburg Incident: Patton's Last Controversy

by retired LTC Lee F. Kichen

LTG George S. Patton Jr.'s reputation as one of America's greatest battlefield commanders is virtually unquestioned. He was a brilliant tactician, audacious and flamboyant. The infamous slapping incidents and the ensuing publicity firestorm hardly tarnished his reputation as a fighting general. However, his decision to liberate 900 American prisoners of war (POWs) confined in Offizerslager (Oflag) XIIIB near Hammelburg, Germany, was more than an embarrassment, it was the most controversial and worst tactical decision of his career.[1]

Central to the controversy are lingering questions:

- Was the decision to raid Oflag XIIIB morally justifiable and tactically sound?
- What are the lessons for today's mounted warriors when planning and conducting a deep raid?
- Did Patton order this raid based on credible intelligence that his son-in-law, LTC John K. Waters, was a prisoner in Oflag XIIIB?
- Would he have ordered the raid if he had not thought that Waters would likely be there?
- Or was it intended as a diversionary attack to deceive the enemy that Third Army was attacking east, not north?

The answer to what truly motivated Patton to order the ill-fated raid on Hammelburg remains unsettled history. However, the evidence is inconvertible that the raid's failure resulted from flawed planning by Patton and his subordinate commanders.

Personal background

Patton repeatedly avowed that he didn't know for certain that Waters was in Oflag XIIIB. Yet the evidence is overwhelming that Patton knew that Waters was at Hammelburg. After his capture in Tunisia, Waters was moved to Oflag 64 in Szubin, Poland. With the Red Army approaching Szubin, the Germans marched the POWs west.[2] In March 1945, three Americans escaped and notified the U.S. Military Mission in Moscow that Waters was among the POWs marching to Hammelburg. The mission's commander, MG John Deane, sent this information to Eisenhower, who forwarded it to Patton.[3]

Patton then set his mind on a military operation of some kind, but what he told family members was different than what he said publicly. On March 23, 1945, Patton wrote to his wife, Beatrice: "We are heading right for John's place and may get there before he is moved." On March 25 he told her, "Hope to send an expedition tomorrow to get John."[4] In his March 29 letter to his brother-in-law, Patton wrote: "I heard of an American [POW] camp. … I sent an armored expedition. … It is possible that John may be among the prisoners. … I would be delighted to take the place." The following day at a press conference, he stated: "There was a [POW] camp containing at least 900 Americans. … I couldn't sleep during the night if I got within 60 miles and not make an attempt to get to that place." At the same conference, however, he branded the raid as a diversion: "I felt by hazarding a small force I would confuse the enemy completely as to where we were going. It did work, for they thought I was going to Nuremburg."[5]

Patton's military operation turned out to be Task Force (TF) Baum. TF Baum's raid on Hammelburg provides today's maneuver leaders invaluable lessons

Figure 1. LTG George S. Patton Jr. (left) speaks with BG Anthony McAuliffe Jan. 15, 1945. Patton, who commanded Third Army from 1944 to 1945, ordered TF Baum's raid. *(U.S. Army photo by SFC Luke Graziani)*

as to the costs of hastily planning a deep operation. Patton's failure to adequately resource the mission commander was inexcusable. Patton in his memoir invited critical analysis of his generalship with a half-hearted mea culpa: "[T]hroughout the campaign in Europe I know of no error I made except that of failing to send a combat command to take Hammelburg."[6]

Tactical situation

Combat Command B, 9th Armored Division, commanded by then-COL William R. Hoge, stormed across the Rhine March 6, 1945, after capturing the Ludendorff Bridge at Remagen. The 5th Infantry Division conducted an assault crossing March 22, followed the next morning by 4th Armored Division.[7] After crossing the Rhine, 4thArmored Division conducted a forward-passage-of-lines through 5th Infantry Division and moved to the Main River, establishing bridgeheads late in the afternoon March 25 on the east bank near Hanau and Aschaffenburg.[8]

These operations took a toll on Patton's soldiers. CPT Abraham Baum, the S-3 of 10th Armored Infantry Battalion, considered 4thArmored Division's soldiers "depleted and exhausted" after four days of continuous combat and little sleep.[9]

Patton's order, formation of TF Baum

On the night of March 25, Patton ordered the XII Corps commander, MG Manton S. Eddy, to organize a task force to liberate about 300 POWs in Oflag XIIIB.[10] Nothing in that order discussed a feint or diversionary attack. That same day, MAJ Alexander Stiller, one of Patton's aides, arrived uninvited at now-BG Hoge's 4thArmored Division headquarters. Stiller said he was to "go along" on the Hammelburg mission, that Patton in no uncertain terms wanted Hammelburg liberated, and that Waters was one of the prisoners.[11] Hoge believed that Patton, who greatly admired LTC Creighton Abrams, the commander of the division's Combat Command B, wanted Abrams to lead the mission.[12]

The task force's size became an open debate. Eddy and Hoge originally showed little enthusiasm for a risky deep strike 60 miles into enemy territory. XII Corps, which would move north, could not adequately support a task force moving east. This mission would also reduce the corps' combat power during future operations. Hoge and Abrams recommended a combat command, contending that a larger force had a better chance of surviving. Eddy would later recommend a smaller-sized task force.

Patton claimed that he wanted to send a combat command: "[U]nfortunately, I was talked out of it of it by Eddy and Hoge. …"[13] In his diary Patton wrote, "I made the attack with only two companies on account of the strenuous objections of General Bradley to making (any effort) at all."[14]

Bradley in his memoir stated that he only learned of TF Baum "... after it had been on the road for two days. … [H]ad George consulted me on the mission, I would have forbidden him to stage it."

However, Bradley's aide, CPT Chet Hanson, in his diary contradicted his boss: "When Patton ran off on his mission of liberation the other day, Brad told him he would allow it providing Patton did not become involved. He was ordered to withdraw if he did [sic] to prevent him from becoming entangled in the wrong direction."[15]

Regardless of who influenced Patton's decision on the smaller formation, he capped the number of personnel at 300.

Baum first learned of the impending raid on the morning of March 26 when he was called to headquarters.[16] Patton arrived at Abrams' command post at 10 a.m. on the 26th and asked who was going to command the task force; Abrams responded, "I am, and I want to take Combat Command B."

Patton told Abrams that he wasn't going, nor was Combat Command B. "This is to be a small force. Now answer my question. Who is going to lead it?"

Abrams answered, "Hal Cohen, 10th Armored Infantry, if he is well enough."

After the battalion surgeon examined

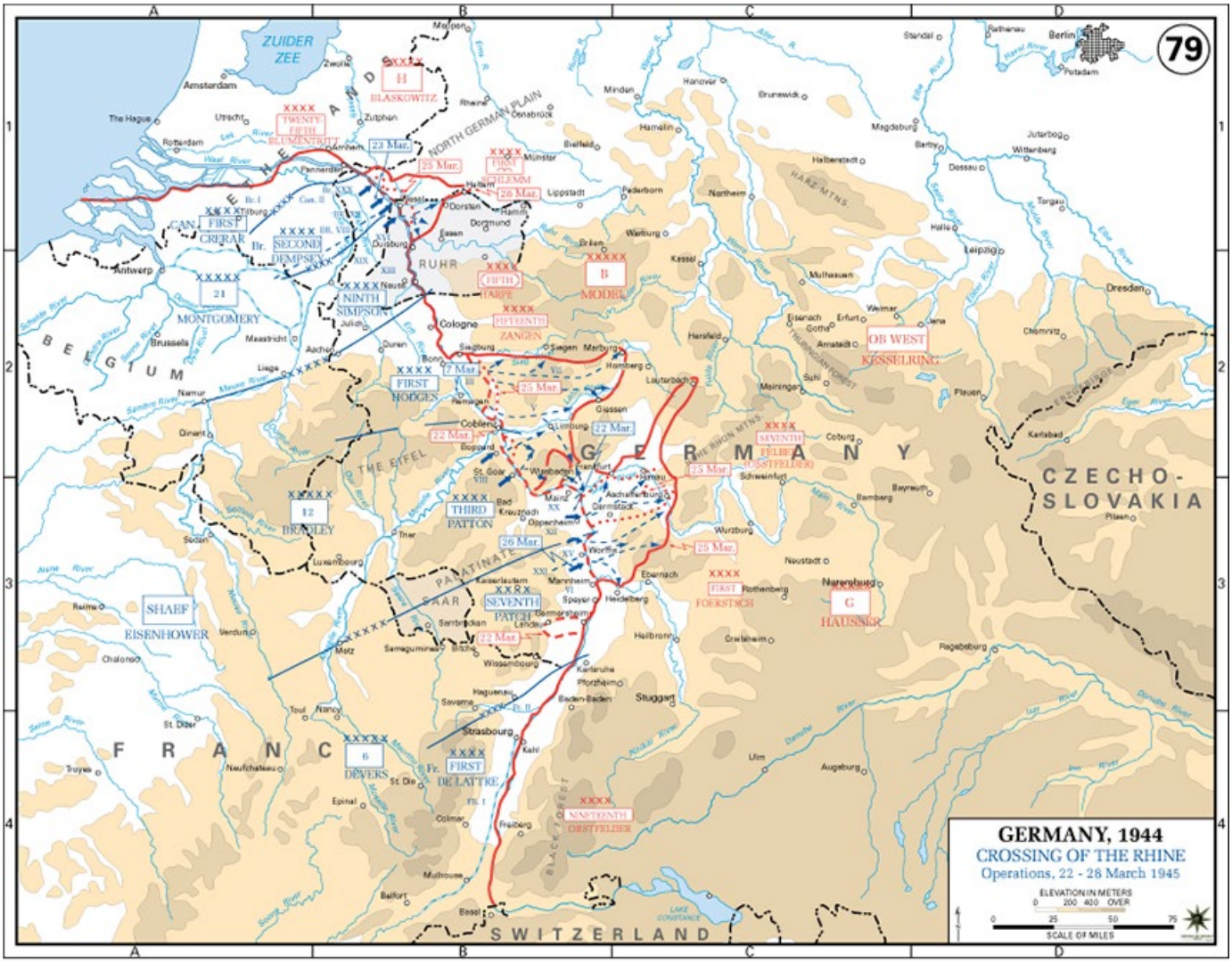


Figure 2. Movement of armies March 22-28, 1945, across the Rhine. Patton's Third Army was moving away from TF Baum while the task force was on its mission and thus did not have support. *(Courtesy Department of History, U.S. Military Academy)*

Cohen (and didn't clear him), Patton directed Cohen to select a task-force commander in his place. Cohen said that he had someone in mind and gestured toward Baum standing on the periphery. As Patton headed to the door, he turned to Baum and said, "Major Stiller will fill you in on the details."

Hoge asked Stiller what was special about Hammelburg. Stiller replied that "the Old Man" was "absolutely determined" to free the POWs and revealed that John Water was one of the prisoners.[17] Stiller briefed Abrams and Baum from a roadmap, tracing the road to Hammelburg 60 miles away. Stiller didn't know Oflag XIIIB's exact location but said that Patton believed a German civilian could provide the information.[18] Stiller at this point had more

Figure 3. Some of the major players in TF Baum's formation: LTG Omar Bradley, LTG George S. Patton and MG Manton S. Eddy are shown a map by MG John S. Wood during a tour near Metz, France, Nov. 13, 1944.

knowledge of the mission than Abrams and Baum; nevertheless, it was clear that Baum would lead the mission, with Stiller along for the ride.

Figure 4. Then-LTC Creighton Abrams sits on top of his Thunderbolt VI command tank. Abrams had wanted to lead the mission and take Combat Command B, but Patton ordered Abrams to choose someone else and to deploy a smaller force.

Abrams and Cohen organized a task force around Company C, 37th Tank Battalion; a platoon from Company D, 37th Tank Battalion; Company A, 10th Armored Infantry Battalion; and an assault-gun platoon and a reconnaissance section from 10th Armored Infantry Battalion. There were 53 vehicles in the task force: 10 M-4A3 medium tanks, six M-5 light tanks, 27 half-tracks, three 105mm self-propelled guns, six jeeps and one tracked medical vehicle – plus 307 soldiers.[19]

Complicating planning and execution was a Third Army/Seventh Army boundary shift north March 26, placing TF Baum in Seventh Army's area of operation. With TF Baum moving east and 4th Armored Division moving north, it would be without support from 4th Armored Division. Baum considered the mission suicidal without support.[20]

Road to Hammelburg

Intelligence estimates indicated that TF Baum would initially encounter little opposition. However, there were indications that two enemy divisions were somewhere between Aschaffenburg and Hammelburg along the Main River. Baum was to take the most direct route at top speed (under black-out conditions, top speed would have been no more than 15 miles per hour). The route was not conducive to high-speed movement. Running through heavily forested areas and the towns along the Main, it lacked maneuver space.[21] To facilitate Baum's initial movement to Highway 26, Abrams attacked Schweinheim at 9:30 p.m. with a tank company, an armored-infantry company and divisional artillery support.[22]

Although Baum was expecting to make a penetration in minutes, intelligence proved faulty. Heavy resistance from the German 413th Infantry Division delayed the penetration by eight hours.[23] Behind schedule, Baum – believing he could no longer wait – drove the task force through Schweinheim at around midnight.[24]

After clearing Schweinheim, Baum believed that he lost the element of surprise, but the enemy was still unaware of his objective.[25] At 1 a.m., news of the Schweinheim fight reached the German high command, which believed that Patton made a "brilliant breakthrough.[26] Baum noted: "[W]e lost infantrymen in these various (small) towns (between Schweinheim to Lohr) from small arms and bazooka fire. We kept on going through that stretch of woods and got to Rechtenbach. … During our trip we shot up various vehicles and Krauts in all the towns. … Momentum of our column was too fast and too great … so we went straight through."[27]

The task force at first light encountered its first organized resistance west of Lohr close to the command post of GEN Hans von Obstfelder's German Seventh Army. (Von Obstfelder was the Wehrmacht's General of the Infantry.) Not knowing Baum's objective, Obstfelder didn't know where to mass his scattered forces. Baum's force, without halting, engaged the lightly armed enemy and destroyed 12 vehicles. During this fight, Baum lost his first tank to a panzerfaust at a roadblock.[28]

Moving on to Gemunden, the task force encountered two lucrative targets of opportunity. The first was a stationary anti-aircraft train; Baum halted the column long enough to have his infantry disable the guns with thermite grenades, while tank main-gun fire destroyed the locomotive. The second target was 12 trains in a marshalling yard, which were destroyed with main-gun and machinegun fire.[29]

By the time it was daylight, the enemy hastily established roadblocks and strongpoints, and moved units to defend Gemunden and the bridge at the confluence of the Saale, Sinn and Main Rivers.[30] Capturing the bridge intact would hasten movement east on Highway 26 to its junction with Highway 27.[31]

Encountering small-arms and panzerfaust fire as it closed on the town, Baum ordered his reconnaissance platoon to determine if the bridge was intact. The enemy was beginning to bury land mines around the bridge.[32] Baum, wounded in the fight for the bridge, lost three tanks to panzerfaust fire. Baum's soldiers rushed the bridge, two of whom made it to the bridge but were killed as the enemy blew it. With the bridge lost, Baum requested close air support (CAS) for assistance in crossing the river. Rather than wait on the CAS mission, he considered his position in Gemunden untenable and backed out of town to find another crossing.[33] During this fight, the enemy captured an infantry platoon and the task force's recon platoon.[34]

Looking for an alternate route, Baum turned north, entering Rieneck at 8:30 a.m. An enemy paratrooper home on sick leave and tired of fighting told Baum that Burgisin to the north would

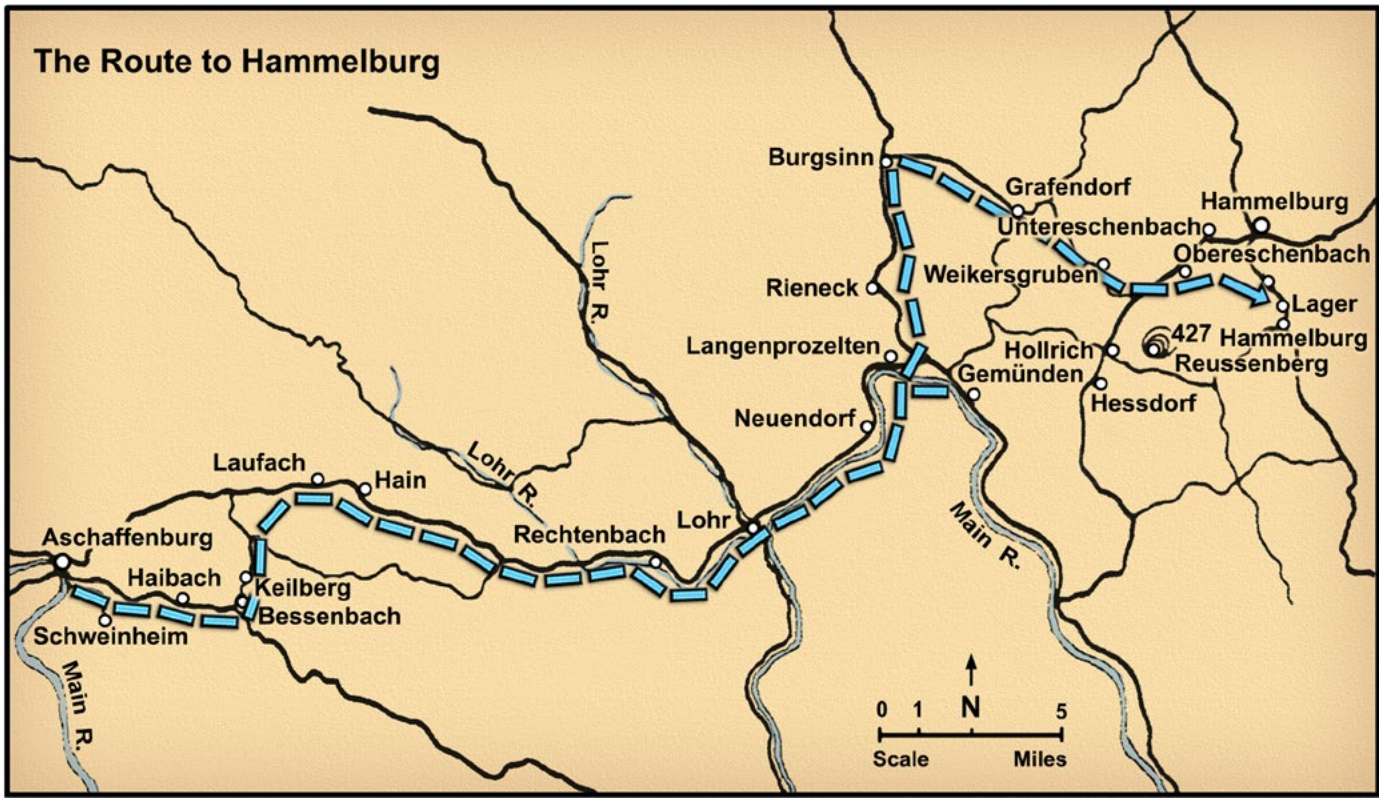


Figure 5. Road to Hammelburg.

be the best place to cross the Sinn.[35] Baum captured German Schutzstaffel General Oriel Lotz and two staff officers outside Burgisin. Outside Graffendorf, TF Baum liberated 700 Russian prisoners who were working on a chain gang. A German aircraft spotted the column after it crossed the Saale at Graffendorf.[36] Baum turned Lotz and other German POWs over to the Russians, but Lotz escaped from the Russians and telephoned Obstfelder as to the task force's destination. The Germans now had enough information on the composition and objective of the task force to consolidate their forces at Hammelburg.[37]

Baum's weakened column continued on Highway 27 as an enemy panzerjaeger company was moving into position near Obereschenbach east of the prison camp. On his own initiative, Technical Sergeant Charles O. Graham, the assault-gun platoon leader, moved to higher ground. The task force destroyed three panzerjaegers, six trucks and some ammunition carriers. Unfortunately, Baum fared worse, losing three Shermans, five half-tracks – including one loaded with gasoline – and three jeeps.[38]

Fight at camp

Baum bypassed the town of Hammelburg and spotted Oflag XIIIB on the high ground. His next task was to clear two enemy infantry companies as he approached the camp. The German area commander meanwhile organized his defense of the camp with two engineer companies. Outgunned by Baum's tanks and infantrymen, the engineers withdrew, while the task force took fire from the guard towers. Shortly thereafter, the task force breached the camp's fence.[39]

MG Gunther von Goeckel, the Oflag XIIIB commandant, advised the commander of the American prisoners, COL Paul Goode, that he ordered only token resistance to prevent bloodshed among the prisoners. Goode then directed Waters, his executive officer, to contact the commander of the American force. After Waters and a small party left the camp administration building, Waters was grievously wounded by sniper fire and was carried back into the camp, there treated by a Serbian physician.[40] As soon as the Americans entered the camp, Stiller ran from building to building trying to find Waters. Stiller, realizing the severity of Waters' wounds, knew he was incapable of traveling.[41]

Baum, overwhelmed by the scene was "sickened. ... They [the POWs] were in terrible shape." With only two medics in the task force, there was no way to provide even the most primitive treatment to the POWs. Expecting to rescue 300 American officers and lacking transportation, liberating 1,500 POWs was impossible. The difference in the number of prisoners Baum expected to liberate and the actual number at Oflag XIIIB reflected a lack of intelligence preparation of the battlefield. Had the task force brought extra weapons for the liberated POWs healthy enough to fight, they would have been an asset rather than a liability.

With order restored, Baum told the prisoners that he couldn't take them all. "Those of you who want to go will have to go on your own. … When I left, the lines were about 60 miles back in that direction (pointing west) at the River Main." Those who "want to go may be able to walk along with the column. … We'll probably have to fight our way out." Baum tearfully recognized that his task was impossible.[42] The POWs unfit for the 60-mile road

march returned to the stockade, others decided to exfiltrate in small groups, and a smaller group jumped on the remaining task-force vehicles.[43]

Destruction of TF Baum

Without a predetermined escape route, TF Baum became a "blind worm over the countryside."[44] During the confusion at the camp, the Germans, under the cover of darkness, organized a hasty defense that would, through a series of ambushes, reduce the task force's combat power. While still at the camp, Baum lost another medium tank to panzerfaust fire. Baum reformed the task force shortly before 11 p.m. and moved out on the same dirt road over which he earlier sent his light-tank platoon. As a recon element, it found a cross-country route to Hessdorf, which led to the main highway.[45] Running into two roadblocks in Hessdorf, Baum moved the column to the north to Hollrich, where he lost three medium tanks, many infantrymen, fuel, ammunition and precious time.[46]

Needing to reorganize his remaining force of three medium tanks, six light tanks, 12 halftracks, about 100 soldiers and 60 liberated POWs, Baum followed a trail to Hill 427. Seeing that he was surrounded, Baum decided to break out in the morning; he then ordered gasoline siphoned from eight halftracks, after which they were burned; redistributed ammunition; and left his seriously wounded in a large building marked with a red cross. The Germans attacked at daybreak as the task force began its movement.[47] An unknown number of assault guns moved from the south, six heavy tanks and two infantry companies from the southwest, while six Tiger tanks at the northeast were in position and firing.

After a 25-minute fight, TF Baum, with its equipment destroyed, ceased to exist. Breaking the remaining soldiers into small groups, Baum and the surviving platoon leaders told them to make their way back alone. German infantry patrols with tracking dogs rounded up most of the Americans still in the area. Baum (once again wounded), Stiller and an unidentified lieutenant were captured at 7:30 p.m. and remained in Oflag XIIIB until it was liberated by 14th Armored Division April 6, 1945.[48]

Of the 307 soldiers initially in the task force, nine were killed, 32 were wounded, 16 were missing and the rest were captured.[49] These casualties do not include the liberated POWs who accompanied the task force from Hammelburg.

The task force's destruction was a short-lived propaganda coup for the Germans, who claimed they destroyed an American armored division at Hammelburg.

Final analysis, lessons-learned

Baum and his small task force fought heroically, audaciously and tenaciously with the knowledge that the Hammelburg mission was impossible. If Patton's real motivation for the raid was to rescue Waters, he egregiously abused his command authority and needlessly risked the lives of his soldiers.

If Patton intended the raid to be a diversion, it was a successful diversion. Von Obstfelder believed Baum was leading 4th Armored Division and possibly Third Army; consequently he committed the equivalent of several divisions to guard major crossroads and bridges to defend Hammelburg. The fact that 4th Armored Division,

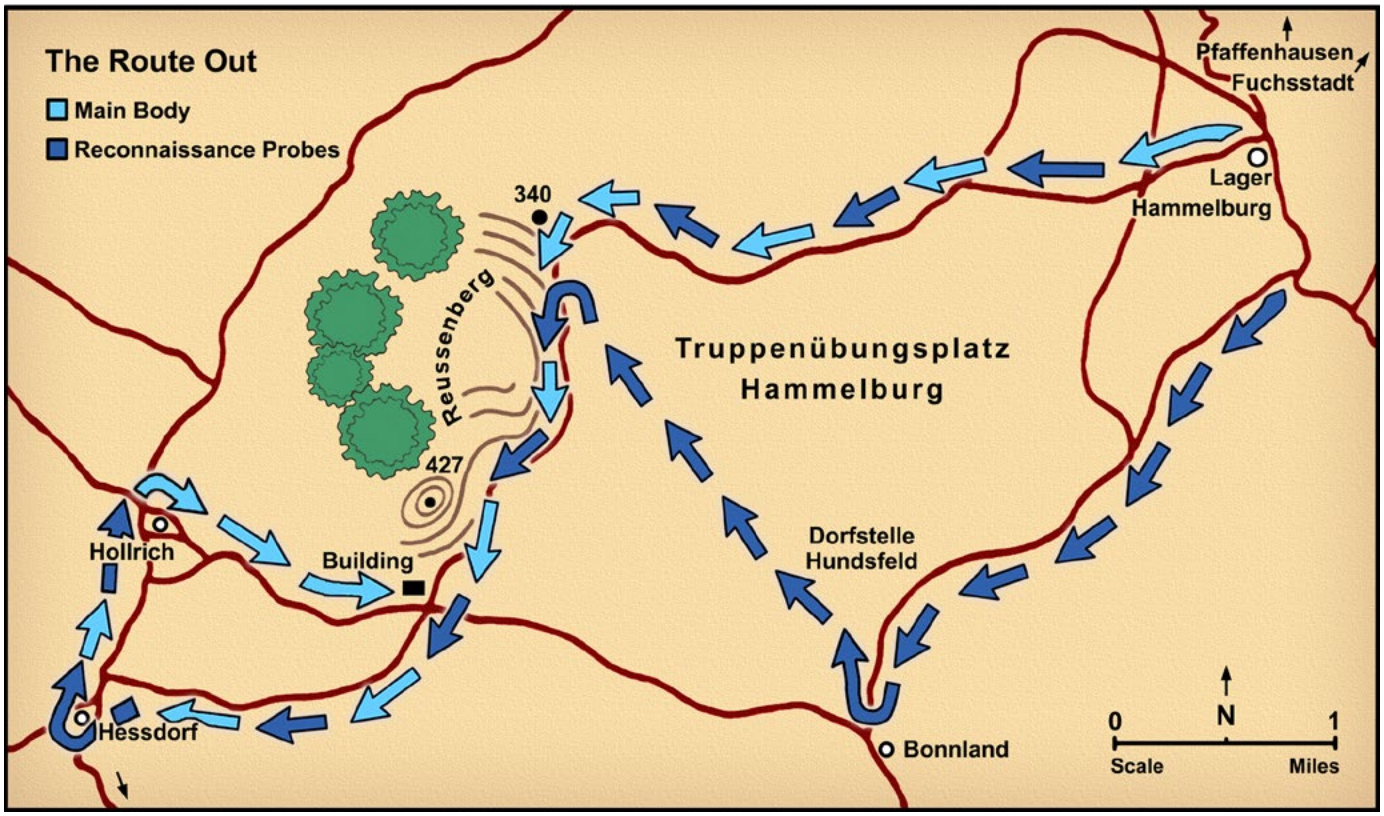


Figure 6. Road out of Hammelburg.

while it moved north, didn't fire a shot during its first 100 miles is partly attributable to Baum's raid. On the road to Hammelburg, the task force's destruction of enemy trains, trucks, ammunition and anti-aircraft guns was a psychological and tactical victory. It caused panic and fear in the enemy's civilian population that the Army was incapable of defeating an American attack deep into its territory.[50]

Seventy-two years after the Hammelburg raid, it remains the U.S. Army's deepest and unsupported mounted raid into enemy territory.[51] In future operating environments, special-purpose forms of attack such as feints, demonstrations, ambushes and raids may become more common.[52] Hammelburg demonstrated that mounted raids aren't "come as you are affairs."

With 4th Armored Division performing brilliantly throughout World War II, it is not surprising that Patton considered it most qualified to conduct the Hammelburg raid. Baum said it best: "We were the 4th Armored Division. … It was an unpardonable sin to fail in a mission."[53]

However, it was not prepared to conduct a raid deep into enemy territory. Cavalry, armored and armored-infantry doctrine of the day did not address raids. Patton capriciously overlooked the complexity of an armored raid, thinking that an audacious and high-tempo "hell bent for leather cavalry charge" to Hammelburg and back would succeed.

The destruction of TF Baum validates the maxim that size counts. Patton issued a mission-type order but failed to adequately resource it. Commanders may possess the legitimate authority to task-organize their forces as they see fit; however, the commander alone bears the responsibility for ensuring the force has enough combat power to complete the mission. Mission, enemy, terrain, troops, time and civilian considerations, not political or other considerations, should govern the size of the force.

Complex missions are inherently risky; insufficient planning time for commanders and staff increases risk to the mission and the force. Abysmal planning and time-constrained preparation portended the destruction of TF Baum. Stiller's briefing to Abrams and Baum concluded at noon, leaving only four hours until the task force was to move out at 4 p.m.[54] Baum had inadequate time for troop-leading procedures, pre-combat checks, rehearsal and rest for his exhausted soldiers. The fatigued soldiers in the task force – lacking thorough knowledge of the mission and uncertain of its final success – made confused and poor decisions at the objective and on Hill 427.[55] By underestimating the enemy's capability and compressing the planning and preparation cycle, the staff failed to plan for CAS, fire support, combat support, forward logistics, communications, reconnaissance and security and a withdrawal plan. Regrettably, neither Hoge nor Abrams requested a delay in the operation for more planning time.[56]

Figure 7. An M4 medium tank from 47th Tank Battalion, 14th Armored Division, crashes into the prison compound at Oflag XIIIB April 6, 1945, two weeks after the failed TF Baum raid. Among the prisoners were Waters and Baum, both wounded.

A raid has many purposes in addition to liberating prisoners or deceiving the enemy: capturing enemy prisoners and material; destroying enemy infrastructure; or forcing the enemy to prematurely disclose his intentions, capabilities and scheme of maneuver. TF Baum is clear and unambiguous proof that a raid is not a hasty attack. A raid is a small-scale but deliberate attack requiring detailed planning, real-time intelligence and preparation. Irrespective of the raid's purpose, common planning considerations were missing or deficient in TF Baum:

- The raid lacked a withdrawal route from the objective different from than that of approach-march route. Raid planning lacked a casualty-evacuation plan, plus rally and maintenance collection points along both approach and withdrawal routes.
- The scheme of maneuver must include criteria for engaging or bypassing the enemy. The planners wrongly assumed that speed would buy security and surprise. By attacking targets of opportunity, the task force lost both and became vulnerable from all directions. These "hip-shoots" led to early detection of the task force.
- Air support must be pre-planned, with aviation assets dedicated to the raiding force. Patton never consulted his air component on this raid.[57]
- Baum didn't know the exact location of Oflag XIIIB. The area and route reconnaissance plan must include ground and air observation of the objective to ensure the enemy situation remains unchanged and the raiding force still possesses enough combat power to accomplish its mission.
- Baum lost significant combat power during the fight at Gemunden Bridge. There was no pre-planned criteria for aborting the raid such as loss of surprise, unacceptable loss of personnel and equipment, and damage to sustainment assets.
- With 4th Armored Division moving north and the task force moving east, it was soon out of range of supporting fires. Fire support must be planned and immediate. Using interdiction and deception fires can slow enemy reaction time and degrade his situational awareness.

- If Baum had been able to clear the enemy's hastily emplaced mines at Gemunden Bridge, the task force had a better chance of using it. Engineer assets are necessary for mobility and countermobility.
- The task force wasn't self-sustaining. It carried fuel in five-gallon cans on one half-track. It lacked enough transportation assets and medical resources for the liberated prisoners. Fuel, recovery and transportation assets and medical supplies must be abundant and readily available.
- Baum failed to "seal" the objective. By establishing a cordon around the objective, the raiding force regains a semblance of security, albeit temporary.
- The compressed planning cycle precluded rehearsals by the entire task force. Rehearsal and detailed road-march planning allows everyone on the mission to understand what he or she will do.

The Hammelburg incident forever tarnished Patton's reputation, while Baum and his soldiers were indominable true heroes. Although Baum slipped into relative obscurity, he left the Army with a Distinguished Service Cross, two Silver Stars, two Bronze Stars and four Purple Hearts; he went home to New York and returned to the garment industry. When asked about Hammelburg, he responded, "They gave me something to do, and I did it."[58]

Retired LTC Lee Kichen served in command and staff positions in armor, armored-cavalry and mechanized-infantry units in the United States and overseas. He also served on the Army Staff and Training and Doctrine Command staff. LTC Kichen's military schooling includes Air War College (non-resident), Command and General Staff College, Armor Advanced Officer Course and Armor Officer Basic Course. He holds a bachelor's of arts degree in history from the University of Massachusetts-Amherst, a master's of social-sciences degree in sociology and political science from Pacific Lutheran University and a master's of arts degree in counseling psychology from Chapman College. His awards and honors include the Legion of Merit (one oak-leaf cluster) and Meritorious Service Medal (two oak-leaf clusters).

Notes

[1] Carlo D'Este, ***Patton: A Genius for War***, New York. Harper Collins, 1996. The estimate of the number of American officers at Hammelburg before the raid vary. When Stiller briefed Abrams, Cohen and Baum, he indicated there 300 POWs in Oflag XIIB. Patton in his memoirs wrote that there were 900 prisoners.

[2] Martin Blumenson, ***The Patton Papers, 1940-1945***, Boston: Houghton Mifflin Company, 1974.

[3] John Toland, ***The Last 100 Days: The Tumultuous and Controversial Story of the Final Days of World War II in Europe***, New York: Random House Inc., 1965.

[4] Blumenson, ***The Patton Papers***.

[5] Ibid.

[6] George S. Patton Jr., ***War As I Knew It***, New York: Houghton Mifflin, 1947.

[7] Shelden L. Thompson, ***The Operation of Task Force Baum Between Aschaffenburg and Hammelburg, Germany***, U.S. Army Infantry School, unpublished, 1949. Thomas was a prisoner in Oflag XIIIB. The 5th Infantry Division and 4th Armored Division were assigned to MG Manton Eddy's XII Corps.

[8] After-action report (AAR), 4th Armored Division, March 25, 1945.

[9] Richard Baron, MAJ Abe Baum and Richard Goldhurst, ***Raid! The Untold Story of Patton's Secret Mission***, New York: Dell Publishing, 1981 (reprint). Baron was a prisoner in Oflag XIIIB.

[10] James B. Hickey, "The Destruction of Task Force Baum: The [World War II] 'Deep Strike' to Liberate a POW Camp Offers Lessons for AirLand Battle," ***ARMOR***, November-December 1987.

[11] Toland.

[12] Tobin L. Green, ***The Hammelburg Raid Revisited***, Johns Hopkins University, Strategic Studies Seminary Paper. A World War II armored-division combat command was the antecedent of today's modular armored brigade combat team.

[13] Patton.

[14] Blumenson, ***Patton Papers***.

[15] Jim DeFelice, ***Omar Bradley: General at War*** (book on-line), Washington, DC: Regnery Publishing Inc., 2011. "Involved" in this instance probably isn't a reference to Patton personally. Presumably, Bradley didn't want this operation to impact Third Army's main effort.

[16] Abraham J. Baum, oral interview, 2013, the National World War II Museum, New Orleans.

[17] Toland.

[18] Baron, Baum and Goldhurst.

[19] Martin Blumenson, "The Hammelburg Mission," ***Military Review***, XXXV, No. 6. The exact number of soldiers in the task force ranges from 292 to 314 troops.

[20] Baron, Baum and Goldhurst.

[21] Hickey.

[22] 37th Tank Battalion diary entry, March 26, 1945.

[23] Rudolf von Gersdorf, "The Final Phase of the War," typescript, Foreign Military Study A-893, U.S. Army Europe, March 20, 1946, cited in Green.

[24] Baum AAR, 4th Armored Division, April 10, 1945, and Baum oral interview.

[25] Baum AAR and Baum interview.

[26] Baron, Baum and Goldhurst.

[27] Baum AAR. At this point, Baum had run through Strass-Bessenbach, Keilburg, Frohenhofer, Laufach and Hain without halting.

[28] Blumenson, "The Hammelburg Mission." Baum would later say in his oral history that panzerfausts were his greatest enemy.

[29] Blumenson, "The Hammelburg Mission"; Blumenson, "The Hammelburg Affair," ***ARMY***, October 1965; Baum oral interview; Baum, AAR. At the time, Baum was unaware an enemy division was to be loaded on the trains. Seeing these yards as a lucrative target, he requested an airstrike.

[30] Richard B. Reppa, ***That Raid on Hammelburg***, U.S. Army Armor School, unpublished, 1948. Reppa was a prisoner in Oflag XIIIB.

[31] Hickey.

[32] Richard Whitaker, "Task Force Baum and the Hammelburg Raid," ***ARMOR***, September-October 1996.

[33] Frederick E. Oldinsky, "Patton and the Hammelburg Mission," ***ARMOR***, July-August 1976.

[34] Baum oral interview.

[35] Oldinsky.

[36] Baum AAR and Whitaker. When spotted by the German aircraft, Baum had 13 tanks, three assault guns and 27 half-tracks.

[37] Baron, Baum and Goldhurst.

[38] Baum AAR; Baron, Baum and Goldhurst; and Blumenson, "The Hammelburg Mission."

[39] Baron, Baum and Goldhurst; Whitaker.

[40] Reppa.

[41] Whitaker. Waters survived his wounds and was liberated April 6, 1945. In addition to the American officers, Serbian POWs were in Oflag XIIIB.

[42] Baum interview and AAR; Baron, Baum

and Goldhurst.

[43] Reppa.

[44] Baron, Baum and Goldhurst.

[45] Thomas.

[46] Baum AAR and Reppa.

[47] Blumenson, "The Hammelburg Mission."

[48] Baum AAR.

[49] Reppa.

[50] Oldinsky.

[51] Baron, Baum and Goldhurst.

[52] Field Manual 3-90.1 lists the ambush, counterattack, demonstration, feint, raid and spoiling attack as special-purpose attacks.

[53] Charles Whiting, ***48 Hours to Hammelburg,*** New York: iBooks, 1970.

[54] Baum oral interview.

[55] Reppa.

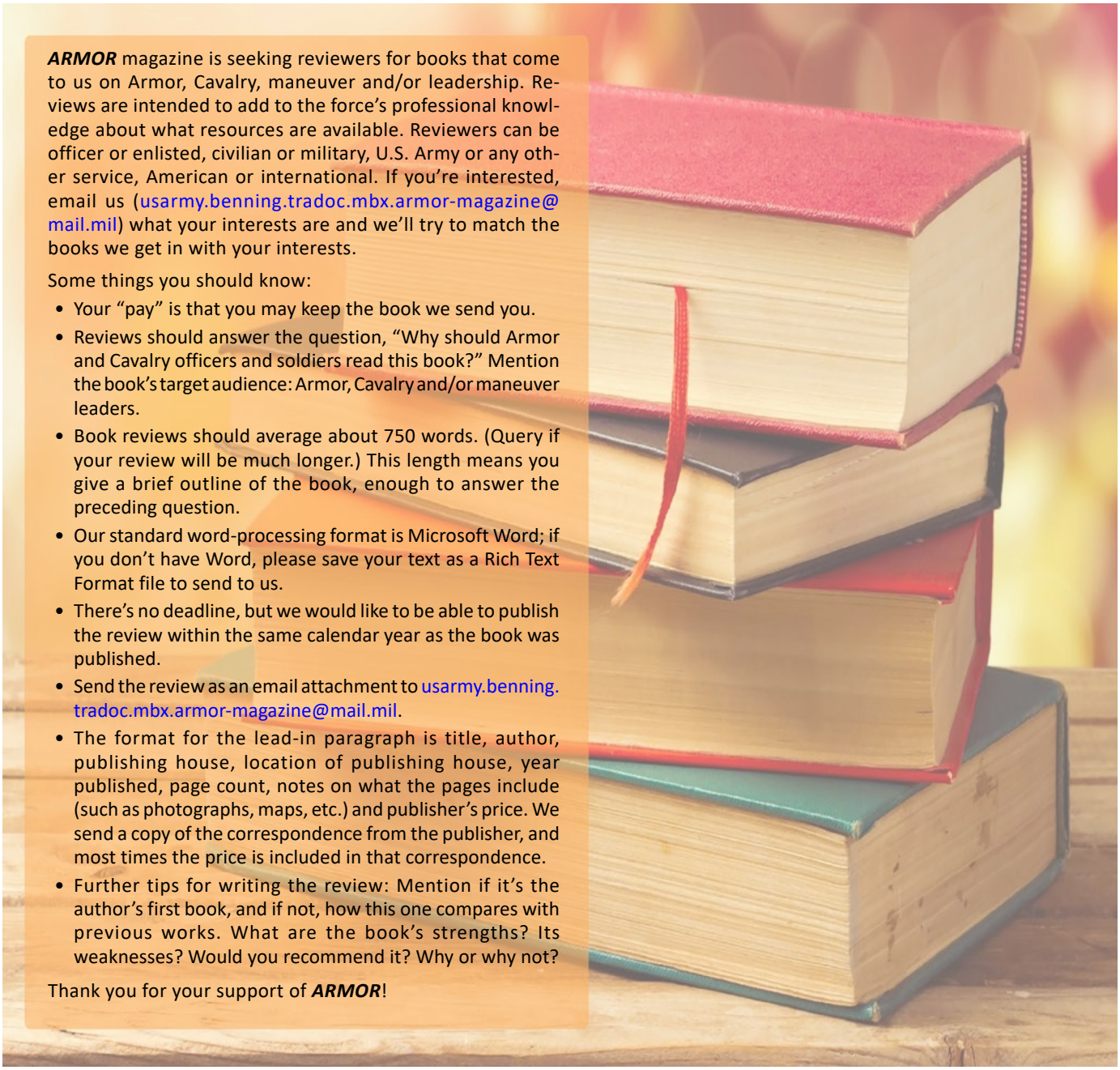
[56] Green.

[57] David N. Spires, ***Air Power for Patton's Army: The XIX Tactical Air Command in the Second World War II,*** Washington, DC: Air Force History and Museums Program, 2002. Patton as an operational-level commander failed his TF by ordering the operation without consulting his air commander.

[58] Whiting.

Acronym Quick-Scan

AAR – after-action report
Oflag – offizerslager
POW – prisoner of war
TF – task force



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BOOK REVIEWS

Forward With Patton: The World War II Diary of Colonel Robert S. Allen, John Nelson Rickard, Lexington, KY: University Press of Kentucky, 2017, 1,288 pages with maps, photographs, footnotes and bibliography, $50.

The World War II personal diary of COL Robert S. Allen, a member of Third Army's G-2 intelligence staff, is brought to life by noted historian and author John Nelson Rickard. Dr. Rickard previously explored the combat record of Third Army in his ***Advance and Destroy: Patton as Commander in the Bulge***. In ***Forward with Patton***, Rickard presents Allen's insights on the daily command-and-staff activities of LTG George S. Patton's army as it prepared for and then entered the European campaign in 1944.

The diary entries address the period from February 1944 until June 1945. Allen's journal is of historical significance, as the author notes, for several reasons. First, "it reflects his (Allen's) private thoughts on his wartime experiences." The journal also provides "insights into the employment of the Third Army Staff and the strengths and weaknesses of its individual members."

Given this rationale, Rickard presents a short biography of Allen. A World War I cavalry officer, he left service at the conclusion of World War I and entered the field of journalism. At the same time, he retained his commission as a member of the Wisconsin National Guard until 1920 and continued as a reserve officer. At age 42, he voluntarily re-entered service and was assigned to the Third Army staff.

After undergoing training as an intelligence officer, Allen assumed duties as the chief of the Situation subsection and executive officer to COL Oscar Koch, the Third Army G-2. To facilitate an understanding of the role and function of the Situation section, the author presents a detailed chart in the text on the structure of the G-2 section.

At a given point, Allen is made privy to the inner working of the ULTRA organization's decoding of German military message traffic. Given the high degree of wartime and post-war secrecy surrounding the methods, procedures and results of the decoding effort, it is surprising to read Allen openly discussing the process in his unclassified diary. As an intelligence officer, one would expect him to be more circumspect in his writings. At the same time, Allen's comments on ULTRA and the impact on operations are fascinating to read.

Rickard's perceptive editing permits a smooth flow of Allen's often cryptic writing style. By inserting minor words into the text, adding an abbreviation list to the appendix and clarifying various errors, the author facilitates the readability of his work. Rickard also provides editorial comments directly into the text "to address some of the blatantly biased statements" and correct "as many significant factual errors as possible by inserting editorial comments in the text or endnotes." The book's endnotes also contain a brief biographical sketch on individuals Allen often only addresses by rank and last name.

Allen is anything but a neutral observer of his surroundings. He is less than complimentary of the members of the Regular Army, often citing them as incompetent gloryhounds seeking recognition, decorations and advancement for what he views as their poor performance. Meanwhile, Allen often complains that he has been unjustly deprived of awards and promotion for his service. His petty vindictiveness extends to his superiors such as Field Marshall Bernard Montgomery, GEN Dwight D. Eisenhower and GEN Omar Bradley. He is especially critical of their combined performance during and after the December 1944 Battle of the Bulge. Also coming in for Allen's biting criticism are GENs "Wade Haislip, Walton Walker and Manton Eddy commanding the XV, XX and XII Corps, respectively." By way of contrast, Patton's dress, command style, directives and tactical judgement receive glowing praise throughout the diary.

A distraction to readers familiar with Patton results from Allen consistently referring to Patton's pistols as having "pearl handles." Patton would have most assuredly roared back at the mere suggestion of a pearl-handled pistol: "they are ivory."

By any standard, Allen was not a desk-bound staff officer. One can assume that he must have been a tough old bird. He is sent, for example, on an intelligence-gathering mission near the very end of the war. During this excursion, his group gets into a firefight with the Germans. Allen is wounded, captured and taken to a German hospital, where his right arm his amputated. Quickly liberated, three days later he was back at work.

Rickard has brought forth an important and interesting view of staff action and intrigue as recorded by Allen. The author's editing produced a highly readable and fascinating look at the inner operation of Third Army's tactical employment of available forces. A word of caution: This is not a book for the first-time reader seeking a better understanding of Patton. Allen finds no fault with Patton and is far too lavish in his praise. Patton had faults like any other human being. However, this should not distract from this superbly edited addition to our collective knowledge of Third Army and its legendary leader.

RETIRED COL D.J. JUDGE

For Want of a Gun: The Sherman Tank Scandal of World War II, Christian M. DeJohn, Atglen, PA: Schiffer Publishing Limited, 2017, 1,392 pages with maps, photographs, footnotes and bibliography, $84.99. Almost 500 photos of rare tanks are from the collection of the National Armor and Cavalry Heritage Foundation.

The American Heritage Dictionary defines a scandal as "any act or set of circumstances that brings about disgrace or offends the morality of the social community; a public disgrace." Author Christian M. DeJohn presents arguments that support his contention that

the development and fielding of the World War II M4 Sherman tank by American and allied combat forces constituted a scandal of the highest order. To support this, he cites many books, articles and personal anecdotes from World War II participants.

As stated in the foreword by Dr. Richard Hallion, the author "examines the complex human story – how key decisions, attitudes and values of commanders led to the Sherman, minimized its deficiencies and thus tragically made possible a victory in Europe bought at the price of numerous killed, maimed and crippled crewmen."

There were some 88,410 tanks produced by the United States during World War II. The vast majority of these were M4 Sherman tanks. These impressive figures were achieved despite warnings from men in the field that the Germans possessed far more lethal tanks. According to the author, there are several reasons why the United States failed to produce an effective system to counter the obvious German tank superiority.

In constructing his argument, DeJohn traces the development of the tank during World War I. The 1915 allied introduction of armored vehicles resulted from a quest to restore mobility to the battlefield. While the Germans were initially shocked by this new weapon system, they soon regained their composure and countered with effective anti-tank measures.

Postwar analysis believed the best use of tanks could be achieved by using tanks to either travel with the infantry or to exploit a breakthrough; thus two variants of tanks were popularized in the interim war period: a heavily armored infantry tank with a speed commensurate with the walking speed of the infantry and a lightly armored, speedy cruiser tank to exploit a breakthrough.

As recounted by the author, pre-World War II American tank doctrine, along with congressional mandates, assigned tanks as infantry-support weapons. In 1939, Germany successfully employed armor to encircle and destroy the armies of Poland and Western Europe. Shocked, America's political and military leaders attempted to overcome years of military neglect.

Under the auspices of GEN Lesley J. McNair, commander, Army Ground Forces, the tank was viewed as a weapon system for exploitation, not as one designed to go against other tanks. To counter the German tank threat, the Army developed and deployed tank-destroyer units whose sole function was to engage and defeat any armored thrust. As DeJohn's research further expands the topic, he cites the political pressure applied to American industry by the Roosevelt Administration. The combination of political pressure and an outdated doctrinal employment resulted in the impressive production of antiquated weapons system that, despite field reports to the contrary, failed to address battlefield realities.

As the invasion of Europe loomed, according to the author, GENs Dwight D. Eisenhower, Omar Bradley and George S. Patton Jr., failed to demand better armament, improved tank main guns and better tank design to counter the German armored might. Despite the development of the T26 tank, which featured a 90mm main gun and better performance factors, American forces entered the continent of Europe with undergunned, poor-performing armored vehicles.

On the positive side, DeJohn acknowledges that the transition to a new tank in the hurried days of invasion preparation would have been disruptive in terms of training and utilization. Yet, he argues that modification to the M4 Sherman should have resulted in the mounting of a more effective main gun. He cites, for example, the value of the British-developed and -employed Sherman Firefly with a long-barreled 76.2 mm gun – a system rejected by American commanders for several reasons. (The most obvious reason was the production capacity of British and American industries to produce the vehicle in sufficient quantities to be effective.)

It is the author's conclusion that "Ordnance was supposed to evaluate Germany's best tanks, updating U.S. design to not just match but defeat them. It stumbled on both counts. By the time the press exposed the controversy, it was too late to make a difference."

This book is an impressive work reflecting the author's command of the subject matter backed up by an astounding amount of data. Lavishly illustrated with an array of photos from the author's personal collection, technical manuals and period news photos, DeJohn has created a work worthy of study and reflection.

The book, however, is an expensive, oversized book. It is awkward to handle, thus limiting reading to a desk type of platform. The author's argument and supporting material are often repetitive. He supports his case with battlefield anecdotes, for example, that while assisting his thesis become laborious to read. Despite these deficiencies, DeJohn produced a work that should spur discussion and debate on the development and employment of the Sherman tank during World War II.

RETIRED COL D.J. JUDGE

*(**Editor's note**: DeJohn, a former M1Abrams tank gunner, has more books coming out: **Legends of Warfare: The M1 Abrams Tank**, and **Legends of Warfare: The M2/M3 Bradley**. The book on the Abrams is in the **ARMOR** editorial offices now and is available for review.)*

Stalingrad, David M. Glantz and Jonathan M. House, Lawrence, KS: University Press of Kansas, 2017, 638 pages with maps and photographs, $34.95.

If there is one battle everyone perhaps knows in some sense in World War II, it is Stalingrad. From recent big-screen productions of it to Monty Python comedy skits, Stalingrad is etched onto the collective conscious of the world at some level. Like the Somme and Verdun from World War I, Stalingrad set in its own blood-soaked way a new benchmark of horror and brutality. Only Manila in 1945 and Berlin even begin to compare to it. In our own time, we have seen a modern Stalingrad played out in Russia's destruction of Grozny as retribution for losing the First Chechen War. The definition of insanity as allegedly stated by Einstein rang true with Stalingrad that "the definition of insanity is doing the same thing over and over and expecting a

different result."

David M. Glantz single-handedly in the largest sense of the word changed forever how military historians and military-history enthusiasts saw and understood the Eastern Front. In work after work, Glantz either demolished cherished myths or rewrote history due to his access to the Soviet World War II archives, a trove of documents that are still a close-hold for the Russian government. Glantz's Stalingrad trilogy (***To the Gates of Stalingrad, Armageddon in Stalingrad*** and ***Endgame at Stalingrad***) is both an epic read and perhaps the definitive account of this campaign.

However, Glantz – along with the noted military historian Jonathan M. House – attempted the impossible: a condensing of Glantz's epic trilogy into one readable volume entitled simply ***Stalingrad***. The question for you who are loathe to wade through the trilogy at 2,278 pages is: Is the new work ***Stalingrad*** truly a worthy condensation of those three volumes? Having read the trilogy, this reviewer can say without reservation that not only does it achieve that, but it stands in its own right. In fact, this may be the best written account of Stalingrad, with only the official German history of this campaign contained within ***Germany and the Second World War: Volume VI: The Global War*** rivaling it.

Now this reviewer should note that he has an entire bookcase filled with books on the Eastern Front in World War II, and one shelf alone devoted to Stalingrad; I've found no finer concise version of the Battle of Stalingrad – none. In its ability to acquaint even the casual reader with the campaign, ***Stalingrad*** can be labeled unflinchingly as "homeric," for it is that brilliant in its distillation of the campaign.

Stalingrad is broken up into 20 chapters with four main themes: "The Limits of Maneuver Warfare, 1942"; "To the Caucasus and the Volga"; "The Encirclement of Sixth Army"; and the "Death of Sixth Army" (Sixth Army would be reconstituted and would die again when the Romanians switched sides in 1944 and closed the bridges behind this again-ill-fated Army).

What makes this work compelling and of heightened interest is Glantz's commentary in the preface when he writes, "Almost from the first, however, we discovered significant contradictions within and between sources. They often disagreed not only on interpretations but also on the very facts at issue ... (and) we found an ongoing struggle between two nearly equal adversaries, neither of which could mass sufficient combat power to achieve decisive victory." With that sort of bold statement serving in a sense as the authors' thesis, who won't now be intrigued, as that goes against the grain of the established Stalingrad narrative.

Glantz and House set the stage well, reviewing the state of the two forces approaching the 1942 campaigning season. The two armies were in a sense mirroring each other in terms of their projections of what they thought those folks on the other side of the hill would do, with fatal consequences later for the German Sixth Army. Germany seemed poised for victory with the failure of the Soviet Izum Offensive or the Second Battle of Kharkov, where the casualty ratio was at a minimum 13:1. But once Fall Blau, the German actual summer offensive, kicked off, we see that the German logistical system still was unable to keep its forces supplied, resulting in almost spasmodic offensive operations and maddening halts. No wonder Hitler rolled the dice here to seize the Soviet oilfields to the South!

To set the stage further, Glantz neatly details that the summer offensive didn't have only the two strategic axes that the German General Staff decided, but three. The failure to recognize and deal with this – perhaps something that was unrealistic to accomplish unless there was a political collapse – drives the German perspective in Stalingrad.

Glantz discusses the myth that the Soviets fought more battles than they were credited for, with a resultant heightened wear and tear on German logistics and increased fuel expenditure. It wasn't solely mass that wore the Germans down. In front of Stalingrad, the Red Army committed four rifle and two tank armies. Combine this with the impact of the infamous Not One Step Back Order No. 227, Glantz writes, "This definitely disproves the notion that the Red Army fled or deliberately retreated in front of the invaders. Moreover, the attrition inflicted on the German units before they even approached Stalingrad would haunt Sixth Army when it finally reached its ultimate target in that city."

We must echo Glantz's comment that one can only hope this study will indeed find a larger, different and perhaps more receptive audience than the Stalingrad trilogy perhaps received. My only misgiving is that the maps still are not up to the quality of many maps in other books. A number are better reproduced in ***Stalingrad***, but the plates used are often hard to read or are simply blurry.

If you only read one book on Stalingrad, this new book by Glantz and House undoubtedly is the choice, bar none. Pick ***Stalingrad*** up, but be forewarned, it will engross you more than any other Glantz book, for House perhaps has given it a lighter touch, making the material both more accessible and riveting.

LTC (DR.) ROBERT G. SMITH

Mission Command: The Who, What, When, Where and Why, An Anthology, Donald Vandergriff and Stephen Webber, editors, self-published with CreateSpace Independent Publishing Platform, 2017, 294 pages, available online at http://missioncommand5ws.com/.

In 2009, then-U.S. Army Training and Doctrine Command commander GEN Martin Dempsey changed the term for the "command and control" warfighting function to "mission command," encouraging warfighters to reanalyze how battlefield leadership was exercised. Since then, the Army has espoused that it thinks differently about how commanders and subordinates interact and how much leeway those subordinates are given. Entering into the campaign of thinking differently is Donald Vandergriff and Stephen Webber's ***Mission Command: The Who, What, When, Where and Why, An Anthology***.

Mission Command is a book written

out of frustration. It is a manifesto. It is "a call for radical reform of the Army." The authors are men and women in love with their military (mostly the U.S. Army) but disappointed by where it is currently. At its best, ***Mission Command*** reads like the thoughts of John Paul Vann on the Army in Vietnam: incisive, critical and yet ultimately hopeful. At its nadir, it's a disorganized ramble through Army history and culture full of the requisite quotes from dead Germans. Overall, the book offers cogent ideas about how the Army can improve its command culture to align with the spirit and intent of mission command. By doing so, ***Mission Command*** has an opportunity to challenge our thinking, conventional wisdom and the way we conduct operations.

Mission Command is an anthology of essays written by a variety of scholars and American military officers, though British and Norwegian essays are also included. Cumulatively, the book's essays address cultural concepts of mission command, historical precedent and the operating concepts required to fully embrace the espoused doctrine. The authors explore key themes about trust, cohesion, leadership, agility and independence from multiple angles as the authors analyze mission command from a variety of perspectives.

Doctrinally, ***Mission Command***'s primary targets are Army Reference Doctrinal Publication 6-0, ***Mission Command***, and the Army Press's ***Mission Command in the 21st Century: Empowering to Win in a Complex World*** by Nathan K. Finney and Jonathan P. Klug, editors. Those works, Vandergriff and Webber claim, miss the point of mission command. The authors identify the underlying cultural shifts needed in today's Army for mission command to take root. America's Army, they state, is hopelessly burdened by excessive staff processes, unimaginative commanders and micromanagement. "The Army's staff training, exercises and evaluations are based on the ability to adhere to process and doctrine rather than attain rapid and decisive results," states MAJ Thomas Rebuck in one of the anthology's essays. As a result, Vandergriff and Webber contend the Army will continue to pay lip service to mission command.

Central to doctrinal understandings of mission command is the German concept of *Auftragstaktik* (mission command or mission-type orders). German tactical and operational successes of 1939-1941 are repeatedly used as examples of what can be done with mission command. By contrast, current and historical American and Allied leadership is repeatedly described as ineffective, slow and overly managerial. Though there exists debate about the true causes of initial German success, the command-climate context is presented for the reader's analysis. While historical examples are scattered throughout the essays, they are employed piecemeal rather than in a thematic or well-developed common thesis, which inhibits their impact.

Overall, the anthology is an uneven work. Some chapters, like MAJ Darrell Fawley's "Mission Command in Garrison," have immediate relevancy and are well-written, reminding leaders at all levels that mission command is not merely a battlefield concept. Other chapters need a stronger editorial hand to help clarify thoughts and concepts. As an example, the chapter on the France's defeat in 1940 attempts to explain how mission command's concepts and culture gave the Germans the upper hand. Sadly, the chapter needs stronger editing to distill the key lessons and make its point succinctly.

Mission Command's central message regarding the cultural need for independence, initiative, trust and cohesion in current units should sit well with armor, mechanized-infantry and cavalry units used to operating in high-tempo and dispersed environments. The call for change echoed throughout the book should find willing adherents to the betterment of the American Soldier and Marine. Whether higher levels of leadership choose to think differently and fully adapt Vandergriff's and Webber's rallying cry remains to be seen.

MAJ TIMOTHY HECK
U.S. Marine Corps Reserve

*(**Editor's note:** MAJ Heck is a new reviewer for **ARMOR**. An artillery officer by training, he has served as a brigade platoon commander, 4th Air/Naval Gunfire Liaison Company, U.S. Marine Corps Reserve, West Palm Beach, FL; logistics officer, Region 3, Marine Corps Embassy Security Group, Bangkok, Thailand; firepower-control-team leader, 4th Air/Naval Gunfire Liaison Company, U.S. Marine Corps Reserve, West Palm Beach; fires-and-effects adviser, Combined Joint Task Force-Phoenix, Afghanistan; and fire direction officer, Battery S, Regimental Combat Team-6, Fallujah, Iraq. He is a graduate of the Joint Forces Staff College's Joint and Combined Warfighting School-Hybrid, the U.S. Marine Corps University's Command and Staff College and the U.S. Marine Corps University's Expeditionary Warfare School. He holds a bachelor's of arts degree in American studies from Georgetown University.)*

*(**Editor's note**: **ARMOR** provides this information because there is confusion as to who publishes **ARMOR**, as evident in several footnotes (for instance, see the footnotes on Pages 170 and 203) in the reviewed publication. **ARMOR** is published by the U.S. Army Armor School and not the Armor Association, which is a private organization. As a government-sponsored publication, **ARMOR** may not carry advertising, and we rely on Armor and Cavalry professionals to write articles for us.)*

The Wehrmacht's Last Stand: The German Campaigns of 1944-1945, Robert M. Citino, Lawrence, KS: University Press of Kansas, 2017, 1,615 pages with maps, photographs, footnotes and bibliography, $34.95.

What motivated the German soldier to forcefully resist the Allied coalition during the final year of World War II? Renowned historian and author Dr. Robert M. Citino provides the answers to this question in his latest work on World War II by exploring the operational art of warfare as practiced by and employed against the German military.

This is an impressive book in both content and length. The work itself represents a tremendous undertaking with 470 pages of text, 87 pages of notes, maps, a detailed index and an impressive bibliography.

This is not a detailed tactical study of the last battles against the German

army. Rather, the concentration is on the operational level of warfare. Citino defines this level of warfare as "the ability to plan a campaign: to muster the available formations, concentrate them for different tasks -- feint, assault, pursuit, to name just three of many – and to launch them into a cohesive campaign plan that advances the armed forces toward their strategic goal."

The book's 10 chapters review the last year of battles fought against the Germans from the defense of the Korsun Pocket in January 1944 to the Battle of Berlin in April 1945. Each of these chapters contains a brief vignette describing a particular aspect of a given engagement, then a detailed discussion of the historical and cultural influences impacting the German operational plans and actions. Thumbnail biographies of the principal players on both sides of the battle enhance an appreciation for the battlefield actions. Emphasis is placed on what worked and did not work for the Germans and why that happened.

Citino's fluency in German allows the author to not only fully explain the literal translation of a particular term but also the cultural nuances assigned to a given military term. He supplements this comprehension of tactical and operational terms by explaining the role willpower, tenacity, perseverance and persistence played in motivating the leaders and soldiers of the German army.

The last two chapters examine not only the closing actions of World War II but also the role of German commanders who were "guilty of the senseless death of German soldiers." The author's often startling comments demonstrate that while Hitler is correctly renounced for his brutality, the German officer corps ably abetted and assisted his efforts until it was too late to alter the situation through a political settlement. The beauty of Dr. Citino's book lies in his writing skill that reflects insight and objectivity, ably assisted by his impressive analytical abilities.

Citino focuses on the German view of these campaigns. Often very different from the Allied perspective, this approach allows for a more distinct and far-reaching understanding of the last battles of the Wehrmacht. Built for a short, lively war of rapid movement, the German armed forces were steadily decimated by a number of factors.

First and foremost, "Germany's problem was not merely military." Citino continues that Germany needed a "strategy as well as strategist to formulate and execute it." Bereft of strategy, the previous German war of maneuver ground to a halt in the face of an alliance that did possess a strategy that allowed the operational level of warfare to flourish. Citino relates the German miscalculations in terms of failure to provide for such essential components of modern warfare as adequate research and development efforts. Without this vital function, technological advances floundered, leading to poor manufacturing decisions that ultimately saw advances during the early war years evaporate as the allies developed superior equipment that could be mass-produced and employed against the reeling German army.

Citino's detailed explanation of how the unrealistic attempt to retain control of vast amounts of territory with insufficient manpower that contributed to an inevitable German defeat is often supplemented by applicable quotes from military theorist Karl Clausewitz.

In addition to insightful observation on the employment of American and British forces, Citino addresses the Russian mastery of operational warfare. His description of the synchronization of partisan force, rear-area operations, aerial employment, massive artillery preparations and overwhelming infantry and armor attacks against a given German weak point are impressive. The same holds true for his comments on the Allied landing in Normandy, the role of deception as shown by Operation Fortitude, the mishandling of operations as demonstrated by Operation Market Garden and the vital role of airpower to assist maneuver as validated by the American actions during the Battle of the Bulge.

This is a well-written work that will appeal to maneuver commanders seeking a better appreciation of the linkage among the strategic, operational and tactical levels of warfare. Citino's work should enlighten leaders and provide a deeper understanding on the complexities of the modern battlefield.

RETIRED COL D.J. JUDGE

Miracle at the Litza: Hitler's First Defeat on the Eastern Front, Alf R. Jacobsen, Havertown, PA: Casemate Publishers, 2017, 208 pages, $9.99 Kindle edition, $23.38 hardcover.

"Winter frost had started, and the first snow settled over the bloodstained tundra by the Litza. The casualty lists were grim. The Germans had lost 12,490 men killed, wounded or missing, and the Russian losses were similar. … Hitler had suffered his first defeat on the Eastern Front." This is the eulogy for Operation Platinumfuchs at the end of Alf R. Jacobsen's new book ***Miracle at the Litza: Hitler's First Defeat on the Eastern Front***.

Platinumfuchs was the northern prong of an ambitious attack across Norway and Finland by the German Mountain Corps to seize the strategically vital White Seaport of Murmansk, the third phase in Operation Silberfuchs, the invasion of northern Russia. These campaigns, begun in Summer 1941, are a largely forgotten part of the much larger Operation Barbarossa.

Jacobsen, a Norwegian investigative journalist and the author of more than 20 books, does a masterful job of recounting the campaign in the far north. He relies on a wealth of primary sources and his own previous work focused on the Scandinavian theater. The result is a short but dramatic portrait of a largely and unknown and vicious battle fought across northern fjords and tundra high above the Arctic Circle.

Jacobsen starts the book in August 1940 with the successful German conquest of Norway. Here he introduces us to his main characters, the German division and corps commanders. Soviets receive attention too, but his sources force him to spend more time on the German perspective. Over the course of campaign, Jacobson delves deeply into these officers and reveals their personalities with exceptional

clarity. He avoids the easy caricatures that expose lesser authors. It is clear that Jacobsen believes the battles and campaign are decided by character and interpersonal relationships among the senior and staff officers. Unfortunately, however, only rarely do junior officers or enlisted soldiers have a role in the narrative. At times his rendering of the battles reads like a television drama, but one where the whims of the characters mean life and death for their men battling across the tundra.

Jacobsen also chronicles Anglo-Soviet relations during the campaign. Using personal communiqués between Churchill and Stalin regarding the establishment of the military missions in London and Moscow, and the decision to start sending Allied aid convoys to Murmansk, this parallel narrative gives context to the battles and keeps the reader aware of the larger strategic picture.

Tactically, the story is one of hubris. German commanders, euphoric and brash after two years of stunning victories in Europe, expect to swiftly cover the 100 kilometers from the Finnish border to Murmansk and easily brush aside any Soviet resistance. However, the tenacity of the Soviet defense and a gross misunderstanding of the terrain stop them at the River Litza, only 27 kilometers into their offensive. Here the Soviets stop three consecutive assaults across the river and inflict casualties on the Germans unheard of up to this point in the war. Two divisions took roughly 12,500 casualties against a roughly equal contingent of Soviets.

After being stopped at the Litza, the front remained relatively stable until 1944. Ultimately the issue was that the German Mountain Divisions were light-infantry units that lacked the supporting arms that enabled such decisive victories in other theaters. They were forced to rely on their rifles and hand grenades to clear entrenched Soviet positions that were supported by artillery and naval gunfire. Logistically the campaign was a nightmare. The road network was so poor that in several cases the Germans resorted to using their frontline troops as porters to move supplies to the front.

Miracle at the Litza is an excellent example of an operational saga despite Jacobsen's choice of a little-known operation. Jacobsen relies heavily on his primary sources to move the narrative along and uses long block quotes from memoirs, diaries and letters, as well as decoded messages from ULTRA – the British code-breaking unit at Bletchley Park – that it feels like the story is telling itself. With blistering historical accuracy, Jacobsen narrates the first German defeat in the East and is able to keep the reader turning pages until the very end.

The history makes has clear lessons for today. Forces built around combined-arms maneuver can be stopped when stripped of their supporting arms, a warning to those who argue for investing heavily in light-infantry formations.

The first book that focuses on Operation Platinumfuchs, it is a worthy chronicle with lessons still valid today. We can only hope that Jacobsen continues to produce such good history and exciting reading.

1LT WALKER D. MILLS
U.S. Marine Corps

*(**Editor's note**: Mills is another new **ARMOR** reviewer. He is a rifle-platoon commander with 2nd Battalion, 1st Marines, but is currently pursuing a master's of arts degree in international relations and contemporary war at King's College, London.)*

Hal Moore on Leadership: Winning When Outgunned and Outmanned, retired LTG Harold G. Moore and Mike Guardia, Maple Grove, MN: Magnum Books, 2017, 168 pages, $14.95.

Every year there is a spate of leadership books written by military officers, business executives, consultants and psychologists. I read countless books on leadership during my last two active-duty assignments – first while serving on the Leadership and Management Committee of the Combined Arms and Services Staff School at the Command and General Staff College and later as the chief of leader development on the Training and Doctrine Command staff. Most of these books were exercises in self-aggrandizement, theoretical and lacking as pragmatic guides to success. A breath of fresh air is the late LTG (U.S. Army retired) Harold G. Moore's and Mike Guardia's book ***Hal Moore on Leadership: Winning When Outgunned and Outmanned***, which is neither boring nor pedantic; rather, it is direct, candidly self-effacing and astute. It captures Moore's development as a leader from his days growing up in rural Kentucky until his retirement from active duty in 1974. It is brilliant in its simplicity, reflecting the man's humility, grace and small-town ethos.

It has been 25 years since the public became familiar with Moore, when Joe Galloway and he wrote ***We Soldiers Once … And Young***. That book and the motion picture are unquestionably the best battle memoirs of the Vietnam War. It was on Landing Zone X-Ray Nov. 11-14, 1965, that Moore – leading the outgunned and outmanned 1st Battalion, 7th Cavalry Regiment – defeated 66th North Vietnamese Regiment. Before and after those three days in the Ia Drang Valley, Moore demonstrated uncommon leadership, moral and physical courage. While the book and film were critically acclaimed, ***Winning When Outgunned and Outmanned*** may be Moore's greatest legacy.

This book was not published during Moore's lifetime. Moore left behind 13,226 words scrawled on yellow legal tablets detailing his development as a leader. His late wife, Julia – who was the only person able read Moore's scribbles – transcribed his draft. With her death in 2004, and Moore and Galloway writing ***We Are Soldiers Still: A Journey Back to the Battlefields of Vietnam*** (the sequel to the first book), ***Winning Outgunned and Outmanned*** became a back-burner project lost in a 20-year-old computer. After thorough vetting by the Moore family, Mike Guardia was chosen to write Moore's biography, ***Hal Moore: A Soldier Once and Always***, published in 2013. For this project, Guardia had unfettered access to Moore's personal papers, speeches and official documents.

Moore's son Steve was able to recover the "bones" of ***Winning Outgunned and Outmanned***; the family engaged Guardia to finish the project. Fortunately for the reader, Guardia – an Army Reserve captain and Armor officer who served on active duty for six

years – understood the art and science of leadership. Guardia, often in Moore's own words, deftly captured Moore's experiences at West Point, on occupation duty in post-war Japan, in combat in Korea and Vietnam, and finally as a senior leader in the post-Vietnam Army during its transition from a conscript to an all-volunteer force.

Over 32 years of active service, Moore developed four principles that shaped his life as a leader, all applicable to today's leaders. Principle 1: "Three strikes and you're not out." Self-confidence is paramount. If a leader thinks he or she may lose, he or she has already lost.

Principle 2: "There's always one more thing you can do to influence any situation in your favor. And after that, there's one more thing." A smart leader has a plan and thinks about the "what ifs" that can derail a plan. Develop a contingency plan that allows for the exploitation of success.

Principle 3: "When nothing is wrong, there's nothing wrong -- ***except*** there's nothing wrong. That's when a leader has to be the most alert." Complacency kills. Leaders are played to create order out of chaos.

Principle 4: "Trust your instincts." Instincts are the sum of one's personality, experience, reading and education. When seconds count and there is no margin for error, instincts and decisiveness are paramount.

These principles form the bedrock of the many maxims and "Moore's observations, lessons learned or relearned" at the end of each chapter that describe a period in Moore's life.

While Guardia masterfully gives tone and context to Moore's draft, his epilogue describing Moore's officer-evaluation reports and the three appendices; Moore's article, "Lieutenant Leadership in Combat"; and his speeches to the National Press Club and Anheuser-Busch distributors are superfluous. A better epilogue would have been one of Moore's speeches to the Army's Command and General Staff College.

If I could keep only one book on leadership, it would be ***Winning Outgunned and Outmanned***.

RETIRED LTC LEE F. KICHEN

Sabers through the Reich: World War II Corps Cavalry from Normandy to the Elbe, William Stuart Nance, Lexington, KY: University Press of Kentucky, 2017, 366 pages, Kindle edition $30.99, hardcover $50.

In his book ***Sabers through the Reich*** Bill Nance sought to fill voids in the historical records of U.S. Army cavalry units in World War II and of the U.S. Army's operational art in the war. He opens his book stating: "Much of what we know about American operational art in the Second World War is incomplete or wrong." Nance succeeds in his well-organized, well-researched and well-written account of this underdeveloped topic. His work will appeal to serious military historians who want to learn about this niche topic, to students of military art and science and to Cavalry and Armor Community members or enthusiasts.

After a brief introduction that brings the reader up to speed on the turbulence in doctrine and structure faced by cavalry organizations in the interwar period, Nance walks his audience through the missions and experiences of the mechanized-cavalry groups (MCGs) as they supported each of the U.S. field armies in the European Theater of Operations. He concludes each section and chapter well by bringing the reader back to common thrust of his book: that corps cavalry organizations served a unique and important role in the Allied attack through France and into Germany in 1944-45. He effectively shows how the various MCGs and their cavalry reconnaissance squadrons served in their expected security and reconnaissance missions. This includes the well-known failure in security of the VIII Corps' 14th MCG in the Ardennes Forest in the opening stages of what would become the Battle of the Bulge and the lesser-known successful reconnaissance role of XX Corps' 3rd (Brave Rifles) MCG in the corps approach to the Seine River in August 1944.

Nance further shows how cavalry units served in economy-of-force roles to allow the corps and field armies to mass on their decisive operations and maintain a coherent front. He explains the importance of this role with consistent explanation of the frontages that the cavalry assumed to allow other combat units to relocate in preparation for an attack. In addition, he describes the nuanced effects of "broad front strategic approach" by laying out the many times the corps and army commanders called on the cavalry to protect the seams among divisions, corps, armies and even army groups.

The book's blow-by-blow account reveals the extensive research Nance conducted to improve the historical record. Apart from adding to an operational history largely established by the U.S. Army Green Book series, he provides context to corps cavalry's performance in the theater. This includes some exoneration of the XII Corps' 2nd (Dragoons) MCG in the Lorraine Campaign in September 1944 and the way some famous events were enabled by cavalry units such as the 6th MCG's actions supporting the relief of Bastogne.

Two factors diminish this otherwise strong work. First, the few maps Nance and his publisher provided were lacking at best. Given the "Xs and Os" nature of the book, this shortcoming is particularly frustrating at times. Readers should consider having complementary maps on hand. Secondly, by the time the reader is following the field armies through Germany, Nance's conclusions can feel rather repetitive.

Sabers through the Reich is a timely work for Cavalry and Armor professionals in a time of transition in the U.S. Army. The tensions in Europe and on the Korean Peninsula demand more study on large-unit employment and its associated challenges. The book also supports our continual realization that we must fight for information more often than not. Nance continually addresses the lack of reliable mounted protection platforms (tanks) and the shortage of dismounts in the cavalry organizations. All these points are also applicable to the security-force advisory units standing up over the next years.

RETIRED COL WILLIAM R. BETSON AND MAJ ANDREW P. BETSON

***(Editor's note: ARMOR** readers may be*

familiar with the author's name: William Stuart Nance is an active-duty Armor officer who has written for ***ARMOR****. He holds a doctorate in history and taught military history at the U.S. Military Academy.)*

The City Becomes A Symbol: The U.S. Army In The Occupation Of Berlin, 1945-1949, William Stivers and Donald Carter, Washington, DC: Center of Military History, U.S. Army, 2017, 346 pages with maps, photographs, footnotes and bibliography, $37.95.

William Stivers, former historian for the U.S. Command in Berlin, teams up with West Point graduate and author Donald A. Carter to examine the U.S. Army's transformation from occupier to protector of Germany's capital city from 1945 to 1949. This focused time period allows the authors to thoroughly examine how the alliance that won World War II suffered irreversible alterations that persist to this day. How did this disintegration begin?

The foundation of a response to that question forms the basis for this study. As the writers proceed, they review the events that shaped the post-war interaction between the Western and Soviet military and diplomatic leaders. They begin by examining a question that stirs academic arguments to this day: whether the Western Allies should have made a determined effort to seize Berlin prior to the Russians. By way of an interesting and compact analysis, the authors conclude that an attempt to seize Berlin ahead of the Russians was far from a pre-determined conclusion. The most capable U.S. military force available for such a forward movement was 2nd Armored Division, which lay some 60-plus miles from the city as the war drew to a conclusion.

A successful attempt by this unit to seize Berlin was highly questionable based on several military and political considerations. A smooth movement to Berlin by 2nd Armored Division assumed that the German military would fully cooperate and not impede either the combat or logistical elements advance to the city. Given the tough fighting taking place on all the battle fronts, this is a highly dubious assumption. Politically, as early as 1944, the Allies agreed to allow the Soviet to take the city and then partition Berlin into four occupation sectors. There was no military or political reason for the Western Allies to engage in fighting for Berlin. As it turned out, the city itself proved to be a tough tactical nut for the Soviets to crack and resulted in their taking a large number of casualties.

As the war ended, the devastation wrought on Berlin from the air and ground created an interruption of normal governmental operations such as water, sewage and postal services. Above all, the shortages of food and medical supplies was exacerbated by the destruction of the transportation infrastructure throughout Europe. Farms were not producing goods, there were no civilian transportation assets to move it, and there were limited passable road and rail systems in operation. To avert a humanitarian crisis, something had to be done and quickly by the victors.

Military commanders from the United States, Great Britain, France and Russia established a commission within the city to avert such a catastrophic event. Despite the lawless actions by all sides against the population of the city, Allied leaders worked in close coordination to re-establish civil law and order, provide housing, move masses of foreign workers and displaced people back to their homelands, repair infrastructure and provide a common food distribution method for the population.

The U.S. was fortunate to have GEN Lucius D. Clay take the lead within Berlin and ultimately be elevated to command of all forces within Europe. This gifted officer appreciated the value of coordinating and cooperating with the other three occupying powers to get Berlin back on its feet. In amazing short order, elections were scheduled and winners assumed responsibility for managing the city under the guise of their respected sector commanders. An air of normalcy began to dawn.

As Germany began to recover, their economic viability became a major goal of the Western Allies. To attain this end, a stable currency was to be established. The Soviets felt that the only currency necessary for the economic future of Germany was one they issued. The other Berlin occupiers took a somewhat different view. Participants in this debate failed to reach a satisfactory compromise, leading the Russians to cut off all food and fuel shipments to Berlin by the Western Allies.

By April 1, 1948, the Soviets blocked all cargo from West Germany to Berlin. By June of that same year, the Western powers' efficient airlift procedure brought food and fuel to Berlin. This impressive effort took place against the background of discussions within the U.S. government on whether or not to stay in Berlin. President Harry S. Truman decided the issue in favor of remaining and strengthening our forces in Berlin. Details of how the airlift began, the food distribution once planes arrived in Berlin, and the impressive command-and-control of the operation form some of the most interesting reading of the book. The blockade ended in May 1949, resulting in a decisive victory for the Western Allies.

The authors should be commended for their superior research and writing skills. This is an impressive book that contains an abundance of supporting data in support of topic development. At times, reading can become somewhat tedious as the authors examine, for example, the development of the currency crisis or the establishment of political parties. However, this should not dissuade one from appreciating the value of this work as an examination of military and diplomatic planning and execution. Maneuver leaders hardened by their experiences in Iraq and Afghanistan will find this work an insightful reference guide for evaluating current and future civil military operations.

RETIRED COL D.J. JUDGE

32ND CAVALRY REGIMENT

The shield is yellow for Cavalry. The "bend raguly" in red symbolizes the cutting firepower of the regiment. This distinctive unit insignia was originally approved for 32nd Armored Regiment Dec. 12, 1941. It was redesignated for 32nd Medium Tank Battalion Oct. 26, 1949; redesignated for 32nd Tank Battalion March 30, 1956; redesignated for 32nd Armor Regiment Aug. 18, 1958; and lastly redesignated for 32nd Cavalry Regiment effective June 28, 2005.

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