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FEATURES

36   BATTALION CALFEX AT JRTC

MAJ Ryan J. Scott

In 1996, after only three years in operation, the Joint Readiness Training Center (JRTC) at Fort Polk, La., opened Peason Ridge for live-fire training. At the time, the focus of combined arms live-fire exercises (CALFEXs) was on the platoon and company levels. After a decade of focusing on counterinsurgency and full spectrum operations, JRTC shifted its focus. In 2012, the implementation of unified land operations in a decisive action training environment (DATE) began with Rotation 13-01. Since then, DATE scenarios have become common place at JRTC. And with this change comes the return of the CALFEX. However, this is not the CALFEX of the 1990s.

42   BCT WALK AND SHOOT: TRAINING TACTICAL LEADERS ON SETTING CONDITIONS TO ACHIEVE COMBINED ARMS MANEUVER

MAJ Daniel Ciccarelli
LTC Charles Kean
COL Brett Sylvia

In February 2016, the 2nd Brigade Combat Team (BCT), 101st Airborne Division (Air Assault) executed a redesigned walk and shoot tactical exercise without troops (TEWT) with the objective of training company and platoon leadership in the art and science of employing both indirect and direct fires, multiple enablers, and maneuver elements to achieve synchronized combined arms maneuver. Such training is invaluable to our company leaders as they prepare to lead their formations in company combined arms live-fire exercises (CALFEXs) and should be built into the standard training progressions for maneuver leaders and units.

COMMANDANT'S NOTE

Check out the U.S. Army Infantry School website at:

http://www.benning.army.mil/Infantry/

Facebook:
https://www.facebook.com/USArmyInfantrySchoolFt.BenningGA/

OTHER DEPARTMENTS

ON THE COVER:

Paratroopers assigned to Baker Company, 3rd Battalion, 509th Parachute Infantry Regiment, 4th Infantry Brigade Combat Team (Airborne) 25th Infantry Division, U.S. Army Alaska, fire the Carl Gustaf recoilless rifle system at Joint Base Elmendorf-Richardson, Alaska, on 1 November 2016. (U.S. Air Force photo by Alejandro Pena)

BACK COVER:

A Soldier with Able Company, 2nd Battalion, 503rd Infantry Regiment (Airborne), 173rd Infantry Brigade Combat (Airborne), scans his sectors of fire on 22 October 2016 during Exercise Strong Shield. Paratroopers from Able Company are in Lithuania training with their Lithuanian partners as part of Atlantic Resolve. (Photo by SSG Corinna Baltos)

Commandant's Note

BG PETER L. JONES

A Tenacious Mindset
Our Key to Victory

The threats we face today have demonstrated an ability to learn, adapt, and transform. Whether these security challenges are posed by such nation states as Russia, China, North Korea, and Iran or by violent extremist organizations like ISIS, they require Infantry leaders who are not only tactically and technically proficient, but who are also tenacious in character and mindset.

Nowhere has the dogged tenacity of the American Infantryman been better exemplified than during the bitter fighting in Vietnam's Ia Drang Valley from 14-16 November 1965, when then LTC Harold G. Moore Jr., CSM Basil Plumley, and the Soldiers of the 1st Battalion, 7th Cavalry, 1st Cavalry Division (Airmobile) fought vastly outnumbered in the first major battle between U.S. and People's Army of Vietnam (PAVN) forces. Facing hundreds of enemy determined to overrun his outnumbered unit by ground assaults, LTC Moore and his troops fought relentlessly from hastily prepared positions on bullet-swept hillsides and in sparse vegetation over a period of three days. At the end of the bloodbath the enemy withdrew, leaving over 600 of his dead in and around the 7th Cavalry's positions and taking with them the knowledge that their new American enemy was a tenacious, battle-proven adversary who was prepared to fight and win.

While the battle for LZ X-Ray raged in the Central Highlands of Vietnam, the seeds of victory were sown in the red clay soil of Fort Benning. LTC Moore's emphasis on Soldier and leader tactical and technical proficiency through rigorous training is what enabled the victory. The results of this tough training and leadership philosophy were demonstrated by the actions of such warriors as then CPT Tony Nadal who moved his company to the sounds of the guns; 2LT Joe Marm who single-handedly attacked an enemy position, suffering severe wounds in the process; and SGT Ernie Savage who assumed the mantle of combat leadership of the "Lost Platoon," calling for supporting artillery fire within 50 meters of his location and stifling a number of attacks throughout his platoon's isolation. This mental tenacity was not born but bred under the leadership of LTC Moore and CSM Plumley who instilled in their troopers the "will to win" and the mental resiliency of "three strikes and you're not out!" Today's leaders must possess this self-confidence and mental tenacity that allows them to take on any challenge while leading from the front.

There can be no other way, and as in the past our Army must be ready now to face the challenges of close combat and win! That is our key to victory!!

One Force, One Fight! Follow Me!
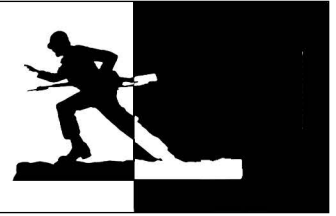
FIRST STRYKER VEHICLE PROTOTYPE WITH 30MM CANNON DELIVERED TO ARMY

DAVID VERGUN

The first prototype Stryker Infantry Carrier Vehicle outfitted with a 30mm cannon was delivered to the Army on 27 October.

The upgraded Stryker vehicle will be known as the Dragoon. The prototype also features a new fully-integrated commander's station, upgraded driveline componentry, and hull modifications, according to a press release from Program Executive Office Ground Combat Systems (PEO GCS).

"It's important to realize the genesis of this event," said Army Vice Chief of Staff GEN Daniel B. Allyn, speaking at the General Dynamics Land Systems Maneuver Collaboration Center in Sterling Heights, Mich.

Following the 2015 Russian invasion of Ukraine, Army leaders in Europe "identified a capability gap that threatened our forces in theater," Allyn explained. "The Russians, it turns out, had upgraded and fielded significant capabilities while we were engaged in Iraq and Afghanistan."

Army leaders recognized that existing Stryker weaponry placed U.S. forces at "unacceptable risk," he said.

The Urgent Operational Needs statement submitted in March 2015 resulted in a directed Stryker lethality requirement, one that included an accelerated acquisition effort to integrate the 30mm cannon on the vehicles, he said.

Fielding to the 2nd Cavalry Regiment in Europe will begin in May 2018, which represents "a near-record time from concept to delivery," according to Allyn.

"This is an example of what is possible when government, military, and industry leaders unite as one team," he continued, describing the collaboration between General Dynamics Land Systems and PEO GCS.

The goal, he noted, was to offer forces on the ground the best equipment and protection possible.

"It's all about the people on the ground, serving and sacrificing on our behalf, each and every day, around the globe," he said.

(*David Vergun writes for the Army News Service.*)

Photo courtesy of PEO GCS

Tactical ROE Management during Unified Land Operations

MAJ PATRICK L. BRYAN

After years of conflict in Afghanistan and Iraq, many Soldiers view rules of engagement (ROE) as static or otherwise slow and averse to change. During the Global War on Terrorism (GWOT), a unit could enter a theater of operations for a particular mission and reasonably expect that the ROE would be the same as when it left. ROE training, therefore, was more easily conducted at home station and during mission rehearsal exercises (MREs) at Army Combat Training Centers (CTCs) because it was predetermined and mature.

However, the United States and its multinational partners are increasingly focusing their efforts on an uncertain future against uncertain enemies. Consequently, the CTCs are designing decisive action training environments (DATEs) that offer realistic challenges designed to exercise brigade- and battalion-level

Photo by SPC Shardesia Washington

U.S. and Italian soldiers brief each other before conducting a dismounted patrol during Swift Response 15 at the Joint Multinational Readiness Center in Germany on 26 August 2015.

command and staff functions that have atrophied over the last decade, including ROE management.[1]

The ROE encountered in a new environment are often complex and dynamic. At the beginning of hostilities, the pre-planned ROE are based on considerations such as international agreements, interpretations among multinational partners regarding international law and the Law of Armed Conflict, target identification, etc. A higher headquarters will change the ROE often as its situational understanding develops. Likewise, commanders might find themselves in command of a force that itself has multiple sets of ROE it must adhere to, and the hierarchy of which ROE set should be followed is sometimes unclear.

Regardless of the complexities, commanders at every level have a responsibility to understand and drive the ROE to accomplish their mission or tasks. If the ROE are too restrictive for the mission or task, then the commander

must seek to adjust them. If the ROE cannot be changed, then it is up to the commander to revise the scope of the mission or tasks. Thus, ROE management at every level of command has two elements, neither more important than the other: ROE tracking and ROE development.

ROE Tracking

Commanders on the ground must understand the ROE thoroughly so they can provide guidance to shape the battlefield according to their vision. This requires the staff to do more than just receive the mission, find the appropriate ROE annex, republish the annex, brief it, and wait for the next ROE message. Of course, that is all part of it, but the ROE must be placed into the context in which a unit will be operating — within an area of operations, area of influence, and area of interest. The process requires a thorough understanding of the enemy and the operational environment so that the ROE can be appropriately applied. As Army Doctrine Reference

Publication (ADRP) 3-37, *Protection*, points out, "a [unit's] failure to understand and comply with established rules of engagement can result in fratricide, mission failure, or national embarrassment."[2]

As long as somebody is actively looking for them, ROE changes from higher headquarters are relatively easy to track. The difficulty is organizing and disseminating that information across the formation in a timely manner so that the Soldiers at the lowest levels know it and understand it. For this reason, it is vital that training includes changes to ROE that accurately reflect the dynamic nature of unified land operations.

Even more complicated are situations wherein multiple ROE (or restrictions to existing ROE) apply during the same operation. These situations most often occur when:

- There is a shift in the relative weight given offensive, defensive, and stability tasks during unified land operations.
- There are multiple, distinct enemies.
- Unique missions or tasks — under separate authority — have been assigned to the unit.
- A coalition partner must adhere to a national caveat or other restriction more restrictive than the published ROE.

Consider the situation that occurred during Exercise Swift Response 15, a Joint Multinational Readiness Center (JMRC) rotational training exercise that partially took place in Hohenfels, Germany. A U.S.-led multinational brigade-sized task force conducted a joint force entry and lodgment operation in a semi-permissive environment against "separatist" elements from the host nation's army. Simultaneously, another potential adversary crossed the international border under completely different auspices, violating the territorial integrity of the host nation. A United Nations Security Council Resolution authorized force against both adversaries, and both adversaries were declared hostile by a competent higher headquarters.[3]

In this unique but very realistic scenario, force was authorized against two declared hostile forces. However, since the composition of one force included citizens from the host country (a non-international armed-conflict) and the composition of the other was opposing state actors (an international armed conflict), the military, political, and legal considerations regarding each drove two differing ROE sets. Fortunately, the unit only faced the former (but the latter certainly existed within the unit's areas of interest and influence).

Regardless, the former was not without complications. The enemy were local separatists who, until recently, were still part of the larger host nation's army.

As a result, the unit faced an enemy that was wearing the same uniforms and driving the same vehicles as its host nation allies. Of course, this sort of problem can be mitigated in several ways, but in the absence of time, the commander issued very detailed guidance. Specifically, he directed that deadly force would only be used by his forces against an enemy who was wearing the right gear/driving the right equipment (i.e. "positively identified") and who demonstrated hostile intent.[4] In other words, because positive identification was alone insufficient to identify the enemy, he provided guidance on the use of force.[5]

Later, the same unit conducted a noncombatant evacuation operation (NEO), which came with completely different ROE that were driven substantially by the U.S. Department of State.[6] In summary, this five-day exercise had multiple missions with at least three different ROE sets that the brigade headquarters had to track, one of which required significant commander's guidance to ensure subordinates understood the ROE distinctions. At the same time, some subordinate multinational units were restricted by national caveats.[7] For example, some could not employ mines of any type during offensive operations due to treaty obligations, which was more restrictive than the published ROE.

Regardless of the situation, commanders, through the collaborative efforts of their entire staff, must account for the ROE. Effective ROE tracking during the operations process allows commanders to better understand the overall situation. As a result, they will be able to better visualize, describe, and direct operations. Among other things, they will be better able to organize and array their forces to best accomplish the mission. To the extent the ROE limit their ability to accomplish the mission, they (and their staffs) must develop the ROE.

ROE Development

ROE should never be too restrictive for the task at hand. If there is a term in the ROE that is excessively restrictive or

Soldiers with the 1st Brigade Combat Team, 82nd Airborne Division conduct an operation brief as part of exercise Swift Response 15 at JMRC on 29 August 2015.

Photo by SPC Justin De Hoyos

Soldiers with the 2nd Battalion, 501st Parachute Infantry Regiment, 82nd Airborne Division, conduct a mission analysis brief during Swift Response 15 on 29 August 2015.

a common ROE template for the full range of operations, provide such language.[10] The SROE also provide general guidelines on ROE development. The JMRC's ROE do the same: "The policies and procedures in this instruction are in effect until rescinded. Supplemental measures may be requested to augment these ROE. No supplemental measures allowing more permissive ROE will be implemented without prior ROEREQ (ROE request) and ROEAUTH (ROE authorization) of such measures. All supplemental measures will be immediately reported through the chain of command."

The bottom line is that ROE are flexible, and commanders at every level should seek to develop them to best accomplish their mission in a dynamic operational environment.

ROE Management Recommendations

ambiguous considering the current situation — and therefore negatively affecting operations — it needs to change. If the ROE cannot be changed (for myriad reasons), commanders and their associated staffs must examine the scope of the military action anticipated and refine it appropriately. Even if the authority to change the ROE remains at a higher level of command, the staff should provide a refined product to the higher headquarters. In other words, take the guesswork out of it for the higher headquarters by making it part of the planning process. Because ROE do not need to be static, ROE development should be part of the detailed planning process at every level, and resources should be dedicated to ensuring that an operation has the most ideal ROE set under the circumstances.

Many factors drive a particular operation's ROE, including customary and treaty law, policy objectives, and mission limitations.[8] But ROE are commanders' tools for regulating the use of force, and as such are necessarily flexible.[9] Tactical-level commanders and their staffs — the ones who can see the adversary and therefore have unique situational understanding — provide substantial input to shape future ROE (through input from all warfighting function representatives). Effective ROE management includes the application of critical thinking to determine whether the ROE "work" for the task at hand. That includes analysis of not just whether it is unduly restrictive, but also whether it is unnecessarily permissive considering the situation. In other words, commanders are not letting the ROE define their left and right limits; they are developing their own left and right limits and using the ROE as their tool to do so.

Usually, published ROE from higher headquarters will contain provisions on how commanders may augment, refine, or restrict the terms of the current ROE. Even the U.S. Standing Rules of Engagement (SROE), which provide

* Assign a staff member to be the ROE manager. The judge advocate/legal advisor is a logical choice, but it does not have to be, especially since not all staffs include a legal advisor (e.g., many multinational forces, battalion staffs). The bottom line is that it should be a staff member who has broad situational understanding and grasps the commander's intent.

* Post the ROE in the tactical operations center and brief them often. The brief should be concise and understandable and should highlight whatever specifics the commander deems most important. At a minimum, it should state who can be engaged, how to identify who can be engaged, and how they can be engaged. This is particularly important in the beginning of hostilities when the ROE are in a constant state of flux but remain necessary throughout the missions (especially when ROE changes are implemented).

* Consider an ROE working group. Again, ROE development requires deliberative planning. The ROE working group provides the collaborative process necessary to maximize the effectiveness of future ROE. At a minimum, the working group should be chaired by the ROE manager and should, at a minimum, include maneuver, fires, and intelligence planners.

* Focus ROE training on the dynamic nature of ROE. Training should include changes to ROE to reflect the dynamic nature of a new battlefield. Likewise, it should include scenarios where multiple ROE are in effect for different subordinate units.

* A caveat regarding ROE cards: In dynamic operational environments, commanders — particularly those commanding multinational forces — should resist the temptation to issue ROE cards to the force. Consider the potential for confusion when the ROE change or a portion of a task force operates on slightly different ROE based on a unique authority or task sometime during a deployment. There will be problems

with policing up the old cards, making sure everybody's got the new ones, making sure they all actually understand the changes, etc. Rather, make sure Soldiers actually understand the current ROE, and more importantly, understand that it could change at any given moment. The training objective should be to react and adapt to the change effectively.

Conclusion

Unified land operations are complex. Because commanders are faced with conducting offensive, defensive, and stability tasks simultaneously — and increasingly as part of a multinational effort — the ROE with regard to each operation become more important, and any shortcomings could have tactical, operational, and even strategic consequences. Commanders must be fully aware of the myriad ROE and caveats present in each mission and ready to adjust accordingly based on their understanding of the operating environment. In short, they need an effective ROE management plan that includes ROE tracking and ROE development.

Notes

[1] ROE management is not a doctrinal term, but rather the author's concept of how ROE should nest within Army doctrine, specifically Army Doctrine Publication (ADP) 3-0, *Unified Land Operations* (October 2011), and ADP 5-0, *The Operations Process* (May 2012).

[2] Army Doctrine Reference Publication (ADRP) 3-37, *Protection* (August 2012) paragraph 3-37.

[3] A "declared hostile force" is "[a]ny civilian, paramilitary, or military force or terrorist that has been declared hostile by appropriate U.S. authority. Once a force is declared 'hostile,' U.S. units may engage that force without observing a hostile act or demonstration of hostile intent; i.e., the basis for engagement shifts from conduct to status. Once a force or individual is identified as a declared hostile force, the force or individual may be engaged, unless surrendering or hors de combat due to sickness or wounds. The authority to declare a force hostile is limited, and may be found at Appendix A to Enclosure A, paragraph 3 of the SROE." *Operational Law Handbook 2015*, Judge Advocate General's Legal Center and School, Charlottesville, Va., 22903, page 83.

[4] Hostile act/hostile intent is ordinarily a self-defense concept but worked perfectly in this situation.

[5] Note that this was not a change to the ROE; most ROE — including the U.S. SROE — will use language that units may engage an enemy that has been declared hostile, not that it must.

[6] Although this was a NEO of U.S. governmental personnel, North Atlantic Treaty Organization and other NEOs will always be driven by the particular state requesting the NEO.

[7] The origin of national caveats and how they would play into an operation is beyond the scope of this article. For a good discussion on caveats, see "Multinational Rules of Engagement: Caveats and Friction," by MAJ Winston Williams, *The Army Lawyer*, (January 2013).

[8] The Chairman of the Joint Chiefs of Staff Instruction (CJCSI) 3121.01B, *Standing Rules of Engagement (SROE)/Standing Rules for the Use of Force (SRUF)*, 13 June 2005. The SROE give U.S. forces a starting point for ROE during every operation. However, it is supplemented depending on various factors, including those discussed in this article.

[9] Ibid, enclosure I, paragraph 3.a.

[10] Ibid, paragraph 6b(2) – 8d and enclosure I.

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Soldiers with the 2nd Battalion, 501st Parachute Infantry Regiment, 82nd Airborne Division, provide security during exercise Swift Response 15 on 29 August 2015.

Photo by SPC Justin De Hoyos

Integrating Cognitive Training for Performance Optimization

MAJ THOMAS A. WHITEHEAD
CPT ANDREW J. VOGEL
CPT JARED D. WIGTON

Leaders at all levels now face a dynamic environment where they cannot plan for every contingency, and the enemy is as fluid and reactive as a social-media newsfeed. With that in mind, the ability of Soldiers and leaders to focus their minds and make coherent decisions has never been more relevant or necessary for our military force on the battlefield and during training.

In the 2nd Battalion, 504th Parachute Infantry Regiment (PIR) (White Devils), we recently explored a training approach designed to maximize human performance by helping our paratroopers understand when they are in a "coherent" state. Our aim was to ensure they knew the difference between being in a coherent or incoherent state, showing them how that knowledge correlates to their ability to accomplish individual tasks from the Paratrooper Essential Task List (PETL).[1] We believe this training approach will benefit all Army leaders, who should deliberately incorporate human-performance experts into all mission essential task list (METL)-focused training.

During the past seven months, our battalion integrated performance experts from the Comprehensive Soldier and Family Fitness (CSF2) team into three initial focus areas: airborne, marksmanship, and leader training. Though not yet quantifiable, this threefold initiative demonstrated tremendous benefits to adding deliberate mental training to improve our paratroopers' confidence and lethality. It proved that deliberate mental training can maximize human performance. Moreover, the method we used explored the science of sports psychology, proven on the fields of professional and collegiate teams, to bridge the gap between mental coherence and physical performance.

In the resource-constrained environment, this approach didn't add to existing training plans; it simply substantiated techniques previously honed during decades of military experience by NCOs and senior leaders that were previously unintelligible to new Soldiers. The result was new warriors who could make clearer decisions and precisely control physical actions in a complex environment.

Background

Improvements in technology and techniques during the last few years have significantly shifted the focus for performance in an airborne unit. Paratroopers exiting an aircraft 1,000 feet above a drop zone can no longer simply rely on "keeping their feet and knees together" because seemingly innocuous errors during the first three points of performance could cost them their lives or the lives of fellow paratroopers. Likewise, snipers who once were consigned to a novel supplementary mission now bear the weight of strategic relevance with each trigger squeeze.

Gone are the days when commanders bore the sole responsibility of decision making. Training must now apply these mental-concentration skills at all levels so that Soldiers can make the right decisions in the violence of a propeller blast, the tension of a hide site, or the chaos of a battlefield.

What was needed was a way to use existing resources found within the CSF2 program to maximize

Photos courtesy of authors

Soldiers from the 2nd Battalion, 504th Parachute Infantry Regiment integrate cognitive training into marksmanship training.

performance through enhanced mental concentration. Rather than just relying on physical repetition, we needed a way to promote individual engagement with every training situation.

Recommendation

The way ahead begins by understanding the approach we used. Recognizing the potential behind performance science and applying the expertise of performance experts needs to be a deliberate effort by leaders. Since this method simply augments existing training events, executing this approach becomes nearly transparent. The next step dedicates performance experts at the battalion level to coach, assess, and reinforce coherence training using common biometric technology and quantifiable analysis. Finally, individual paratroopers will overcome the cognitive doldrums that restrain them to leverage the capabilities of consciousness and achieve optimal performance.

Leveraging Maximum Capability

Paratroopers stand inside the mock-up of a C-130 Hercules aircraft, grasping the yellow static line in their fists, waiting for the command to "go." As they walk toward the door, hundreds of tasks circle through their minds: spacing between the jumpers to their front, covering the rip-cord handle of their reserve parachute, keeping a steady pace toward the door, and so on. When their turn to execute proper exiting procedures arrives, the paratroopers hand the static line to the safety, making eye-to-eye contact, turn toward the paratrooper door and jump. They snap into a good tight body position just as the "black hat" instructors taught them at Airborne School. After a six-second count, they confidently reach their arms into the air to simulate controlling the parachute canopy, certain they performed the task flawlessly.

The jumpmaster then calls some of them back to explain they did not fully turn 90 degrees into the paratrooper door, causing them to exit at a dangerously wide angle. The jumpmaster has the paratroopers repeat the drill until success is achieved. However, this common retraining approach may not fully address the gaps in physical performance when executing in real-time conditions.

Training a Soldier to perform specific tasks under conditions that are both cognitively and physically demanding is a common Army approach within the "train as we fight" mindset. This approach typically allows leaders and Soldiers to achieve a level of confidence that each Soldier trained is an expert at what he or she does and that the unit can accomplish its mission. It is when a Soldier fails to execute mastered tasks to prescribed standards that leaders are faced with a unique training opportunity to truly increase their level of proficiency.

Often, a leader's approach is to ask, "Why did you do that? You know how to do this; I have seen you do it correctly." When the response from the Soldier is "I don't know," he or she then physically repeats the training until the task standards are met.

However, getting that Soldier to understand why he/she failed the task physically — and not just retraining the task

Training a Soldier to perform specific tasks under conditions that are both cognitively and physically demanding is a common Army approach within the "train as we fight" mindset... It is when a Soldier fails to execute mastered tasks to prescribed standards that leaders are faced with a unique training opportunity to truly increase their level of proficiency.

— may prevent failure from happening in the future. This is not an institutionally intuitive approach. Seasoned leaders often forget their anxiety levels are reduced based on their experience level, which allows them to focus, gaining and maintaining an optimal state of coherence. Coherence is what happens when experienced leaders achieve a state of concentration in which they can think clearly, understand their environment, recall their training, and apply their mind to executing a physical task. This balanced application of cognitive and physical ability stands in sharp contrast to the response of the Soldier described in the previous scenario who simply didn't know what happened, functioning in an incoherent state.

Therefore, training must be about leveraging maximum physical and mental capability to achieve optimal performance potential every time and in any condition. The ultimate goal to addressing the cognitive component into our training is to prevent any paratrooper from saying, "I don't know why I did that."[2]

Airborne Initiative

For years, with use of the T-10 parachute, leaders emphasized keeping your feet and knees together to prevent serious injury during an airborne operation. This applies to the final steps of the "five points of performance," when the paratrooper makes contact with the ground.

Recently, technological innovation with the T-11 advanced tactical parachute system has significantly decreased the average rate of descent and the likelihood of injury during this time, but it has also increased the importance of properly executing the first three points of performance. The introduction of pre-mock door training and many revisions of pre-jump enables leaders to ensure proper repetitive training and that paratroopers conduct adequate rehearsals during sustained airborne training to achieve task mastery prior to an actual jump. Reduction of the weight in the paratrooper's load during airborne operations and enhanced physical fitness training initiatives are additional ongoing efforts to help the paratrooper execute the first three points of performance.[3]

Our training approach took into consideration all these initiatives and attempted to add in the understanding of the cognitive burden on the paratrooper's physical performance. We composed a test group of 25 paratroopers with varied

A 2-504 PIR sniper incorporates cognitive-domain training into marksmanship, focusing on coherence.

airborne experience, ranging from recent graduates of Airborne School to master-rated jumpmasters. The group had one classroom session about two hours long about various techniques to enhance coherence during an airborne operation. The session focused on the start of the airborne timeline through landing on the drop zone.

Civilian performance experts from the CSF2 program initially taught the techniques. These techniques included mental imagery, breathing exercises, and cue words to return to an optimal state of coherence.

The company first sergeant then led the test group in several mock-door rehearsals, mainly tied to physical training, twice a week for about four weeks. During this mock-door training, paratroopers deliberately conducted mental imagery where they would conduct a cognitive rehearsal of each task from those in the aircraft through landing. The mental-imagery technique allowed paratroopers to focus their minds on each task, preventing them from allowing their minds to wander or increase their anxiety.

Next, they received instructions to practice diaphragmatic breathing to prevent them from raising their shoulders, which bear most of the additional weight. This breathing technique maximizes the amount of oxygen in the bloodstream and is a method to interrupt the "fight or flight" response and trigger the body's normal relaxation response. By doing this, paratroopers were empowered to further focus and continue their mental rehearsals.

During the last step, paratroopers used "word cueing" to help them remain in a focused state during execution of each task rather than solely relying on muscle memory to accomplish them. The use of word cueing during execution is an effective method to help paratroopers coherently execute each task. More importantly, it helps them identify potential performance errors so they can fix them.

The results of this training were not quantifiable due to the lack of technology being readily available to provide feedback to paratroopers who employed these techniques during both training and actual airborne operations. However, we did find that participating senior NCOs who were seasoned parachutists reported they already unintentionally applied several of these techniques. Our findings during this training were that we had bridged the gap of experience between new and senior parachutists in a shorter period. This happened through the teaching techniques that our senior NCOs had intuitively employed and learned on their own during the course of their careers.

Marksmanship Initiative

We leveraged the same performance experts (Dr. Katy Turner and Brian Wade) that we used during the airborne initiative to enhance the precision and lethality of our battalion snipers. Our approach to cognitive training for shooting was to integrate the performance experts into the battalion sniper training without adding time or interrupting the training schedule. We also knew that a test group comprised of all our battalion snipers had received training through the Army Sniper Course or from someone who had graduated the course. Therefore, our assumption was that they would not be naturally open to take advice from civilian performance experts with limited marksmanship training.

With that in mind, our performance experts had to build a relationship with the snipers for their feedback to be effective. They only worked with the snipers on the ranges while they were shooting. They were able to provide instant feedback on the snipers' ability to hit the target based on their level of coherence. Over multiple sessions, the performance experts were able to introduce the same techniques used in the airborne initiative to improve overall performance for the group of snipers.

The result was immediate and quantifiable for the snipers based on the use of combined factors: monitoring heart rates via an electronic tablet while shooting, the accuracy of the shooting, and performance observations by the experts. After a couple iterations that incorporated the techniques, our snipers could articulate their cognitive state and personal coherence with each shot taken.

Junior snipers now understood when and why they should not have taken a shot in haste; something briefly caused them to lose focus, and they had not regained a coherent state before pulling the trigger. What we learned from this was that this focus on the cognitive aspect of training transcends shooting and, over time, it will accelerate the snipers' ability to make clear concise decisions and judgments in a complex environment.[4]

Leader Initiative

The final White Devil initiative was the integration of performance experts into a rifle company, with a focus on developing leaders. In June 2015, we first had the opportunity to integrate Turner and Wade into collective training at Range 74 with Alpha Company.

The team came out and watched fire teams execute drills on entering and clearing a room. The initial reaction, especially from the senior NCOs of the company, was wary skepticism — about the value of the skills presented by the performance experts and the potential cost in valuable training time. Fortunately, Turner and Wade went to great lengths to ensure they came alongside our training instead of pulling leaders away for an entirely separate event. During the course of several weeks of intense training, the two performance experts gained the trust of the Alpha Company team by integrating into the training progression for platoon external evaluations (EXEVALs) in August 2015. They ate Meals Ready to Eat (MREs), stayed out in the rain, and walked every iteration of the squad live-fire exercises at West McKiethan Pond. The only cost to the unit in terms of training time was the five minutes they took at every after action review to coach squad leaders on coherence, visualization, and breathing techniques.

During platoon EXEVALs, it was evident the training had paid off. The platoons from Alpha Company were incredibly successful, and the mantra of the senior NCOs of the company changed from "I don't buy that performance stuff" to "they're just coaching us on what we already do." This is the crux of mental-performance training: the most successful leaders in our organization already use these skills that were developed during years of experience in training and combat deployments. Once again, this approach to training allowed us to bridge the time gap between experienced leaders and paratroopers while passing these critical skills on to the next generation.

The overall result of this training was improved mentoring by our leaders. Not only did they maintain the level of professionalism as they instructed a task to mastery level, they also were able to identify when a paratrooper's anxiety or excitement level was going to hinder successful accomplishment of the collective task. The leader could then move to that paratrooper and coach him or her back into a state of coherence and cognitive focus. A side benefit of this training was that it also developed leaders' decision-making skills and confidence in leading.

Conclusion

We found the incorporation of the performance experts into our training was beneficial at the individual Soldier and leader levels. Unfortunately, with the focus on Department of the Army requirements, our performance experts are routinely required to pull away from our training to conduct Army Regulation 350-1-required master resiliency training courses as well as unit training. Having the performance experts routinely pulled for other training does not maximize their potential.

What do we need? We recommend the number of performance experts be increased to no fewer than two per brigade combat team (BCT), and leaders should deliberately incorporate them into all METL-focused training. Also, we need to increase our performance experts' technological capability to enable them with the tools to provide quantitative feedback and training enhancement.

The ultimate goal of incorporating the cognitive-domain focus into our training is to prevent Soldiers from saying "I don't know why I did that" when they make a mistake. Helping them understand why they made a mistake increases their speed of learning and their mastery of tasks. The NCOs of our battalion are masters at training competence. We now need the expertise provided by the performance experts to train coherence to simultaneously improve the performance of our paratroopers.

Notes

[1] The PETL is leader development, physical and mental readiness, small-unit battle drills, airborne proficiency, weapons proficiency, and medical-skills proficiency, according to 82nd Airborne Division Pamphlet 600-2, *The All American Standard* (January 2015).

[2] "The cognitive component refers to the mental activity pertaining to the act or process of perception, memory, judgment and reasoning." — U.S. Army Training and Doctrine Command (TRADOC) Pamphlet 525-3-7, *The U.S. Army Human Dimension Concept* (May 2014).

[3] "Developing holistic health and fitness for members of the Army profession requires that the Army clearly define fitness; determine how it assesses individual and unit measures; develop monitoring strategies to detect and prevent decreases in physical performance; identify how to apply requirements to all members; identify training requirements; and identify the desired endstate." – TRADOC Pamphlet 525-3-7.

[4] A complex environment consists of many autonomous factors that link together through diverse, interrelated and interdependent connections. Leaders cannot contain or reduce such an environment into a single rule or description, as it is intrinsically unpredictable.

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THE STRATEGIC LIEUTENANT

1LT MARIBEL R. BROWN

On my first day representing the 173rd Airborne Brigade as the Operation Atlantic Resolve liaison officer to the U.S. Embassy in Riga, Latvia, I put on a fresh uniform, cleaned my boots, and ensured my hair was within regulation. When I met the outgoing chief of the Office of Defense Cooperation (ODC), I confidently shook his hand and looked him the eye. He looked at my uniform, grinned, and exclaimed, "They sent me a second lieutenant?! Is that all they had?!" My heart sunk. I knew the importance of first impressions and I thought I had ruined mine based on something I could not change — my rank as a junior officer operating amongst more senior grades. This encounter ensured I felt the true gravity of the fact that I represented my entire organization. The next five months would reinforce this lesson and teach me that, rank immaterial, professional relationships are the cornerstone of liaison operations.

The other LNOs from my unit in Estonia, Lithuania, Poland, and Germany were all lieutenants as well. In our discussions following our redeployment from Atlantic Resolve, we all kept coming back to the same after actions review (AAR) comment: it was impossible to get anything done without an extensive point-of-contact roster. 1LT Sergio Rolon, a heavy weapons platoon leader who served as the LNO in Poland, stated that "success as an LNO is primarily based on how many people you know that are willing to engage more important people on your behalf."

While planning a 9/11 Remembrance ceremony, the bureaucratic red-tape procedure for getting the U.S. Ambassador to Latvia, Nancy Bikoff Pettit, to ride on a Black Hawk helicopter was hindering progress. When I kept running into roadblocks, I engaged the new ODC chief. While he likely had his own perceptions about my level of experience early on, our working relationship had shown him that I was a reliable problem solver. If I was going to him for help, it would signal to him that I had exhausted my resources. After discussing the issue with him, I presented him a course of action that would quickly solve the problem. He agreed and called a general officer whom he knew personally. By the next day, I had received signed memorandums approving the ambassador to ride in the aircraft, which was a first-time experience for her that she told me she would never forget. Ambassador Pettit noted that the military base had "come to symbolize one of our greatest bilateral successes in the region and being on base... was a perfect way to showcase this superb cooperation."

The ceremony itself was also a success. It took place at a Latvian military base and involved not only the American paratroopers from the 1st Battalion, 503rd Infantry Regiment, but also Latvian, German, and Danish soldiers. The strategic message sent by this ceremony was one of unity amongst allies who have fought and died together in past wars.

Representing the heavy weapons company at Tapa Training Area, 1LT Connor Arbiter served as the LNO in Estonia. Like the other LNOs, his largest stressor was movement of personnel, weapons, and equipment. While operating in Eastern Europe, the 173rd Airborne Brigade built interior lines of communication and displayed our freedom of maneuver by transporting paratroopers, weapons, and equipment through multiple borders. The battalion logistics section and the 21st Theater Support Command Movement Control Team worked tirelessly to make movements as smooth as possible.

Differing timelines in the many countries along with mission-dictated changes left the unit scrambling at times to make small miracles happen. In some cases, the only thing that ensured these movements happened in Estonia was Arbiter asking a personal favor from his contacts at the National Movement Control Center.

The LNO to the U.S. 4th Infantry Division Mission Command Element in Germany, 1LT Christopher Bolin, identified the following as a friction point. "When we do not respect their timelines, we may damage our relationship with the host nation agencies over time, which may limit our freedom of maneuver along interior lines in the future." As a junior officer, he understood the strategic implications and elevated his concerns to the command team in order to improve our planning processes and identify requirements earlier. This, in turn, will preserve the relationships we have been working so hard to build.

Currently a company executive officer, 1LT Devin Hamilton recently completed his time as the LNO to Lithuania. His involvement in Baltic Push, a multinational logistical movement, is proof of the strategic impact a lieutenant can have. The intent of Baltic Push was to assess the concept of a Joint Baltic Movement Control Cell coordinating freedom of movement within Atlantic Resolve North and to assess the interoperability of allied logistical doctrine and equipment.

As a result, the 1st Battalion's Forward Support Company was able to do something historical: conduct a border-crossing convoy using a single permit to deploy. No stranger to

assisting in historical firsts, Hamilton was also instrumental in securing the use of the Lithuanian presidential C-27 Spartan aircraft for the scout platoon to conduct an airborne operation into Exercise Iron Sword, leveraging the professional relationship he had cultivated with the Lithuanian Land Forces commander, who then worked on our behalf to coordinate for use of the aircraft.

In addition to transportation, one of the other main tasks LNOs undertake is escorting visitors who would come to the country in order to engage Atlantic Resolve Soldiers specifically. Some were visiting the countries for other political or economic reasons. In these cases, the visiting Congressional delegation or flag officer would only interact with a small fraction of Atlantic Resolve: the lieutenant serving as LNO.

This was the visitor's only glimpse into the operation on the ground and, for some, was their first time hearing about the specifics. Each LNO clearly represented the brigade and Atlantic Resolve very well — each report that came back to the unit was positive. People from all walks of life were thoroughly impressed with the lieutenants who showed up to work at an American embassy, a foreign ministry of defense, or an allied land forces headquarters, and embodied the ideals of professionalism and dedication. Some of the civilians the LNOs worked with had very little experience working with the military. Often, they were off put by past negative experiences. The competency my peers showed prevailed in single-handedly changing these people's perception of what the military can and should be.

The LNO Smart Card created by the Training Analysis Feedback Team out of Fort Leavenworth, Kan., lists the following as traits one should possess when serving as LNO:

- Innate ability to solve problems
- Excellent communication skills, both verbal and written
- Professional and confident approach
- Proactive and self-motivated
- Team-building skills
- Genuine willingness to help
- Desire to build a mutually cooperative relationship with mission partners
- Organizational skills
- Ability to synchronize and focus on critical needs
- Awareness of limitations with an ability to learn quickly
- Politically astute with the ability to grasp difficult leadership roles of civilian organizations

All of these characteristics should come together in order to help build professional relationships with our NATO allies and partners. While many of these traits may not seem inherently present in young officers, the enthusiastic will to win can often be enough to overcome other shortcomings. An infectious positive attitude wins friends to your side, making it easier to influence them into helping you when you need it. That being said, serving in this position requires a higher level of maturity as is laid out in the earlier examples.

Prior to deployment, my counterparts and I had a much narrower view for what to expect as LNOs. We could not have predicted that our successes — or failures — as lieutenants would have strategic implications. From their experiences in Iraq and Afghanistan, our command team understood the importance of choosing the right people for the job. Choosing someone to serve as LNO is empowering them to operate autonomously in order to challenge their potential. I cannot imagine a more unique role in which to challenge myself while operating to accomplish the larger mission of demonstrating continued U.S. commitment to the collective security of NATO and to enduring peace and stability in the region.

1LT Maribel R. Brown is a Military Intelligence officer currently assigned to the 1st Battalion, 503rd Infantry Regiment, 173rd Airborne Brigade, in Vicenza, Italy. During the unit's recent deployment as part of Operation Atlantic Resolve, 1LT Brown served as the liaison officer to the U.S. Embassy in Riga, Latvia. A prior enlisted Soldier, she originally enlisted in the Army in 2003 as a healthcare specialist and attained the rank of SSG prior to receiving her commission through ROTC in May 2014.

REACHBACK FOR THE SQUAD

BRIAN J. DUNN

The Army should exploit reachback technology to counter the threat to the crews and squads of our Infantry fighting vehicles (IFVs) that an enemy with capable and numerous anti-armor weapons poses. Reachback is "the process of obtaining products, services, and applications, or forces, or equipment, or material from organizations that are not forward deployed."[1] Enabled by secure Internet-like connections, we already use reachback capabilities to obtain a variety of support functions for forces forward deployed from troops or civilian employees as far away as the continental United States that at one time could only be provided by support units in theater. By using reachback technology, we could provide the future IFV with a full actual/virtual squad for mounted operations. This manning concept would retain combat power for a smaller but more capable expeditionary Army, help mitigate force protection paralysis that could preclude efforts to achieve decisive victory, and instead make a positive contribution to force protection by reducing the actual manned infantry complement of the future IFV.

During the Iraq War, I often cringed at the thought of Marine amphibious assault vehicles (AAVs) being used as infantry carriers. We were fortunate not to experience more catastrophic hits on those vehicles. As we seek to regain full-spectrum ground combat capabilities by renewing our force-on-force combat training, we must cope with the reality that a future Army IFV with a full squad operating against a capable conventional enemy could make our smaller future Army heavy forces pay too high a price to continue their missions.

In 2002, while discussing what type of Abrams tank replacement was needed to equip a strategically deployable Army, among other observations I wrote that the replacement for our Cold War-era heavy force armored vehicles would need a version to replace the Bradley Fighting Vehicle (BFV) that could carry a fire team-sized infantry element capable of exploiting technology to call in distant firepower from a variety of sources for force-on-force combat.[2] A smaller infantry element on a future IFV would also minimize casualties when a fully crewed IFV is destroyed.

Today, the idea for fewer mounted infantry remains an active option for our heavy forces. The replacement for our current IFV may only provide for a small infantry complement, according to more current thinking as the Army debates its assessment of the Army's approach for developing future Army combat vehicles.[3] Indeed, the Armored Multi-Purpose Vehicle (AMPV), the planned replacement for the venerable M113, has room for only six passengers in addition to two crew.[4]

The IFV required enough space to carry an Army squad. A future vehicle may only need to carry a fire team. Even as we foresee the need for less than a full infantry squad on a future IFV, the problem remains that full infantry squads are still important even in an era when technology-enabled "hyper-

Soldiers with the 3rd Brigade Combat Team, 4th Infantry Division move out on a mission as part of Decisive Action Rotation 16-09 at the National Training Center, Fort Irwin, Calif., on 27 August 2016.

Photo by PFC Jordan Roy

infantry" is within reach. If we rely on even more precise and responsive distant firepower from other branches and services to compensate for fewer hyper-infantry, yes, a networked force can provide us with the capability of "covering more ground with fewer boots[.]"[5]

But we can't cover more people with fewer boots. What will we do in peace operations, counterinsurgency operations, or even urban terrain warfare? In cities (or worse, mega-cities), the ground itself collapses around the Soldier with a much shorter sight line and additional difficulties remaining connected to the Army network. A small fire team-sized squad is capable of fighting in conventional combat if it has timely access to firepower. It will be inadequate for manpower-intensive operations.

Paratroopers from the 3rd Brigade Combat Team, 82nd Airborne Division use Joint Tactical Radio System radios to communicate during a field exercise at Fort Bragg, N.C., in March 2011.

Reachback technology offers a means to achieve force protection without reducing heavy force combat capabilities by striking a balance between mitigating the effects of catastrophic hits on our IFVs, exploiting the possibilities of hyper-infantry in high-intensity combat, and conducting troop-intensive operations. We could design our future infantry fighting vehicle to have room for only a fire team — the actual onboard fire team for mounted operations — without losing the full squad by exploiting reachback technology within a battalion's battlespace rather than the globe-spanning reachback we use for other types of support.

The rest of the squad — the virtual fire team — would remain in the battalion headquarters where it would operate two remote weapon stations on the IFV via the battalion-level Warfigher Information Network-Tactical and the company and below Joint Tactical Radio System. These remote weapon stations would supplement the organic firepower of the IFV and the mounted actual fire team (when the infantry dismounts).

Naturally, such a pairing of actual and virtual fire teams will require a battlefield network that provides trusted access, assured connectivity, and interoperability.[6] One can accept a delay when watching cat videos on Internet. On the battlefield, there can be no lag and no worries about who is operating the remote weapon station behind your dismounts.

In a perfect mechanized infantry world, you don't slow down the advance to the speed of walking infantry. If "dropping the rear ramp slab just slow[s] down the whole operation," why not make the future IFV more capable of supporting the tanks without dismounting the infantry?[7]

The virtual fire team operating the IFV remote weapon stations would provide additional protection for the IFV and accompanying tanks and support vehicles.

In exceptionally high-threat anti-armor environments, the IFV would fight without an onboard fire team, relying on the virtual fire team to operate its remote weapon stations for additional surveillance and mounted firepower.

Or, our heavy battalions could order their IFVs to operate using mixed actual and virtual fire teams, deploying the IFVs with virtual fire teams forward and keeping the actual fire team-manned vehicles in the rear positions in case dismounts are needed. The dismounted infantry would have the additional support of the virtual fire teams manning their IFV remote weapon stations.

Virtual fire teams kept at battalion headquarters would also be available as a virtual reserve, allowing battalion commanders to rapidly assist companies in heavy dismounted combat that requires the full infantry squads on the ground. This reinforcement could be achieved by committing the virtual fire teams of an unengaged company to operate remote weapon stations (or deployable robotic systems) on the IFVs of a company in contact with the enemy.

To mitigate physically overburdening the smaller IFV crew and actual fire team, the virtual fire team would provide vehicle protection while the actual fire team and IFV crew are performing maintenance, resting, sleeping, or even incapacitated. In the latter case, the virtual fire team manning the remote weapon stations would buy time for rescue and medical assets to reach the wounded crew and actual fire-team Soldiers who are incapable of self-defense.

Finally, the virtual fire team could rotate into the IFV role, allowing the actual fire team already there to deploy to the headquarters element where it would operate the remote

weapon stations while gaining some respite from forward operations.

Having the companies' virtual fire teams manned by troops stationed at the battalion headquarters would not remove the Soldiers from danger. After all, the virtual squad is manned by very real Soldiers. On the positive side, their physical location at battalion will keep more infantry at the headquarters capable of local self-defense should the battalion headquarters come under direct ground attack.

But the headquarters, already a target for enemy indirect fire and air attack, would need to take precautions against making fire teams casualties despite operating virtually in a theoretically safer physical location away from direct fire threats.

If remotely operated robotic weapons are part of the future IFV at some point, as the technology matures, actual or virtual fire teams could operate the unmanned weapons; or, as the technology is developed, deploy and monitor autonomous robotic systems evolved from equipment like the Special Weapons Observation Reconnaissance Detection System (SWORDS).

Indeed, if such a manned-unmanned teaming of Soldiers and robotic systems actually increases the number of Soldiers needed, even as we seek to reduce the infantry capacity of our future IFV, the actual/virtual squad concept will support such a requirement for more infantry.[8]

In that case, a squad of three fire teams could carry out the roles of the onboard actual fire team, the virtual fire team that operates IFV remote weapon stations, and a third virtual fire team that controls or monitors the unmanned systems partnered with the IFV crew and actual fire team.

This expanded full squad would provide additional fire-team rotation capabilities to keep actual fire teams more rested and effective than extended and continuous combat operations would otherwise allow.

Protecting the Soldier by removing the Soldier from exposure to the enemy is already happening. We are attempting to take the Soldier out of supply trucks (and even supply helicopters). We found that taking high mobility multipurpose wheeled vehicle (HMMWV) machine gunners from their exposed positions and putting them under armor within the same vehicle with a Common Remotely Operated

Weapon Station (CROWS) to observe, aim, and shoot, saved Soldiers' lives. There are those who foresee Army platoons with paired manned and unmanned vehicles.[9]

To save lives and preserve our ability to achieve decisive operations, "send a bullet and not a man."[10] Reachback for the squad extends this thinking by sending the bullet virtually. But it isn't "just" a means to save Soldiers' lives. Force protection concerns carried to the extreme could hamper efforts to win a campaign by excluding certain actions that could be exploited for victory because those actions are likely to result in friendly casualties in the short run.[11]

While force protection is a natural consideration for using a small, volunteer Army whose members our society values, that outlook cannot be allowed to interfere with achieving a military objective — which is presumably why the Army is committed to war.

Like the pre-World War II French army that reacted to their heavy casualties from their World War I offensives by adopting the "stylized, tightly controlled 'methodical battle'" doctrine, could we paralyze our own Army with casualty-averse caution should we face an enemy with a doctrine that seeks to achieve victory rather than minimize casualties — and get both defeat and heavy casualties?[12]

The technology that allows reachback capabilities could allow us to enhance force protection without inducing force protection paralysis that cripples our ability to fight at the high intensity conventional combat portion of the combat spectrum. If virtual fire teams can reduce friendly casualties without reducing mounted firepower for offensive operations

Photo by SSG Jason Hull

A vehicle from the 1st Battalion, 325th Airborne Infantry Regiment, 2nd Brigade Combat Team, 82nd Airborne Division, armed with a Common Remotely Operated Weapons Station II provides support by fire for maneuvering paratroopers during an exercise at Fort Pickett, Va., on 25 February 2015.

Soldiers from Company A, 2nd Battalion, 5th Cavalry Regiment, 1st Brigade Combat Team, 1st Cavalry Division, dismount from their Bradley Fighting Vehicle during fire team live-fire certification training at Grafenwoehr Training Area, Germany.

by heavy forces, we can mitigate a fear of casualties that could paralyze attempts at decisive operations.

The use of virtual infantry fire teams is not an issue of replacing infantry with technology. It is about preserving infantry when they are "spam in a can" riding with the heavy armor for the situations when the infantry needs to dismount to achieve the mission. Taking the infantry out of our future infantry fighting vehicles — when the tactical conditions warrant it — is a logical extension of technology-driven force protection measures that can retain the flexibility of a full (or larger) squad. The Air Force already fights their unmanned aerial vehicles from the continental United States using reachback technology. We should move some of the Army's mechanized infantry Soldiers out of the future IFV with an actual/virtual squad when possible using reachback to battalion headquarters over a robust Army network.

Notes

[1] Department of Defense Dictionary of Military Terms, http://www.dtic.mil/doctrine/dod_dictionary/data/r/11141.html.

[2] Brian J. Dunn, "Equipping the Objective Force," *Military Review* (May-June 2002).

[3] Sandra I. Erwin, "On Future Combat Vehicles, Army Takes Pragmatic Approach," *National Defense Magazine* blog (19 February 2015), http://www.nationaldefensemagazine.org/blog/Lists/Posts/Post.aspx?ID=1752.

[4] Kris Osborn, "Army to Roll-Out First New Infantry Carrier," *Scout Warrior* (9 December 2016), http://www.realcleardefense.com/2016/12/09/us_army_to_roll-out_first_new_infantry_carrier_288363.html.

[5] LTG Robert S. Ferrell, LTG Michael E. Williamson, and BG (P) Daniel P. Hughes, "Networking Force 2025," *Army* (September 2014): 38.

[6] "Modernizing LandWarNet: Empowering America's Army," Torchbearer National Security Report (Arlington, VA: Association of the United States Army, May 2012): 5.

[7] Daniel P. Bolger, *Death Ground: Today's American Infantry in Battle* (NY: Ballantine Books, 1999), 147.

[8] William Matthews, "Robot or Not," *Army* (November 2014): 37.

[9] Ibid, 36.

[10] There are many ways to express the idea of saving our troops' lives by expending ammunition. See Bolger, 19-20.

[11] Indeed, it is "false compassion" for our troops to let a war drag on by refusing to achieve victory quickly, which is one lesson of Iraq's invasion of Iran in 1980. See Brian J. Dunn, "The First Gulf War and the Army's Future" The Land Warfare Papers No. 27 (Arlington, VA.: Institute of Land Warfare, 1997), 15.

[12] Williamson Murray, "Innovation Past and Future," in *Military Innovation in the Interwar Period*, ed. Williamson Murray and Allan R. Millett (NY: Cambridge University Press, 1998), 321.

Brian J. Dunn earned a bachelor's degree in political science and history from the University of Michigan in 1986 and a master's degree in history from Eastern Michigan University in 1989. From 1987 to 1993, he served in the Michigan Army National Guard and was honorably discharged in 1995. Among other jobs, Dunn taught an introductory American history course at Henry Ford Community College for three terms prior to beginning his position in 1991 as a nonpartisan research analyst for the Michigan State Legislature, the position from which he retired in 2010.

Other articles he has written include:

Military Review — "The AFRICOM Queen," May-June 2016 (third place in the 2015 General William E. DePuy Special Topics Writing Contest); "The Path of the Future Army," September-October 2000; "Equipping the Objective Force," May-June 2002; and "Transforming USAREUR for a Strategy of Preemption," November-December 2003.

Joint Force Quarterly — "Rethinking Army-Marine Corps Roles," Autumn 2000.

Army — "Peace Enforcement: The Mythical Mission," November 1996; "Landpower Needed for Decisive Victory," April 1998; and "A Total Army for Total War: The Guard Divisions' Role," January 1999.

Operational Phasing:

Phase Names Should be Driven by Activity in Each Phase

LTC (RETIRED) JACK E. MUNDSTOCK

Phasing an operation has for years seemed to be as difficult a subject to discuss as either religion or politics. People seem to develop an opinion and stay with it despite all arguments presented to the contrary. What follows is taken from Army Doctrine Reference Publication (ADRP) 3-0, *Unified Land Operations* (see figure at right).

P: Primary planning/execution emphasis
S: Secondary planning/execution emphasis
T: Tertiary planning/execution emphasis

PHASE I: SHAPE
P: Stability S: Offense T: Defense

PHASE II: DETER
P: Defense S: Offense T: Stability

PHASE III: SEIZE INITIATIVE
P: Offense S: Defense T: Stability

PHASE IV: DOMINATE
P: Offense S: Defense T: Stability

PHASE V: STABILIZE
P: Stability S: Offense T: Defense

PHASE VI: ENABLE CIVIL AUTHORITY
P: Stability S: Offense T: Defense

Example of Combining the Elements of Decisive Action in a Notional Campaign

There has become a rather widespread belief that this example of phasing is a model to be followed despite the notation in paragraph 2-27 which states, "These phases are examples. An actual campaign may name and array phases differently." The name of each phase should be driven by the activity in that phase, and the emphasis on decisive action tasks (offense, defense, stability) will also be driven by what the planners intend to have occur in that phase. "**Deter**, **dominate**, and **seize the initiative**" may have clear meanings at the theater, corps, and division plans level, but once translated to brigade and below the meanings and intent of the higher echelon planners tend to become blurred. The ability to execute all three decisive action tasks at the same time is situation and echelon dependent. A corps or division can probably execute all of the tasks, to some degree, at the same time. Once we move to brigade combat team (BCT) and below, this becomes more difficult and unlikely. At echelons below division it is likely that the tertiary emphasis is being planned for but not executed at any given moment.

Prior to the attack on 9/11, G3 XVIII Airborne Corps developed a five-phased model for an operation requiring forced entry. I intend to use a slight modification of that model to discuss operational phasing.
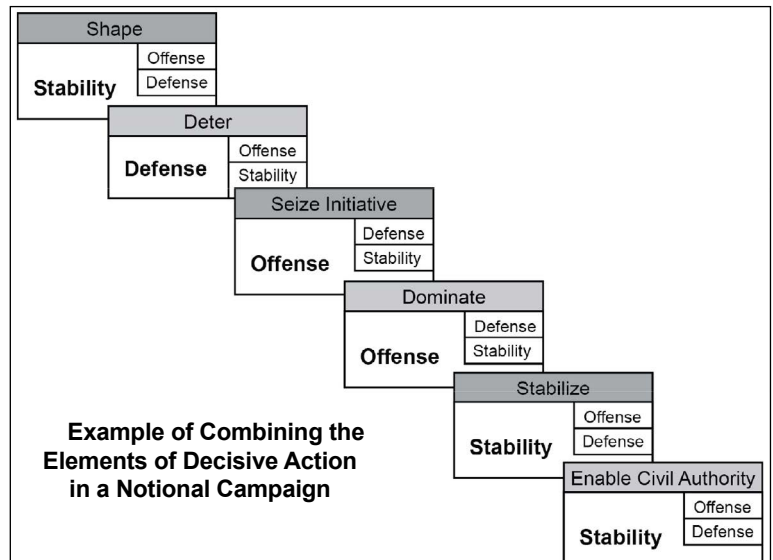
Model

PHASE I: DEPLOY/FORCED ENTRY

PHASE II: ATTACK TO RESTORE INTERNATIONAL BORDER

PHASE III: DEFEND INTERNATIONAL BORDER

PHASE IV: INTERNAL DEFENSE OF ATROPIA

PHASE V: REDEPLOY

General Scenario

Atropia has been invaded by its neighbor Ariana. Arianan forces have occupied a significant portion of Atropia but have been attrited by coalition air forces and culminated. An Atropian security force is securing the coalition assembly areas and providing early warning of any Arianan attack. A corps-level formation of Arianan forces remains in Ariana and may or may not be committed into Atropia. There is a major river approximately half way to the international border from current coalition positions. The border region is ethnically mixed and the population has divided loyalties to both countries.

PHASE I: DEPLOY/ OCCUPY ASSEMBLY AREAS
P: Defense, S: Stability, T: Offense

PHASE II: ATTACK TO SEIZE INITIAL OBJECTIVES AND RIVER CROSSING
P: Offense, S: Defense, T: Stability

PHASE III: ATTACK TO RESTORE INTERNATIONAL BORDER

P: Offense, S: Defense, T: Stability

PHASE IV: DEFEND INTERNATIONAL BORDER
P: Defense, S: Offense, T: Stability

PHASE V: INTERNAL DEFENSE OF ATROPIA
P: Stability, S: Defense, T: Stability

PHASE VI: REDEPLOY
P: Defense, S: Stability, T: Defense

Next, the critical events for each phase will be added. The numbers represent a possible sequence of execution and not necessarily a priority of execution.

PHASE I: DEPLOY/OCCUPY ASSEMBLY AREAS
P: Defense, S: Stability, T: Offense

1. Occupy assembly area.
2. Establish perimeter defense.
3. Coordinate with maneuver enhancement brigade (MEB) for fires plan and base cluster defense.
4. Establish task organization to support river crossing and initial attack.

PHASE II: ATTACK TO SEIZE INITIAL OBJECTIVES AND RIVER CROSSING
P: Offense, S: Defense, T: Stability

5. Conduct forward passage of lines (FPOL) with Atropian security force.
6. Conduct zone recon to river.
7. Conduct area recon of crossing sites and initial objective.
8. Attack to river.
9. Conduct river crossing and seize initial objectives.
10. Defend bridgehead.

PHASE III: ATTACK TO RESTORE INTERNATIONAL BORDER
P: Offense, S: Defense, T: Stability

11. Pass control of bridgehead to brigade engineer battalion (BEB).
12. Change task organization to remove bridging equipment from attacking formations.
13. Attack to restore international border.

PHASE IV: DEFEND INTERNATIONAL BORDER
P: Defense, S: Offense, T: Stability

14. Establish area defense (forward) of international border.
15. Establish screen forward of BCT.
16. Establish obstacle plan for screen and Main Battle Area (MBA).

17. Establish a Forward Supply Point (FSP) for Class IV/V barrier material.
18. Establish BCT rear area with BEB in control.

PHASE V: INTERNAL DEFENSE OF ATROPIA
P: Stability, S: Defense, T: Offense

19. Maintain screen of international border.
20. Divide BCT AO into battalion-sized AOs.
21. Defend key infrastructure.
22. Conduct assessments of population centers within AO.
23. Partner with Atropian security forces.
24. Conduct Search and Attack as necessary.

PHASE VI: REDEPLOY
P: Defense, S: Stability, T: Offense

25. Turn over battalion AOs to Atropian forces.
26. Occupy assembly areas for redeployment.

You will notice that the six phases now contain 26 critical events and it could be easily a larger number with a little imagination. Especially in the operationally heavy phases (II,III, and IV depicted here), there is a tendency to take what are actually critical events and make them another phase. This makes the operation order (OPORD) more complex as each additional phase should require an additional sub-paragraph to the main paragraphs, changes to the task organization, and additional graphics. In most cases, the additional "phases" are unnecessary and clutter an already busy process. Per paragraph 4-41 in ADRP 3-0: "A change in phase usually involves a change of mission, task organization, or rules of engagement" Unfortunately, we appear to have strayed from this concept. The old FM 5-0 used to have a copy of a 4th ID operations order from WWII. It was 10 pages long. This was explained by stating that the division had been in combat continuously for three years and all the SOPs were understood. A 10-page division-level OPORD will probably never be seen again, but we can reduce the size and complexity of what is currently being written.

LTC (Retired) Jack E. Mundstock served in multiple infantry assignments including the 1st Ranger Battalion and the 7th Special Forces Group. He served as an advisor in El Salvador and as a joint exercise officer, G3 XVIII Airborne Corps. He was the chief observer-trainer for Operations Group C of the Battle Command Training Program, conducting military decision-making process (MDMP) exercises for every brigade in the Army National Guard. He has conducted more than 200 MDMP exercises at the battalion, brigade, and division levels.

WHAT IS IO?

MAJ DANIEL W. CLARK

Recently, a colleague of mine was asked by a public affairs officer to not include me on correspondence with reporters because I am an information operations (IO) officer and it "can cause confusion for the reporter." The implication was that because I am an IO officer my interaction with the media would be perceived as manipulative. This is an example of a common misconception throughout the military that we must correct. IO officers are professional communicators, not psychological manipulators. Information operations is the fancy term that the military has given to what nearly every other organization refers to as communications. The purpose of communications is to inform desired audiences in order to influence those audiences to act, or not act, in a manner that is beneficial to the organization. Ironically, it has been the failure of the IO community to effectively communicate what we do, why we do it, and how we can support that has led to this potentially dangerous misunderstanding of information operations.

The first step in correcting this misperception is to define what IO actually is. The U.S. military defines information operations as the integrated employment of information-related capabilities to influence, disrupt, corrupt, or usurp adversarial human and automated decision making while protecting our own.[1] The U.S. Army has, as recently as 2013, defined IO as the integration of designated information-related capabilities in order to synchronize themes, messages, and actions with operations to inform United States and global audiences.[2] Finally, strategic communication is defined as the focused U.S. government effort to understand and engage key audiences to create, strengthen, or preserve conditions favorable for the advancement of U.S. government interests, policies, and objectives through the use of coordinated programs, plans, themes, messages, and products synchronized with the actions of all instruments of national power.[3] Taken together this suggests, at least to me, that the role of the IO officer is to develop, refine, and synchronize a communication strategy that makes efficient use of all available assets in order to communicate a message to key stakeholders that will yield a result favorable to the U.S. government, the U.S. military, or the unit. Nowhere in any of that do I read the role of the IO officer as performing psychological manipulation of civilian leadership, the press, or the American public.

If we can accept that the purpose of IO is to inform desired audiences, then we must also accept that the purpose of providing that information is to influence those audiences to take a desired action or inaction. That word — "influence" — seems to cause people a lot of consternation, but it is entirely unnecessary. The very purpose for providing information to any audience is to influence them to take or not take action to the benefit of the organization providing the information.

Otherwise, providing the information would simply be a waste of resources. Perhaps if I used the word persuade as opposed to influence it would be less controversial, but the message doesn't change. The U.S. military regularly informs Congress on its efforts for the purpose of persuading appropriators to provide funding for military programs that will support national strategic goals. We inform the public about our ongoing operations to persuade them to provide support to our personnel while simultaneously informing them of the benefits of military service to persuade them to become members of our honored profession. We inform foreign audiences about the capabilities of our military forces to persuade them to avoid military conflict all together. These are all perfectly legitimate and legal purposes for providing information. Because of the important nature of these efforts to our national security, IO officers — at least those who are good at what they do — will study influence techniques in an effort to improve their capabilities to do their jobs. As would any marketer who were to pick up a book by Dr. Robert Cialdini or Nick Kolenda. However, nowhere in an IO officer's training or professional military education do they receive instruction on the conduct of what was formerly called psychological operations (now called military information support operations – MISO). IO officers understand MISO and the effects it can have on the information environment. They are also aware of and adhere to the provisions of 10 U.S.C. 2241 which states "no part of any funds authorized to be appropriated in any act shall be used by the Department of Defense for publicity or propaganda purposes within the United States not otherwise specifically authorized by law." Military information support operations are, however, only one of the many designated information-related capabilities that IO officers assist their commanders in employing, and there is zero prohibition that I can find on the use of any other information capability (excepting methods of electronic interference).

This unfortunate misrepresentation of information operations officers does not lie solely with the IO community. There are a host of factors that contributed to this misunderstanding from the very beginning of the discipline. However, we have certainly failed to effectively communicate the truth about what we do and why. In 2011, *Rolling Stone* Magazine published an article that accused the former commander of NATO Training Mission Afghanistan — then-LTG William Caldwell — of illegally ordering a team of psychological operators to "manipulate visiting American senators."[4] Their source was a National Guard IO officer, then-LTC Michael Holmes, whom the article quoted as saying "my job in psy-ops is to play with people's heads." The article lists Holmes as an IO officer, not a PSYOPs officer, and makes no mention of the fact that Holmes had no military training or education in conducting PSYOPs. Caldwell was known for brilliant execution of

strategic communication, and he directed his IO officer to build a strategy for persuading key stakeholders to provide the resources he believed were needed to accomplish the mission he had been assigned. According to the article, Holmes refused to comply with the order citing the "Smith-Mundt act of 1948." He was later reprimanded for a host of unrelated charges, but none the less asserted that his reprimand was the result of his refusal to comply with Caldwell's orders. The official title for the law Holmes referenced is the United States Information and Educational Exchange Act of 1948 and it is specific to the U.S. Department of State and what would later be called the U.S. Information Agency. Nowhere in the Smith-Mundt act are the words "information operations" used. Nor does the word "propaganda" show up.[5] But in referencing the act, Holmes immediately associated IO with propaganda. On 13 July 1972, the act was amended as part of Public Law 92-352 Sec. 204 to state that "any such information shall not be disseminated with in the U.S...." Still the act makes no reference to the Department of Defense or any of the military departments. Even that portion of the act referenced as establishing the prohibition has since been repealed by H.R. 5736 in 2012. It is my understanding that there was an official inquiry following the accusations made in the article, but that no violations were found. The damage to the IO community, however, was done. In my own career I have already encountered commanders who eschew employment of IO officers for fear of being accused of violating some urban legend of misrepresented law.

IO is the coordination and synchronization of the military's capabilities to affect the information environment; it is not the psychological manipulation of the minds of the masses. The purpose of those communications is to persuade our audiences to act in a manner that is to our benefit. And given that the mission of the U.S. military is to deter, continuously shape, and ultimately win conflict against our nation's adversaries there is nothing nefarious about that persuasion. While we in the IO community have yet to effectively communicate what benefits we provide the force and how our commanders can ethically employ the capabilities at our disposal, perhaps it is time we start to lift ourselves out of the shadows of ignorance and do our job — communicate.

Notes

[1] Joint Publication (JP) 5-0, *Joint Operation Planning* (August 2011).

[2] Army Doctrine Reference Publication (ADRP) 3-0, *Unified Land Operations* (May 2012).

[3] JP 5-0.

[4] Michael Hastings, "Another Runaway General: Army Deploys Psy-Ops on U.S. Senators," *Rolling Stone,* 23 February 2013.

[5] U.S. Information and Educational Exchange Act of 1948, Pub. Law No. 402, Ch. 36.

MAJ Daniel W. Clark is a U.S. Army information operations officer and the director of communications for a civilian flight training and flight services organization. As with all *Infantry* Magazine articles, the views herein are those of the author and not necessarily those of the Department of Defense or any element of it.

CALL Releases Newsletter Highlighting Company-Level CAM at JRTC

The Joint Readiness Training Center (JRTC) turned to decisive action training with what was called, at the time, a full spectrum operations (FSO) rotation in October 2010. The shift to a decisive action training environment (DATE) did not lessen the challenges of FSO; it merely placed them inside DATE as a more accurate depiction of unified land operations. Regardless of rotational design (FSO versus DATE), company-level leaders find decisive action a challenge for themselves, their Soldiers, and their units. This newsletter is about company-level combined arms maneuver (CAM), concentrating on basics for company leaders and their units.

Download the newsletter at:
http://usacac.army.mil/sites/default/files/publications/17-02.pdf Class I

THE DISMOUNTED RECON TROOP:
A RELEVANT FORCE FOR THE IBCT

CPT GRAHAM WILLIAMS
1SG BRIAN BAUMGARTNER

Over the past three years, there has been much debate concerning the relationship between Cavalry and Infantry organizations as it relates to reconnaissance and the cavalry squadron. The dismounted reconnaissance troop (DRT) is at the heart of this debate, and the troop's relevancy is in question. A recent proposed change to the Infantry brigade combat team's (IBCT's) task organization is the disbanding of the DRT and adding additional combat power to the mounted reconnaissance troops. This added combat power is the "3 x 36" concept whereby the mounted troop's three platoons are increased to 36 scouts with 128 personnel total in the troop. We believe that the DRT should remain in the IBCT formation as a force multiplier for the squadron and brigade, and the benefit to adding combat power to the mounted troop comes with a price. We will support our assessment by showing that the DRT has unique attributes to assist the IBCT by comparing the capabilities and limitations of the dismounted and mounted troops, relaying how mounted and dismounted elements work in conjunction with each other, and highlighting successful employment of a DRT at two culminating training exercises. When manned, trained, and employed properly, the DRT is well suited for reconnaissance and security tasks and allows commanders to make timely and accurate decisions to seize, retain, and exploit the initiative.[1] The aforementioned proposal equates to a degradation of these tasks for the squadron commander and ultimately the IBCT.

The DRT's task organization and capabilities allow for close, deliberate, and stealthy reconnaissance to satisfy reconnaissance requirements for the squadron and answer the brigade commander's critical information requirements (CCIR).[2] These two aspects are important to note for tactical employment of the DRT and to show that the troop performs different functions than its mounted brethren. A review of the DRT task organization shows how the troop assists the squadron and the IBCT with information collection:

* The troop has two dismounted reconnaissance platoons. Each platoon has three reconnaissance teams of eight personnel.

* Each reconnaissance team has a staff sergeant as team leader and a sergeant as assistant team leader. Each subset team had two scouts and a radio-telephone operator. Each team is designed to operate in two separate observation posts (OPs) depending on mission requirements.

* The DRT has a sniper section of seven with two teams of three snipers. The sniper teams can provide precision direct fire capabilities as well as prosecute call-for-fire missions.

Soldiers with C Troop, 3rd Squadron, 71st Cavalry Regiment, conduct pathfinder operations during a team live-fire exercise.
Photos courtesy of author

Each team can utilize the M107 Barrett .50 caliber rifle, the M24 sniper weapons system, and the XM 2010 enhanced sniper rifle. If needed, the sniper section can operate in three autonomous teams, but two teams are ideal. The sniper teams can be task organized under the platoons or work independently for the troop or squadron.

* The DRT has a six-man 60mm mortar section that can work in two sections. The mortar section can be attached to the two platoons or work under the troop headquarters co-located with the command post.

* The DRT should only have five vehicles total. Three for headquarters and two for each platoon.

* All total, minus habitual attachments, a fully manned DRT has around 80 personnel.

* The DRT has a Raven unmanned aerial vehicle (UAV) that can provide coverage to support the two platoons or separate named areas of interests (NAIs). Recently, the troops have fielded soldier-borne sensors such as the Instant Eye (IE) SUAS and eventually nano-borne sensors.

The DRT's task organization leads into some of the critical capabilities the troop provides as stated below:[3]

* Provides all-weather, continuous, accurate, and timely reconnaissance and security in complex, close, and urban terrain.

* Employs small unmanned aircraft systems (SUAS) to enhance reconnaissance efforts.

* Conducts stealthy reconnaissance and security operations.

* Assists in answering the CCIR.

* Detects threat deception, decoys, and cover and concealment that otherwise would not be detected by single-capability surveillance means by employing integrated and synchronized reconnaissance.

* Assists in shaping the area of operations (AO) by providing information or directing fires to disrupt the threat.

* Conducts reconnaissance of one zone, two routes, or six areas.

* Conducts ground, water, and air insertion.

* Employs organic indirect fire support (60mm mortars) for the troop.

* Supports targeting and target acquisition through available ground and aerial assets such as the fire support team (FIST) and SUAS.

* Due to the numerous 'F7' coded Pathfinder slots and trained personnel, the DRT can be used as the squadron and brigade's pathfinder element.

* The DRT can conduct up to 12 short-duration OPs for a period of less than 12 hours, up to six long-duration OPs up to 24 hours, or up to six extended-duration OPs beyond 24 hours based on METT-TC (mission, enemy, terrain and weather, troops and support available, time available, and civil considerations) variables.

These capabilities are considerations when the brigade and squadron staffs begin the military decision-making process, review mission variables (METT-TC), and conduct intelligence preparation of the battlefield.[4] The troop is also

> *By eliminating the dismounted troop from the IBCT task organization, the squadron commander is limited in the effectiveness and area that the mounted troops can cover with both reconnaissance and security operations.*

one of the few formations in the IBCT that has the ability to conduct long-range high frequency (HF) and tactical satellite (TACSAT) communications to relay information to the troop command post (CP) or the squadron tactical operations center (TOC).

The DRT is able to successfully conduct zone, area, and route reconnaissance according to the seven reconnaissance fundamentals. While the DRT is better suited for area reconnaissance, the troop can also conduct zone and route reconnaissance in restricted and severely restricted terrain. In looking at the squadron commander's reconnaissance planning guidance, eliminating the DRT limits the commander with regards to focus, tempo, and engagement abilities. The persistent and clandestine surveillance that the DRT provides gives the commander flexibility to conduct stealthy and deliberate reconnaissance focused on any type of threat in any kind of terrain. If the commander desires to operate with liberal engagement criteria, the DRT is ideal for fire support missions and utilizing the sniper teams for precision direct-fire engagements. Without the DRT, the squadron and brigade limit their ability to conduct pathfinder operations for air insertions and large-scale landing zone operations. The battalion's reconnaissance platoons are the next lower-level element designed to conduct pathfinder operations; however, they are typically not as forward deployed and primarily operate in the battalion AO.

By eliminating the dismounted troop from the IBCT task organization, the squadron commander is limited in the effectiveness and area that the mounted troops can cover with both reconnaissance and security operations. All the troops have similar reconnaissance and security mission-essential tasks, but the DRT is used for operations that require deliberate and stealthy reconnaissance.[5] If tasked to perform a route reconnaissance, the mounted troops are limited to vehicular avenues of approach and adjacent areas. Because they rely on their vehicles, the mounted troops cannot effectively conduct route reconnaissance on cross-country mobility corridors like the DRT. While it is important for the mounted troops to conduct route recon on alternate and main supply routes (ASRs/MSRs), the infantry battalions most likely use restrictive terrain to move to their objectives. With its capabilities, the DRT platoons can operate autonomously in restrictive terrain and extend further with HF and TACSAT communication. The mounted troops do not operate in this capacity and their ability to extend is restricted due to the

range of FM communication. The mounted troops are also limited with the size of the OPs that they can afford to establish given crew manning. If the squadron requires information to be collected on an objective that is surrounded by severely restricted terrain and the objective does not have avenues of approach leading to it, the mounted troops could not effectively collect on this objective as well as the DRT. While it is widely known that the mounted troops are more than capable of conducting reconnaissance and security without their vehicles, there is an obvious degradation of mobility and firepower if tasked to operate purely dismounted. Mounted troops lack the density of long-range communication equipment, have limitations with task organization, and focus primarily on mounted training versus dismounted due to the lack of training time. One could argue that the UAS assets that the brigade and mounted troops have could cover the aforementioned objective. But unlike the DRT, the UAS is limited to two-dimensional collection, doesn't operate clandestinely, cannot maintain constant observation, and is susceptible to the effects of weather.

With security operations, the DRT assists the squadron commander in fulfilling the fundamentals of security oriented on specific terrain and threats in conjunction with mounted elements. The DRT is ideal for conducting a screen in restrictive terrain for early and accurate warning to allow the brigade commander to make timely and well-informed decisions. Once the DRT identifies the threat, it can easily gain and maintain contact using organic weapon systems. The troop can orient on the force requiring protection while conducting continuous reconnaissance from surveillance sites and report critical information. With clandestine surveillance OPs and security positions, the DRT is critical to defeating dismounted enemy reconnaissance elements. With area and local security, the DRT is unique in that it can provide stealthy protection of friendly forces before and after conducting zone reconnaissance and establishing a screen — all while working in conjunction with mounted elements. For instance, mounted and dismounted troops can conduct a mutually supporting zone reconnaissance focusing on severely restricted terrain and vehicular mobility corridors. The troops can then transition into a screen line in the same terrain and orient on mounted and dismounted threats. Since the DRT is an infantry element, the squadron commander also has the ability to conduct troop or platoon offensive operations (such as attacks and raids) and the ability to conduct combined arms operations with mounted and dismounted elements tailored to the threat. This combination of assets allows the commander to extend his level of protection to target enemy dismounted reconnaissance and infantry forces and allows the ability to transition from security to offensive operations.

This leads to the question as to which element is capable of replacing the DRT if the squadron requires additional external dismounted assets. The next lower level echelon that can provide similar capabilities would be the infantry battalion reconnaissance platoons. These platoons, which
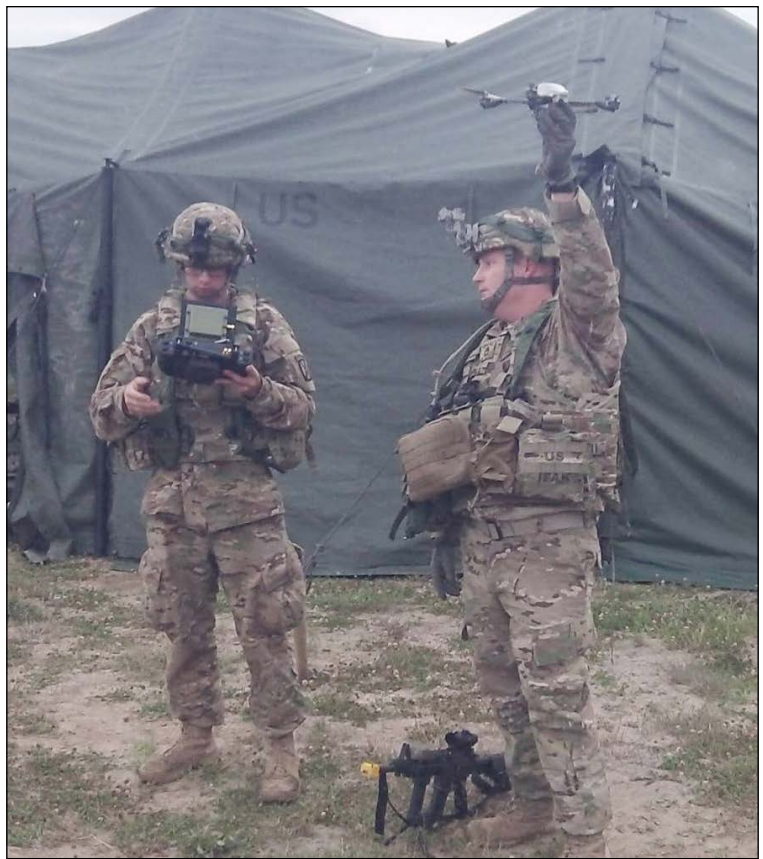
Soldiers with C Troop, 3rd Squadron, 71st Cavalry Regiment prepare to launch an Instant Eye SUAS during Mountain Peak 2014.

comprise three reconnaissance teams and a sniper section, can only partially fill the capability gap that the DRT provides since they are smaller and are under the infantry battalion's task organization. Tasking the reconnaissance platoons to support the cavalry squadron degrades the battalion's ability to conduct reconnaissance. Doctrinally, the DRT is employed during the brigade's initial planning process to shape preparation activities and execution.[6] As parallel planning develops within the IBCT, the battalion scouts are deployed to conduct a reconnaissance handover of objectives, or named areas of interest (NAIs), with the DRT platoons. There exists the possibility of supplementing the cavalry squadron with a dismounted element from a rifle platoon, but these platoons are not trained on reconnaissance and security tasks, lack long-range communication systems, and operate with different tactical standard operating procedures (TACSOPs).

During recent exercises, the DRT's performance reiterated the fact that the troop should remain in the IBCT task organization. Lessons learned from the 1st Brigade Combat Team, 10th Mountain Division's Mountain Peak 2014 exercise and follow-on Joint Readiness Training Center (JRTC) decisive action rotation highlighted the effectiveness of mounted and dismounted troops working in conjunction with each other for reconnaissance and security operations.

Mountain Peak, a division-run brigade-level decisive action exercise, included a culminating attack on an urban area. During the exercise, the DRT commander was tasked

by brigade to act as the "chief of scouts" by incorporating scouts from all dismounted elements in the brigade such as the infantry battalion's reconnaissance platoons. This "super DRT" was tasked to conduct area reconnaissance on numerous objectives leading to the village and establish reporting from numerous OPs oriented on the military operations on urban terrain (MOUT) site. The DRT deployed the mixed scout and sniper OPs through severely restricted terrain on avenues of approach that the enemy did not anticipate. Each OP successfully observed its objectives, reporting timely and accurate information to the mobile troop CP, which allowed the brigade to relay the information to the infantry battalions prior to their assault. These OPs remained on their NAIs and linked up with the infantry battalions to conduct a handover of the objectives. The result was a resounding success for the brigade due to the dismounted reconnaissance asset's ability to utilize severely restricted terrain and to use long range communications for situational understanding and awareness. Had the DRT not been a part of the operation, the brigade and squadron commander would only have the option of utilizing mounted reconnaissance assets. Again, the mounted scouts could have dismounted to establish the OPs, but they would have been limited as to how far they could have extended into the restrictive terrain given their inherent limitations.

A few months later, the reconnaissance squadron deployed to JRTC with the lessons learned from Mountain Peak fresh in everyone's minds. As the rotation progressed, the brigade continually pushed the mounted and dismounted scouts two steps ahead of the infantry battalions. Daily, DRT OPs linked up with battalion scouts to conduct reconnaissance handover. As the brigade neared the defense stage of the exercise, the opposing force (OPFOR) quickly became aware of the blue force's reliance on using mounted avenues of approach. Anyone who has operated in the JRTC training area knows that the OPFOR habitually uses the terrain to its advantage. In turn, the DRT stuck with its intended purpose, taking advantage of severely restricted terrain to not be decisively engaged by the enemy and to collect on numerous NAIs. The result was a success; the DRT was the most forward-deployed troop, was only decisively engaged once, and effectively conducted reconnaissance and targeting focused on key enemy positions.

Prior to the culminating attack on Sangari at JRTC, the DRT was tasked to conduct a widespread zone reconnaissance through restrictive cross-country mobility corridors in support of the infantry battalions on their approach march. In addition to the zone reconnaissance, a portion of a dismounted platoon was tasked to conduct pathfinder operations and secure a landing zone for an infantry battalion, and then establish a screen line for the maneuver battalions to pass through. The information from the zone reconnaissance proved invaluable for the brigade and infantry battalions which were able to conduct a forward passage of line and begin their attack. At that time, the mounted troops were tasked out for security operations in the large area the squadron had to cover. If the DRT had not

been in the IBCT task organization, the squadron would have been relegated to mounted assets and SUAS for the zone reconnaissance. The OPFOR anticipated the propensity for units to use mounted assets so they emplaced numerous improvised explosive devices (IEDs) and ambushes along the avenue of approach thereby prohibiting these elements from approaching the village. The DRT facilitated the infantry battalion's attack by moving dismounted through restricted terrain that the OPFOR did not anticipate. If JRTC scenarios are designed to train for a hybrid threat and simulate the worst case scenario that an IBCT could face, the DRT proved it's an asset that should remain in the IBCT arsenal to exploit enemy vulnerabilities and operate decentralized in restrictive terrain.

The recent IBCT modernization proposal adds additional mounted combat power to the squadron and eliminates the DRT as an asset in its task organization. In doing so, the squadron and brigade lose a critical dismounted capability, leaving a gap in long-range dismounted collection assets. Adding additional combat power to the mounted platoons and retaining the DRT would be the ideal course of action. However, since the Army is downsizing, this is obviously not feasible. As it states in FM 3-98, *Reconnaissance and Security Operations*, reconnaissance and security units preserve the BCT's freedom of maneuver over the enemy, and successful reconnaissance allows the brigade commander to initiate combat under advantageous conditions to defeat this enemy. The DRT does this not only with its capabilities but with how well the mounted and dismounted troops work in conjunction with each other in any operating environment. By eliminating the DRT, the squadron commander is limited to mounted and SUAS assets for their intelligence, surveillance, and reconnaissance (ISR) plan. Retaining the troop will allow for better opportunities to operate inside the enemy's decision-making cycle. If the DRT is disbanded, the IBCTs could pass a point of no return, and the capabilities which the troop provides might be needed for future operations against an unanticipated threat.

Notes

[1] FM 3-98, *Reconnaissance and Security Operations* (July 2015).

[2] ATTP 3-20.97, *Dismounted Reconnaissance Troop* (November 2010).

[3] Ibid.

[4] FM 3-98.

[5] ATTP 3-20.97.

[6] FM 3-98.

At the time this article was written, **CPT Graham Williams** was serving as the commander of Charlie Troop, 3rd Squadron, 71st Cavalry Regiment, 1st Infantry Brigade Combat Team, 10th Mountain Division, Fort Drum, N.Y. He had previously served as commander of Alpha Company, 2nd Battalion, 22nd Infantry Battalion.

At the time this article was written, **1SG Brian Baumgartner** was serving as the first sergeant for Charlie Troop, 3-71 CAV. Prior to this assignment, 1SG Baumgartner was the first sergeant for the Reconnaissance and Surveillance Leaders Course (RSLC) at Fort Benning under 3-16 Cavalry Regiment.

SQUAD OVERMATCH
SOFTWARE BEFORE HARDWARE

SFC (RETIRED) MIKE LEWIS

Man has fought wars against his fellow man since the beginning of time; this is one of the few constants throughout human history. Along with fighting wars, man has consistently sought better ways to defeat his enemy while avoiding harm to himself. Hands and feet gave way to clubs and sharpened sticks augmented by thrown rocks as standoff weapons, which were in turn defeated by edged weapons and thrown spears. While edged weapons are still in use today, standoff weapons were improved, with spears leading to the bow and crossbow, which were replaced by firearms. Muskets led to repeating firearms, improved into modern assault rifles and machine guns, augmented by heavier weapons systems. Although heavier weapons allow more standoff with more efficient killing of the enemy, another fact has held true; as T.R. Fehrenbach wrote in *This Kind of War: The Classic Military History of the Korean War*, "…you may fly over a land forever; you may bomb it, atomize it, pulverize it and wipe it clean of life — but if you desire to defend it, protect it and keep it for civilization, you must do this on the ground, the way the Roman legions did, by putting your young men in the mud." This means that as long as warfare exists, the Infantry will be an integral part of the action.

Although the idea of finding more efficient ways to defeat the enemy while preserving one's own force is as old as warfare itself, "squad overmatch" has been the mantra of modernization across the Army and specifically in the Infantry over the last few years. It is a multifaceted effort involving combat systems, communications platforms, weapons, and training. Materiel solutions have produced highly agile, networked, and lethal capabilities, resulting in a force that is better prepared to defeat adversaries than a decade ago.

The reason the term squad overmatch was chosen for the effort is because the squad is the building block of any tactical formation. Squads accomplish missions, operating as elements of a larger unit. Overmatch is defined by the *Oxford Online Dictionary* as to "be stronger, better armed, or more skillful than." By that definition, in my opinion, the U.S. Army Infantryman, and squad by extension, is far from full realization of this goal with regards to lethality.

Training Shortfalls

Standard weapons proficiency training in the Army does not always lead to "weapons mastery." Weapons mastery is

Paratroopers assigned to the 2nd Battalion, 503rd Infantry Regiment, 173rd Airborne Brigade, fire an M240 machine gun at Drawsko Pomorskie Training Area, Poland, on 20 October 2016.

Photo by SGT Lauren Harrah

being able to utilize the weapon to achieve effects downrange through deep understanding. It encompasses knowing the weapon's physical and operational characteristics, its operational and mechanical strengths and weaknesses, the ballistic performance and characteristics of its ammunition, engagement techniques and considerations, and being able to keep the weapon in operation while maximizing its potential through lethal and precise fires.

Leaders must possess mastery of not only their assigned weapon, but every weapon system under their direct control and be competent in echelonment of fires, selecting not only the correct weapon but the correct ammunition and engagement technique through intimate knowledge of the capabilities of their element's assigned weapons and an understanding of supporting fires. They must also possess an understanding of weapons that may be employed in support, including artillery and aviation platforms. An excerpt of Army Techniques Publication (ATP) 3-21.8, *Infantry Platoon and Squad*, paragraph 1-52, states that the squad leader:

• Is the subject matter expert on all battle and individual drills.
• Is the subject matter expert for the squad's organic weapons employment and employment of supporting assets.
• Knows weapon effects, surface danger zones, and risk estimate distances for all munitions.
• Uses control measures for direct fire, indirect fire, and tactical movement effectively...

FM 3-21.8 (now superseded by ATP 3-21.8), paragraph 1-45 states: "Every Infantryman, from the private enlisted Soldier, to the general officer, is first a rifleman. As such, he must be a master of his basic skills: shoot, move, communicate, survive, and sustain. These basic skills provide the Soldier's ability to fight. When collectively applied by the fire team, squad, and platoon, these skills translate into combat power."

Further, paragraph 1-46 states:

"Infantrymen must be able to accurately engage the enemy with all available weapons. Soldiers and their leaders must therefore be able to determine the best weapon-ammunition combination to achieve the desired effect. The best combination will expend a minimum of ammunition expenditure and unintended damage. To make this choice, they must know the characteristics, capabilities, and vulnerabilities of their organic and supporting assets. This means understanding the fundamental characteristics of the weapon's lay (direct or indirect), ammunition (high explosive [HE], penetrating, or special purpose), trajectory (high or low), and enemy targets (point or area). Properly applying these variables requires an understanding of the nature of targets, terrain, and effects."

However, many Soldiers and leaders never progress beyond the weapons training presented during One Station Unit Training (OSUT), with skills such as moving target engagements seldom trained or later tested at home station.

> *Leaders must possess mastery of not only their assigned weapon, but every weapon system under their direct control and be **competent in echelonment of fires, selecting** not only the correct weapon but the correct ammunition and engagement technique through intimate knowledge of the capabilities of their element's assigned weapons and an **understanding of supporting fires.***

Unless the local commander perceives a need or the Soldier is being trained as a designated marksman (DM) or sniper, training isn't typically conducted at ranges beyond 300 meters, nor is training in adjusted point of aim (holds and leads) routinely conducted. Marksmanship training utilizing night vision devices, thermal weapons sights, or under chemical, biological radiological, and nuclear (CBRN) conditions wearing the protective mask and/or other appropriate protective garments may not be conducted on a regular basis, depending on the organization.

Weapons handling skills are a weak point of training, with Soldiers expected to be capable of reloads and simple stoppage reductions upon completion of OSUT. Home-station training often fails to place appropriate emphasis on these skills through continuing reinforcement drills. Skills in reducing complex stoppages including charging handle impingements or bolt overrides aren't typically trained either formally or at unit level, producing weak weapons handling skills.

Studies conducted by the Human Resources Research Organization (HumRRO), Army Research Institute (ARI), Rand Corporation, and others have consistently found training to be lacking in producing weapons mastery. A contributing factor according to multiple studies is a lack of trained instructors to teach skill at arms. The Rand Corporation found that the Army is the only U.S. military branch without formal weapons instructor courses to develop unit-level trainers in its 2014 report *Changing the Army's Weapon Training Strategies to Meet Operational Requirements More Efficiently and Effectively*. The newly instituted Master Marksmanship Trainer Course (MMTC), designed to provide trained and qualified instructors with the rifle/carbine, offers a partial solution.

Another major contributing factor is the degradation of training and knowledge presented in training and doctrine over the last few decades. For example, a rifleman at the beginning of World War I was expected to hit a point target at distances exceeding 600 yards with only rudimentary iron sights; the modern rifleman, equipped with a red dot or even magnified optic, is in many cases challenged to hit a point target at only 300 meters. The 1954 *Trainfire I*

Photo by SGT Paige Behringer

An Infantryman from the 2nd Squadron, 3rd Cavalry Regiment fires an AT-4 anti-tank weapon as another Soldier assists during a range on 23 April 2016 at Adazi Military Base, Latvia.

are constants, but some aspects change between weapons and ammunition. Employment techniques and considerations may also vary widely; without proper training, this is lost on the end user and the leader.

With the 11H military occupational specialty (MOS) being absorbed by 11B, formal training on the tube-launched, optically-tracked, wireless-guided/Improved Target Acquisition System (TOW/ITAS) at the Soldier level was abandoned. As a result, anti-armor systems are typically manned by personnel that have been trained within their organizations, not necessarily by qualified instructors.

The machine gun is the most casualty producing weapon in most formations. Analyzing force structure within sister services and allied forces, the U.S. Marine Corps and multiple foreign armies consider machine gunnery important enough to have a specific machine gunner MOS. Not only is machine gunnery just a duty position within the Army, it is only addressed with a familiarization during OSUT and little to no formal training outside of organizational courses. Machine gunnery is commonly taught in local machine gun leader courses and only briefly touched on during NCO Education System (NCOES) courses. Considering the importance of machine gunnery, the Army places woefully insufficient attention training on it.

The Army requires a paradigm shift concerning weapons training to maximize overmatch potential. Leaders must be formally trained not only how to maintain and fire their weapons, but in their employment and in training subordinates. The Army must realize that all elements require weapons proficiency to achieve mission success while facing modern hybrid threats. While the Infantry is tasked with closing with and destroying the enemy by means of fire and maneuver, any element must be prepared to react to contact at any time. Therefore, all Soldiers, MOS or unit immaterial, must demonstrate weapons proficiency with the goal being weapons mastery.

The Way Ahead

Formalized training programs are necessary to educate the force and produce unit-level trainers to maximize proficiency across the Army. Some of this training already exists, both as Maneuver Center of Excellence (MCoE) courses and as troop schools conducted by units at home station. A holistic approach to weapons mastery must be undertaken to have maximum impact. The approach requires changes or additions to doctrine, schools, and reportable training requirements under Army regulations.

Changes to doctrine are already in progress with Training Circular (TC) 3-22.9, *Rifle and Carbine*, being published in May 2016; other TCs covering other weapons and training strategies are forthcoming. Changes to schools have also begun with improvements to the Heavy Weapons Leaders Course (HWLC) and additional weapons training modules

study conducted by HumRRO specifically sought to find an acceptable solution rather than producing weapons mastery, illustrated by the statement, "Throughout, the aim has been to produce more efficient combat riflemen with economy of ammunition and training time, utilizing the type and quality of instructors likely to be available in time of mobilization." *Trainfire* forms the basis of weapons training to this day.

This article has so far focused on skills with the rifle/carbine as it is by far the most issued weapon in the Army. However, lacking rifle mastery is but a small symptom of the larger systemic problem. While rifles are the most numerous weapons in the Army, crew-served weapons including specialty weapons such as the FGM148 Javelin missile or the M3 Multipurpose Anti-Armor Weapon System (MAAWS), known as the Carl Gustav, are even more important to man with properly trained personnel due to their capabilities and employment considerations.

While many say "shooting is shooting," there is much more than meets the eye with regard to different weapons. Shooting is shooting and the functional elements of employment, ballistics, and the effects of wind and weather

to the Basic Leaders Course (BLC) and Advanced Leaders Course (ALC). However, more is still needed to maximize overmatch through weapons mastery.

Updating doctrine only addresses some of the issues. The root problem is a lack of institutional knowledge throughout the Army resulting from a lack of comprehensive training. Implementing courses to build institutional knowledge within the NCO Corps produces mastery at the unit level and across the Army. The following courses would fill the training gap:

• **Javelin Gunner Course** — The Javelin Gunner course should be restructured to include the M3 MAAWS for a mission tailorable Javelin/MAAWS team. It covers the Javelin, the M3 MAAWS, target recognition, M3 ammunition, and engagement techniques. The Javelin/MAAWS Gunner Course is designed for Skill Level 1 Soldiers and is a seven-day program of instruction (POI) producing the 2C additional skill identifier (ASI).

• **Master Marksmanship Trainer Course** — MMTC produces master marksmanship trainers and includes four levels or phases. Level 1 is a two-week POI training weapon (M16/M4) characteristics, cycle of operation, sights and optics, ballistics, the effects of wind and weather, marksmanship fundamentals, and coaching. Level 2 is a one-week POI training short-range marksmanship (SRM) while digging deeper into marksmanship fundamentals by teaching recoil management and teaching weapons handling skills such as reloads. Level 3 is a one week POI training mid-range marksmanship (300-600 meters) and covers concepts including environmental impacts on ballistics, range determination, target detection, moving target engagements, magnified optics, and angle fire. Level 4 is the final one-week POI, producing an efficient master trainer at the unit level through training management; training aids, devices, simulators and simulations (TADSS); surface danger zones (SDZ); teaching methodology; DA PAM 350-38; and competition. The MMTC pipeline produces extremely knowledgeable trainers capable of conducting comprehensive training with the M16/M4.

• **Small Arms Instructor Course (SAIC)** — SAIC is similar to the Small Arms Weapons Expert (SAWE) course that was briefly conducted under the MCoE. Successful completion of MMTC Levels 1-3 is a SAIC prerequisite. This course focuses on the M320, M249, M9, and adult learning theory in a two-week POI, producing qualified instructors to train Soldiers in employment of squad-organic weapons and should have an ASI attached. Coding at least one squad leader position per platoon within infantry companies and reconnaissance troops for the SAIC-qualified ASI ensures an NCO Corps capable of training squad-organic weapons proficiency through advanced knowledge.

• **Machine Gun Leader Course (MGLC)** — MGLC is similar to the SAIC but specific to machine gunnery. Successful completion of MMTC Levels 1-3 is a prerequisite. MGLC trains adult learning theory, briefing techniques, weapons maintenance, machine-gun theory, crew drills, employment of machine guns (M249, M240, M2, and MK19), echelonment of fires, and an overview of SDZs in a three-week POI, producing qualified instructors to train Soldiers in employment of machine guns and should have an ASI attached. Coding weapons squad leader positions for the MGLC ASI ensures expert leadership and training at the platoon level with belt-fed weapons systems.

• **Heavy Weapons Leaders Course** — HWLC is currently conducted and undergoing improvement at the MCoE. It produces qualified NCOs trained to lead Soldiers in employment of heavy weapons and produces the B8 ASI. Restructuring should lead to HWLC covering heavy and specialty weapons including the Javelin, TOW/ITAS, MAAWS, and shoulder-launched munitions (SLM); the M2 and MK19 would be moved to the MGLC. Successful completion of MGLC should be a HWLC prerequisite. Coding anti-armor section leaders and senior scouts in the Infantry brigade combat team (IBCT) formation with the B8

A Soldier from the 198th Infantry Brigade adjusts the optic of another Soldier as part of the Master Marksmanship Trainer Course on Fort Benning, Ga., on 26 January 2016.

ASI provides expert leadership and training at the platoon level with heavy and specialty weapons.

• **Small Arms Master Gunner (SAMG)** — The SAMG course would be the finishing course to certify master gunners in the IBCT formation and could be accomplished by slightly restructuring the Master Gunner Common Core currently being conducted at the MCoE. It replaces MMTC Level 4 and consists of training management, the Digital Training Management System (DTMS), range development and construction, and SDZ development in a two-week POI. Successful completion of SAIC, MGLC, and HWLC is required to attend the SAMG course. The SAMG course produces qualified master gunners for the IBCT, just as the Bradley master gunner (ASI J3) and Abrams master gunner (ASI K8) are utilized in the ABCT and the Stryker master gunner (ASI R8) in the SBCT, and should be assigned an ASI which replaces all previously earned weapons ASIs. Each infantry company and reconnaissance troop training NCO position within the IBCT should be coded for the SAMG ASI; each battalion/squadron of any type of formation excluding the ABCT and SBCT should have a SAMG-coded position in the S3 section. All SAMGs can be utilized to expertly assist in the planning, conduct, and management of individual weapons skills and maneuver live-fire training.

The solution that best maximizes throughput for needed courses is a semi-centralized one. Divisions should activate training units, resourced by petitioning for a modified table of organization and equipment (MTOE) increase or by the U.S. Army Training and Doctrine Command (TRADOC) providing positions aligned with and assigned to each division; the training units are filled from within the division. Separate battalions and brigades use the nearest division training unit to resource the necessary training seats. All of the above listed courses would be conducted at home station by the divisional training units (as accredited by the MCoE and TRADOC) with the exception of SAMG; within the active component, this increases throughput tenfold over conducting courses only at the MCoE while providing significant savings in temporary duty (TDY) expenditures. Using this solution, only 100 NCOs (10 per division), could produce approximately 1,600 MMTC Level 3, 720 SAIC, 720 MGLC, 720 HWLC qualified leaders, and 720 Javelin/MAAWS qualified gunners annually by conducting one quarterly instance of each course with a 4:1 student-to-instructor ratio for MMTC and 6-8:1 for all others.

Further, divisional training unit cadre will externally evaluate weapons employment during company combined arms live-fire exercises (CALFEXs), providing brigade commanders with objective analysis of weapons mastery levels within their organizations.

Conclusion

The Army will and should continue to seek materiel solutions to enable overmatch at all echelons. However, without an increase in weapons proficiency, squad overmatch will not be fully realized. In his book *The Acts of King Arthur and His Noble Knights,* John Steinbeck wrote, "The purpose of fighting is to win. There is no possible victory in defense. The sword is more important than the shield and skill is more important than either. The final weapon is the brain. All else is supplemental."

Widespread weapons mastery will never be reached without a significant change in training, rendering materiel solutions less effective than they could be. In order to truly achieve overmatch, the Army must prioritize professional development within the NCO Corps concerning small arms and anti-armor weapons systems.

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Soldiers with Company C, 2nd Battalion, 27th Infantry Regiment, 3rd Brigade Combat Team, 25th Infantry Division, fire the Javelin anti-tank weapon at the Pohakuloa Training Area, Hawaii, on 28 July 2016.

Photo by SPC Patrick Kirby

EAST AFRICA RAF:
A VIEW FROM THE GROUND

CPT RENEE SANJUAN

"The Army is globally responsive and regionally engaged; it is an indispensable partner and provider of a full range of capabilities to combatant commanders in a joint, interagency, intergovernmental and multinational [JIIM] environment. As a part of the Joint Force and as America's Army, in all that we offer, we guarantee the agility, versatility, and depth to prevent, shape, and win."

— Army Strategic Planning Guidance 2013

Background

The Army has combat-proven, tactical-level leaders who have worked closely with local leaders across Afghanistan and Iraq, but how does the Army leverage such talent and experience to engage effectively on a regional scale? After returning from a deployment to Afghanistan, the 4th Infantry Brigade Combat Team (IBCT), 1st Infantry Division was designated to replace the division's 2nd Armored Brigade Contact Team as the second Regionally Aligned Force (RAF) for Africa Command (AFRICOM). While small elements throughout the brigade deployed for training events and conferences, the 2nd Battalion, 16th Infantry Regiment served as a forward-stationed capability under the operational control of the Combined Joint Task Force-Horn of Africa (CJTF-HOA). This article will specifically focus on the forward-deployed element although many of the lessons learned can be applied to the remaining RAF force. The battalion received additional capabilities and built a task force (TF) ready and able to engage partner nations (PN) throughout East Africa. TF 2-16 broadened expectations for forward-deployed security elements, providing greater flexibility and capability to CJTF-HOA. Over the course of nine months, TF 2-16 fulfilled a complex mission set, which consisted of two East African response forces, a full training cycle, more than 70 theater security cooperation (TSC) initiatives, and newfound partnerships. This article serves to address challenges and expectations in order to provide lessons learned

to future RAF elements. As the Army shifts efforts toward regional alignment, such conversations become critical to the successful employment of capabilities throughout the world.

Deployment Preparation

Force Structure — In order to be an effective RAF, the unit needs to align its structure to cover the mission set, interact with allied nations, and meet the needs of African partners. A reliable projection of missions and a battle rhythm help align the force structure to conduct daily operations, operational missions, and TSC operations. However, in order to create an appropriate force structure and prepare for critical missions, units need accurate information on countries within the area of responsibility (AOR) with regards to not only their structure but also their historical engagements and projected needs. Partnering with our allies at the task force, company, and even platoon level calls for structures closely aligned to both regional capabilities and local force structures in order to make joint training and engagements more rewarding. Furthermore, within the organizational structure, there must be subject matter experts (SMEs) for TSC activities. Communication of growing trends and needs is imperative to provide continuous partnerships rather than a cyclic relationship that starts over with each unit. Mission commanders (MCDRs) typically deploy in support of missions

Photo by USAF SSgt Kevin Iinuma

Arta Interservices Military Academy cadets observe a Soldier from the 2nd Battalion, 16th Infantry Battalion during convoy training in Arta, Djibouti, on 9 December 2014.

for two to six weeks at a time. This calls for units to continuously improve their force structure and provide a more leadership-heavy organization. To support such efforts based on African nation requests, TF 2-16 recommended to its replacement that it deploy more senior NCOs, particularly in the logistics and counter-improvised explosive device (C-IED) fields. The emphasis on building the JIIM team is helping units develop more in-depth knowledge of other players in the area, but the most critical link is joining scattered information into a more user-friendly, timely, responsive, and easily shared web of knowledge.

Pre-deployment training — Training must continuously evolve as experience grows. The challenge planners faced was to prepare the brigade for a vast area with complex and different cultures. TF 2-16 attended a week-long block of instruction, which focused on the entire continent of Africa. The focus was too broad for those deploying to East Africa. Identifying skill-focused teams would more sharply target mission objectives in training. Training could then separate teams into areas of interest, and after a regional overview, the unit could split into task-focused working groups with an experienced advisor. Specialty military-to-military (MIL-MIL) teams could even pair with SMEs returning from theater. The 1st Battalion, 77th Armored Regiment — the unit which replaced TF 2-16 — received an informal version of this concept during their Combat Training Center rotation due to previously deployed leaders conveniently serving as observer-controller-trainers (OCTs). While a relief in place (RIP) should provide similar knowledge, the use of redeployed personnel

as instructors for a pre-deployment curriculum could provide a more effective learning environment due to the lack of competing requirements found during a RIP. This example could be captured as a lesson learned and then formalized across the Army.

Aside from the general approach to pre-deployment training, TF 2-16 identified particular areas and skills which required an increased focus. Units would benefit from foreign weapons training and survival, evasion, resistance, and escape (SERE) training. For foreign weapons training, knowing what weapons our East African PNs use is critical. The opportunity to receive hands-on experience prior to deployment ensures that trainers are better prepared for TSC missions. In some cases, MCDRs first handled the foreign weapon system after already being deployed. Such an experience highlights the need for technically savvy and flexible leaders for these mission sets. Furthermore, when teams deploy, they operate in small teams, which is different than what most personnel experienced in previous deployments. To address this experience gap, CJTF-HOA assigned an Asymmetric Warfare Group (AWG) operational advisor to the task force who had years of experience in that realm. However, resourcing in-depth training, like SERE training, for future MCDRs (or train-the-trainers) prior to deployment would better posture the unit for success and provide a more steady solution.

Lastly, upon arrival to theater, forward-deployed units need to conduct follow-on training in all areas with joint partners from CJTF-HOA and embassy teams. Battlefield circulation throughout East Africa during the pre-deployment

A Soldier with the 2nd Battalion, 16th Infantry Regiment covers his teammates during a dismounted patrol on 25 September 2014 at the 5th French Marines Desert Commando Course near Arta, Djibouti.
Photo by USAF SSgt Dillon White

site survey (PDSS) is imperative to establishing and passing off relationships critical to ensuring more productive communication prior to missions. There is no substitute for a face-to-face encounter. The first time PN leaders meet us should not be after our transfer of authority (TOA) but rather during the PDSS to build rapport and confidence with our counterparts.

Challenges and Recommendations

The problem set was complex: under a joint headquarters, TF 2-16 deployed small teams in support of TSC activities across East Africa. Young leaders faced the challenge of transitioning from combat operations in Iraq and Afghanistan to TSC activities throughout an unfamiliar region. The scope was significantly larger, and the force was drastically smaller. Innovation and initiative through mission command became the backbone of RAF operations. With the brigade operating from Fort Riley, Kan., a joint division headquarters co-located with the task force as small teams deployed to multiple countries. Challenges that would otherwise seem simple grew in complexity.

Most missions developed and came through three main sources: U.S. Army Africa (USARAF) staff, PN requests through embassies, and growing relationships/leader initiative. Each mission type required its own approach and produced unique challenges. While the threat was not imminent, the stakes were high: the RAF element had to "prevent violent extremist organizations from threatening America, ensuring the protection of the homeland, American citizens, and American interests."[1] In order to accomplish that objective, the RAF focused on two key tasks:

* Teach, coach, and mentor African partner militaries in order to enable them to neutralize violent extremist organizations; and
* Develop and strengthen JIIM relationships.[2] Both tasks needed devoted time, resources, and clear lines of effort (LOEs).

The Approach

Shortly after taking over the RAF mission in the Horn of Africa, TF 2-16 analyzed the mission set, mission feedback, and AWG reports. Missions focused on MIL-MIL engagements across the area of operation, but the approach was fractured, sporadic, and missed mission analysis. TF 2-16 staff's task was imminent: transform our approach to MIL-MIL engagements by focusing on the military decision-making process (MDMP) and provide MCDRs with a clear task and purpose. Following a deliberate MDMP, the Fire Effects Coordination Cell then acted as the proponent for an accelerated MDMP for the enduring mission. However, there was a lack of detailed information to conduct a true MDMP. At the very least, MCDRs attempted to conduct reconnaissance missions or video tele-conferences (VTCs) to gather necessary information prior to missions. However, reconnaissance or assessment missions were not effective due to PNs' differing expectations, and conducting VTCs with the necessary personnel was unreliable. When a MCDR sent requests for information (RFIs) to PNs for mission planning and analysis, they received incomplete information if any at all.

Country team synchronization meetings occurred at the division level, but they seemed more staff focused than MCDR focused. A follow-on working group with key players for the upcoming mission could address RFIs and lead to more effective engagements. This group should require the attendance of an embassy representative and eventually a point of contact (POC) from the requesting unit. If personnel are not able to meet in person, then a VTC would be acceptable. This would fill the void of the analysis that would otherwise be provided by a brigade staff element and provide face-to-face emphasis on critical pre-mission coordination.

TF 2-16's C-IED cell achieved success with mission preparation and execution due to the increased need across PNs. This drove the ability to establish continuity by working with the same country desks and at times the same units or schools. Not surprisingly, they emphasized that it is "essential to be embedded into the initial planning process for every mission."[3] Upon receiving the mission, Soldiers identified a lead trainer to help plan and certify subordinate trainers. At D-30, all the trainers focused on the material and rehearsed the classes until validated by the engineer cell NCOIC. They used the Army's troop leading procedures and the eight-step training model, which were extremely effective and provided maximum flexibility.

Understanding Capabilities

With respect to our African partners, we often lack a clear picture of their capabilities. When we plan a mission, we expect comprehensive intelligence products on our targets. Why should RAF missions and supporting MIL-MIL engagements be any different? When we conduct recons prior to MIL-MIL engagements, we start behind the curve as opposed to truly building off the knowledge collected from previous engagements, particularly when those engagements are conduct by other units. A lack of knowledge and an unclear concept prior to the mission creates confusion on the ground. For example, during a five-day long-range marksmanship (LRM) engagement, Headquarters and Headquarters Company (HHC) sent a small team to conduct an assessment on Kenyan Defense Forces' (KDF) sniper capabilities to better understand the strengths and weaknesses of the KDF. However, the KDF's expectation differed from that of the mission statement provided to the TF 2-16 MCDR. KDF soldiers attending the assessment were not trained in LRM and instead expected the U.S. team to provide instruction, causing the U.S. team to be less prepared for its mission.

The information is out there, scattered amongst different people and organizations. Only when we can effectively synchronize the information and make it easily accessible will RAF elements be able to overcome such challenges. A Partner Nation Data Packet (PNDP) should be provided to MCDRs prior to their departure on a TSC mission. MCDRs need a more in-depth brief on the mission focus to include:

PN capabilities, previous training, equipment, and doctrine. However, as observed in the Kenya mission, being provided information does not necessarily mean that the MCDR will have an accurate understanding of the PN. According to a June 2014 report by AWG operational advisors assigned to CJTF-HOA, "understanding the PN and its culture, language, capabilities, and capacities is important to achieving a seamless and effective mission."[4]

With the shortfall identified, who is responsible for the product? Currently, no single office is ready or able to conduct such expansive and focused assessments. A training-specific intelligence estimate would require an intelligence and operations fusion cell. Thus adding fusion cells to embassy teams would provide an on-the-ground capability to communicate back and forth between MCDRs, PNs, and the Department of State. They could also collect information from MCDRs prior to their departure in order to ensure accurate and updated information. The PNDP is the first step towards a collective understanding and effective dissemination of information. Once received, a TF intelligence section can focus on analyzing the information for mission execution.

As the Army increases its RAF efforts by providing more resources and larger areas of interest, MCDRs need a place to start their research besides Google or hundreds of after action reviews (AARs) on a portal. According to the civil-military operations (CMO) officer at CJTF-HOA, the next step to making information available across the region is to establish a RAF Interactive Information Network (IIN).[5] Once developed, the next step is to make the products accessible across the Army. In the digital age where we have access to instant communication, we should have a network with information, assessments, videos, pictures, programs of instruction, and points of contact available at our fingertips. For RAF missions, the most effective means of organizing all of the data would be by location, with all topics and mission categories searchable across the world. As the Army increases its RAF footprint across the combatant commands, those waiting to deploy to any area of the world could benefit significantly from this effort.

Partner Nation Needs

African countries work with multiple nations besides the United States, which illustrates the mission complexity. During a Uganda Tactical Combat Casualty Care (TCCC) mission, for example, the medical team identified that the Ugandan People's Defense Force soldiers received previous training from French, British, Dutch and Italian forces. Therefore, we cannot assume that their doctrine or tactics, techniques, and procedures (TTPs) will directly mirror ours or that they will choose to use all the TTPs we give them. Additionally, for Eastern Africa, the African Union Mission in Somalia (AMISOM) is a significant operation and a large focus for training efforts. Solutions used in our combat experience may not be accessible or practical in Somalia.

Furthermore, AMISOM forces receive equipment and training from multiple bilateral agreements as well as UN Support of AMISOM (UNSOA). There are differences between how a given country's forces operate under their own doctrine and how they operate under the African Union and United Nations. In short, every country operates differently based on its capabilities, and we cannot assume that it operates the same as us. We need to be able to relate to each nation's particular challenges. Teaching courses which focus on AMISOM-specific operations helped provide the task force with knowledge to conduct future TSC missions.

A growing need for C-IED training drives our efforts to support PNs. The goal of the TF 2-16 C-IED training cell was to enable Troop Contributing Countries (TCCs) with internal capabilities and systems to establish their own C-IED training programs. We provided in-depth training for the PNs, but a train-the-trainer approach would be more effective if adequately supported by the PN.

Photo by USAF SSgt Dillon White

U.S. Army Soldiers demonstrate how to sweep an injured soldier to find potential massive bleeding on 21 July 2014 at the Arta Interservice Military Academy in Djibouti.

Training aids need to be focused on what the PN uses. For medical training, units benefit more from training with improvised items instead of combat application tourniquets or emergency trauma bandages. After working with gendarmerie (police units) in Djibouti, we received a report that a gendarme used a veil from a nearby girl to make a tourniquet at the scene of a vehicle-motorcycle collision. The gendarme reported, "Our intervention was crucial since it helped us to demonstrate the good results of the 48 hours of first aid training we received from an experienced American team." SGT Joshua Morrison, an instructor during the training, responded to the report by stating that "knowing that what we teach is actually being used makes being here worthwhile." The main takeaway from that event is that by focusing on the actual capabilities and resources available to local forces, we can better influence the effectiveness of that force.

Other challenges are the funding process and time lag. After going on a mission to conduct an assessment and "share best practices" under Title 10 funding, MCDRs returned eager with a recommended way ahead. However, the funding process could take years. The friction causes confusion with PNs. Funding delays result in old LOE strategies driving current missions. Commanders should be given more flexibility to make missions responsive to PN needs and morphing LOEs, especially in regions with ongoing combat operations. Current operation funding requirements tie the hands of those planning missions, causing efforts to slow down or go in the wrong direction. Young leaders are used to combat operations that are end-state focused and produce quick results. The complex and time-consuming funding approval process slows a RAF unit's ability to effect change, and such delays can decrease confidence and trust between nations.

JIIM Team

Growing in importance, there are countless players involved in TSC efforts. Joint missions require a delicate touch, but efforts continue in hopes of reaching synergy through integrated employment of initiatives. CJTF-HOA drove the focus on strengthening the JIIM team and partnerships throughout the region, and Task Force 2-16 took initiative with every possible opportunity. Within months of TOA, the TF created close partnerships with other units in CJTF-HOA like Civil Affairs and Navy Seabees; allied partners such as the French, Germans, and Japanese; and units within Djibouti such as the Joint Military Academy at Arta (AMIA) and Djibouti armed forces. At the battalion level and below, experience working with JIIM environments is limited. Operating without the unifying thread of combat operations against a common threat challenged leaders as they worked to build the JIIM team. Building good rapport and an understanding of what each capability brings to the table helps drive mission success. According to an AWG study conducted to assess the RAF mission, "a common theme among all country teams in the region is the desire to limit the DoD signature while still achieving desired operational and strategic goals."[6] While understandable that the Army is not

Focusing on leader development and mission command will ensure that elements are prepared for this unique mission. Lessons learned need to be communicated effectively throughout the Army, providing a robust network of knowledge that can be shared directly between mission commanders.

the face of efforts as was so in Iraq and Afghanistan, we can be more effective in a synchronized approach.

As we passed off our partnerships to the incoming unit, we emphasized the importance of taking the relationships to the next level by synchronizing LOEs with our multinational teammates in a regional approach. The next step in JIIM team efforts is to build strong relationships with our allies and then expand those relationships to host joint exercises.

Takeaways

The Regionally Aligned Force needs to put efforts towards gaining access, shaping the environment, and then refining the approach. To refine the RAF approach, our TSC missions need to be more targeted and deliberate with special emphasis on enablers such as embassies and Department of State officials to help multiply our efforts. As the Army expands its efforts to effectively align with regions across the world, the AFRICOM RAF serves as a lens by which future missions can be assessed. The missions are uncertain and challenge leaders to be creative in the employment of their capabilities. Focusing on leader development and mission command will ensure that elements are prepared for this unique mission. Lessons learned need to be communicated effectively throughout the Army, providing a robust network of knowledge that can be shared directly between mission commanders. Doing so will create a more flexible and effective force. However, in order to be effective partners, the Army must still maintain its lethality as the most highly trained and professional land force in the world by maintaining skills and conducting challenging training. RAF units need to be more than partners; they need to lead by example by upholding the highest degree of professionalism in both action and ability to teach others to defend their countries.

Notes

[1] CJTF-HOA Vision Statement.
[2] Task Force 2-16 mission statement key tasks.
[3] Interview with TF 2-16 C-IED Cell OIC.
[4] Asymmetric Warfare Group (AWG) Report, June 2014, 13.
[5] Interview with CJTF-HOA civil-military operations officer.
[6] AWG Report, 28.

At the time this article was written, **CPT Renee Sanjuan** was serving as commander of Fox Company, 2nd Battalion, 16th Infantry Regiment, 4th Infantry Brigade Combat Team, 1st Infantry Division. The battalion completed a nine-month deployment to East Africa where it served under the Combined Joint Task Force-Horn of Africa.

Battalion CALFEX at JRTC

MAJ RYAN J. SCOTT

In 1996, after only three years in operation, the Joint Readiness Training Center (JRTC) at Fort Polk, La., opened Peason Ridge for live-fire training. At the time, the focus of combined arms live-fire exercises (CALFEXs) was on the platoon and company levels.[1] A CALFEX facilitates a much higher proficiency level for force-on-force training, enabling units to emerge from the Combat Training Center (CTC) at an even higher experience level. JRTC's goal was to build towards facilitating company- and battalion-level CALFEXs.

JRTC has come close to meeting its goal of conducting battalion CALFEXs, but until April 2015 they could only claim partial success. The closest JRTC has come to meeting a battalion-level CALFEX was in the late 1990s, with companies conducting live-fire training in sequence on an objective. Between 2004 and 2012, units training at JRTC were preparing for combat deployments to Iraq and Afghanistan. Although the live-fire training remained, the counterinsurgency environments required emphasis on convoy live-fire training more than CALFEX. Due to the Army Force Generation (ARFORGEN) process, time constraints, and non-standard mission requirements, core competencies fell to the wayside.[2] CTCs were putting emphasis on mission readiness exercises (MREs) rather than company- and battalion-level maneuver training.

After a decade of focusing on counterinsurgency and full spectrum operations, JRTC shifted its focus. In 2012, the implementation of unified land operations in a decisive action training environment (DATE) began with Rotation 13-01.[3] Since then, DATE scenarios have become common place at JRTC. And with this change comes the return of the CALFEX. However, this is not the CALFEX of the 1990s.

Most combat leaders who have experienced JRTC know the value of the CALFEX. Live-fire training not only replicates a war-like environment, but it also helps condition Soldiers to engage the enemy. In the opening pages of *On Killing*, LTC (Retired) Dave Grossman describes the enormous value these exercises have on conditioning Soldiers. He argues that even when Soldiers are exhausted and deprived they will still function with proper conditioning.[4] Furthermore, to be successful on the battlefield, leaders must know the limits of their weapons and Soldiers. So certainly, no one will argue against the value of live-fire training.

Unfortunately, the overwhelming majority of leaders have never experienced true battalion-level live-fire training at JRTC, much less trained for it at home station. But don't worry, this is not an impossible task to overcome. Having

recently experienced the planning and execution of the 1st Brigade Combat Team, 82nd Airborne Division's JRTC Rotation 15-06, I know leaders can succeed at executing a battalion-level CALFEX at the JRTC. This article describes the JRTC battalion-level CALFEX, highlights its value global response force (GRF) and regionally aligned forces (RAF) training, and offers a practical framework for home-station battalion-level live-fire training.

Event	HQs	Platoon	Platoon	Squad	Mortar	Battery	Aviation
Light/Heavy Deliberate Attack	X	X	X	X	X	X	X
Ambush		X					
Movement to Contact		X	X		X		
Trench		X	X		X		X
Raid	X		X		X		
Convoy Security	X		X				

Figure 1 — Menu of LFX/Unit Participation from FORSCOM Regulation 350-50-2 (July 2000)

The JRTC CALFEX: The 1990s vs. 2015

The purpose of the JRTC CALFEX is to validate training proficiency. The goal is to tailor training to the operational environment, optimally from the platoon to battalion level.[5] However, until April 2015, JRTC had not conducted a live fire above the company level. The closest example of a battalion-level, live-fire event (as seen in JRTC Rotation 15-06) was between 1996 and 2002. During this period, the CTC trained rotational units to defeat a near-peer adversary rather than to attain proficiency in counterinsurgency operations.

To understand the JRTC CALFEX concept during that time, we must look at three areas: location, organization, and execution. Prior to 1996, live-fire training was in the Fullerton training area — "the Box." This meant live-fire training took place relatively close to the force-on-force maneuver space. Having a short distance to travel for training simplified platoon and company movement as well as the logistical planning for ammunition, food, and other life support. However, much of the maneuver areas closed during live-fire training because of the surface danger zones within Fullerton.

"Surface danger zones are the ground and airspace designated within the training complex (to include associated safety areas) for vertical and lateral containment of projectiles, fragments, debris, and components resulting from the firing, launching, or detonation of weapon systems to include explosives and demolitions."[6]

As a result, live-fire training occurred prior to the first force-on-force training day — D-Day.[7] In 1996, the JRTC moved its live-fire training area from Fullerton to Peason Ridge. This move added a distance of roughly 20 kilometers, significantly increasing the rotational unit's planning and logistical requirements for conducting a CALFEX.

In addition to relocating to Peason Ridge, JRTC's organization of the live-fire division was a critical component of live-fire training. The live-fire division used a seven-team model.[8] The training objectives determined the design and scenario of each team. Team 1 was a movement-to-contact team for light and heavy forces. Team 2 was the ambush and village training team. Team 3 was trenches, the ditch-like network of fighting positions reminiscent of World War II. Team 4 was artillery. Team 5 was the Special Operations Forces (SOF) team. Team 6 focused on specialized training.

Team 7 was the armor and mechanized team. Collectively, these core live-fire observer-controller (OC) teams made up the live-fire division. There were no force-on-force OCs.

In July 2000, JRTC published an update to U.S. Army Forces Command (FORSCOM) Regulation 350-50-2, *Training at the Joint Readiness Training Center.* Based on the brigade commander's training requirements, units also had a menu of options for executing live-fire training. It included light and heavy deliberate attack, ambush, movement to contact, trench, raid, and convoy security (see Figure 1). The menu also put emphasis on the squad and platoon levels. Prior to executing a CALFEX at the JRTC, units had to meet the following prerequisites:[9]

- Units must have completed live-fire training within the last six months at home station.

Heavy force units participating in live-fire must:

- Have qualified all anti-armor crews on table XII within the last six months;
- Provide copies of the most recent tank or Bradley crew gunnery skills test; and
- Bring the original weapons data card (DA Form 2408-4) for each vehicle.

Indirect fire units participating in live-fire must:

- Ensure all participants are command safety certified by the battalion commander;
- Bring the original weapons data card (DA Form 2408-4) for each vehicle; and
- Establish a method to check all mortar firing data.

Typically, live-fire training took two days, running into the early morning of the third day depending on the scenario chosen and experience level of the unit. The first day consisted of administrative preparation and tactical planning. Units coordinated for food and logistics to sustain the force for a period of 48 hours. This included developing a wish list for the types of ammunition the unit wanted to train during the live fire. Platoon sergeants would have to distribute the different types of ammunition to their squads using the same planning considerations as in a combat environment. Simultaneously, the company commanders and platoon leaders would conduct tactical planning. Using the Army's troop leading procedures (TLPs), junior leaders would receive an operation order (OPORD) with a specific mission and end state and determine how to address the problem. The outcome of their planning resulted in an executable plan on day 2.

Day 2 consisted of rehearsal and execution with live ammunition. First, units would rehearse their plan to refine and visualize their concept the operation. This also offered the live-fire OCs a litmus test on the proficiency of the unit; a technique still used today. Units not proficient after several rehearsals would conduct live-fire operations in the daytime only to mitigate risk. Those units conducting the nighttime task would attack their objective at 0200. The live-fire training would culminate at 0500 or when units became combat ineffective.

From 1996-2002, rotational units that trained as a battalion never conducted the live fire as a whole battalion during execution. Although a battalion-sized element received the mission and planned for its execution, companies conducted rehearsals and executed separately from the battalion. Additionally, multiple companies completed live fires sequentially. Company A would attack an objective followed by Company B attacking a different objective. Thus, only one company was on an objective at a time, and companies did not attack multiple objectives simultaneously.

Today, the live-fire division has improved its ability to provide complex training, providing a true battalion-level CALFEX experience. Proof of this comes from looking at its multiple locations, organization, and execution. The Army has invested significantly in funding Fort Polk with the Digital Multi-Purpose Battle Area Complex (DMPBAC), Combined Arms Collective Training Facility (CACTF), and Shughart-Gordon Military Operations in Urban Terrain (MOUT) site as additional off-site locations that rotational units can request for training.[10] However, Peason Ridge training area remains the primary location for conducting live-fire training.

The live-fire division now has a smaller organization with fewer teams. The live-fire division's mission command structure includes the live-fire chief, deputy, command sergeant major, supply sergeant, operations section, and teams. There are three true teams to support live-fire training. The first is the maneuver team which includes three teams. The second is an indirect fire team. The final team includes a single Special Forces trainer and an aviation liaison. Although the live-fire division is smaller, it can easily facilitate a battalion-level CALFEX when partnered with force-on-force observer-coach-trainers (OCTs).

To simplify operations during the battalion-level CALFEX, the live-fire division is dependent on force-on-force OCTs to provide coverage. During the 2nd Battalion, 501st Parachute Infantry Regiment's (PIR's) JRTC rotation in April 2015, the live-fire division managed live-fire safety and the overall execution of the training while the force-on-force OCTs assigned to 2-501 PIR facilitated the live-fire training by:[11]

- Issuing the battalion OPORD to the rotational unit;
- Receiving the rotational unit back brief;
- Controlling unit pickup and

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movement to Peason Ridge;
- Facilitating classes and dry rehearsals;
- Facilitating full mission profile rehearsals;
- Conducting change of mission and live-fire after action reviews (AARs); and
- Controlling unit pickup and return from Peason Ridge.

Using this method, the live-fire division was able to focus on realistic, rigorous, and safe training within the scope of the battalion commander's training objectives. This benefited the force-on-force OCTs as well, giving them a holistic look at the unit they were mentoring.

The JRTC still offers units a menu of one or a combination of missions based on the brigade commander's training objectives.[12] Similar to the 1990s, units must complete a list of prerequisites prior to live-fire training at JRTC. These include:[13]

Maneuver Units:
- Units must complete a like level live-fire exercise (LFX) under similar conditions in the last 180 days (not a show stopper — habitually see units come to JRTC trained one level down).
- All Soldiers must have qualified on their assigned weapons within the last 180 days.
- All Soldiers must arrive at JRTC with zeroed weapon systems (both iron sights and optics).

Indirect Fires:
- Units must complete a like level LFX under similar conditions in the last 180 days (not a show stopper — habitually see units come to JRTC trained one level down).
- All Soldiers must have qualified on their assigned weapons within the last 180 days.
- All Soldiers must arrive at JRTC with zeroed weapon systems (both iron sights and optics).
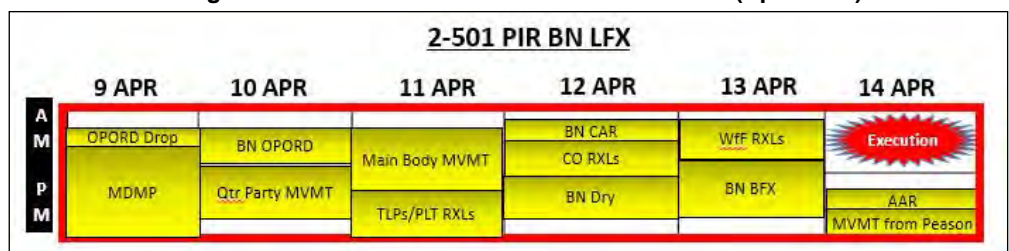
Battalion Live Fire:
- Leadership stabilization for weapon squad leader and above.

Figure 2 — The JRTC Live-Fire Iteration Timeline (April 2015)

Photos courtesy of author

LTC Mark Ivejaz, commander of the 2nd Battalion, 501st Parachute Infantry Regiment, speaks during the battalion live-fire OPORD brief.

- Company level day/night live fire within the last six months.
- Company fire support coordination exercise within the last six months.

Exceptions to Policy:
- Brigade commander memorandum to the commander, Operations Group (COG).

The execution is by far the most impressive aspect of the battalion-level CALFEX. It took seven days for the 2-501 PIR to execute the JRTC's first battalion-level live fire. For 2-501 PIR, training began on 9 April 2015. The unit received a battalion OPORD from the OCTs. On the second day, 2-501 PIR completed battalion-level planning and issued a battalion OPORD. Soon after, the battalion began movement of the quartering party to Peason Ridge to establish its tactical assembly area. By 1400 on 11 April, 2-501 PIR had all its Soldiers on the ground at Peason Ridge and began company OPORD and TLPs.[14] Day four was dedicated to the battalion combined arms rehearsal and dry rehearsal. Day five was the blank fire. Day six was the execution day; 2-501 would attack with Alpha, Bravo, and Delta Companies on one objective followed by Charlie Company attacking two objectives sequentially. Following the execution, 2-501 PIR conducted AARs and redeployed from Peason Ridge.

The description above only scratched the surface on live-fire training. The JRTC live-fire training is the most realistic live fire units will do short of combat.[15]

The Value of the CALFEX in GRF and RAF Training

While the future is unknowable, combat readiness training remains essential for the GRF and RAF. The CTC CALFEX is the cornerstone of this training. Units that experience a CALFEX emerge from the CTC at a higher readiness level. It replicates combat conditions, educating leaders on the capabilities of their Soldiers and their weapons. Additionally, CTCs replicate battlefields where a commander can try new concepts without the fear of failure.[16]

The learning begins with a combined arms maneuver live fire. Leaders get a chance synchronize direct fires, mortars, artillery, and aviation. This forces leaders to think through:[17]

- Movement techniques
- Direct fires suppression
- Marksmanship
- Weapons discipline
- Battles drills
- Demolition

Rigorous and repetitive rehearsals is a core building block to live-fire training. The JRTC live-fire division uses the crawl-walk-run approach to the CALFEX. In the crawl phase, rotational units receive classes and complete dry rehearsals. The objective is for units to demonstrate proficiency in the key tasks required to execute their live-fire scenario prior to starting full dress rehearsals.[18] At JRTC, the rehearsals and actual live-fire training typically occur in separate locations. Every unit will conduct a minimum of two full mission profile rehearsals to validate their scheme of maneuver.[19]

In the walk phase, the training unit demonstrates its understanding of fire support coordination. During the fire support coordination exercise, platoon leaders and forward observers hone their skills in the employment of aviation and indirect fire assets. Unit leaders and the fire support team will describe overall guidance for fires and the fire support execution matrix for the mission.[20] The integration of aviation assets is essential to this training. As part of the "walk and shoot," platoon leaders will control the movement of real aircraft under the supervision of the forward observer, thus solidifying the relationship between the platoon leader and forward observer. [21] Once units demonstrate proficiency in the walk phase, they are ready for the actual live fire.

The execution of the live fire is the run phase of training. JRTC conducts a series of checks prior to the first weapon fired. In addition to checking aviation, indirect fires, and mortar assets, safety mechanisms are also reviewed.[22] Once completed, the training unit receives clearance to start the mission.

GRF and RAF must be ready to deploy in an unfamiliar environment at a moment's notice. Preparing for uncertainty is a phrase that will remain in our military lexicon. This is because high intensity conflicts are just as likely as humanitarian assistance operations. To be successful on the battlefield, the commander must know the capabilities of his weapons and Soldiers. And a battalion CALFEX at JRTC provides this opportunity. The challenge comes when deciding where to put emphasis during home-station training.

Home-Station Training: Back to Basics

There is no silver bullet to executing a CALFEX at JRTC. However, mastering the basics of mobility operations is a good start. According to recent live-fire division observations

and the JRTC trends published in Fiscal Year 2014, home-station training must focus on:[23]

- Squad- and team-level proficiency
- Mission command
- Asset management
- TLPs
- Maneuver

For squad and team proficiency, units should leverage the Army Training Network (ATN). With the Army Training and Evaluation Program (ARTEP) no longer valid in current Army doctrine, ATN provides an easy link to Army warrior tasks and battle drills. Warrior tasks are the individual skills known to be critical to Soldier survival.[24] Battle drills are collective actions (or tasks) performed by a platoon or smaller element without the application of a deliberate decision-making process, initiated on a cue, accomplished with minimal leader orders, and performed to standard throughout like units in the Army.[25] The ATN also offers leaders resources to tailor squad- and team-level training with user-friendly access to Army universal task list, unit training modules, and links to applicable doctrine.

Mission command helps commanders capitalize on the human ability to take action to develop the situation and integrate military operations to achieve the commander's intent and desired end state.[26] For live-fire training, understanding mission command helps leaders take disciplined initiative when synchronizing assets. In theory, it will also delineate the platoon, company, and battalion fight. Let us look at the employment of mortars as an example.

A mortar platoon leader is the combat leader and principal advisor to the battalion commander while the company/troop commander is responsible for the tactical employment of his mortar section. For a mortar section to be effective, the battalion/squadron commander must provide a clear intent and desired end state for what he wants his mortar unit's fires to do and how he wants them to support his maneuver.[27] To prepare for a CTC CALFEX effectively, embed mission command in home-station training.

A solid relationship between the commander and fire support officer (FSO) is critical to improving asset management. Asset management refers to the synchronization and employment of all direct and indirect fire capabilities. The higher the echelon of command, the more complex this becomes. Battalion and company FSOs are responsible for planning and coordinating the fire support plan.[28] This includes air-ground deconfliction of airspace, integration for aviation assets, and incorporating indirect fire. This is a large and difficult burden to bare. This is why the commander must foster this relationship and provide commander's intent. The result will be the appropriate level of guidance and optimal asset employment.

During every training event, of course, leaders use TLPs. However, subordinate-level leaders often remain stagnant as they wait for higher to issue an order. This wastes time and is counterproductive to effective planning. At home station, units must become comfortable with collaborating with, rather than waiting on, higher headquarters. This requires subordinates to begin parallel planning as higher develops the plan or order.[29] Additionally, during complex operations, bottom-up

Photo courtesy of the JRTC Operations Group Public Affairs

Soldiers with the 1st Battalion, 327th Infantry Regiment, 1st Brigade Combat Team, 101st Airborne Division (Air Assault), prepare to breach a building during a battalion live fire at the Peason Ridge training area on Fort Polk, La., on 10 April 2016.

refinement often helps the orders process. When companies and below become comfortable with parallel planning, it will maximize the available planning time and reinforce effective plans.

Lastly, one of the most important areas to focus home-station training on is maneuver. Based on recent feedback from the JRTC live-fire division, home-station training must focus specifically on improving the breach fundamentals — suppress, obscure, secure, reduce, and assault.[30-31]

Suppress. A sufficient supporting force is critical to suppressing the enemy. When done properly, it will employ enough direct small-arms fire to allow the breaching element to move. This may mean using 60mm mortars as part of suppressive fires. Suppression also includes tying rates of fire to high points of risk.

Obscure. Hand-emplaced smoke is the most responsive and most effective breaching obscurant.[32] During training, obscuration training should focus on degrading enemy observation and fires while not impeding friendly fire and control. Leaders must also place emphasis on the science of obscuration. This includes considering how many rounds to use, artillery time of flight, and smoke dissipation time.

Secure. Secure is a tactical mission task that involves preventing a unit, facility, or geographical location from being damaged or destroyed because of enemy action.[33] For home-station training, units must practice resourcing maneuver and supporting assets sufficiently to avoid giving the enemy freedom of action. In other words, set conditions for each maneuver element to have overwhelming success. Tying rates of fire to high points of risk applies here also.

Reduce. Reduction is the creation of lanes through or over an obstacle to allow an attacking force to pass.[34] Home-station training should put an emphasis on determining how to create maneuver lanes that rapidly build combat power. Additionally, redundant reduction methods will improve the combined arms breach.

Assault. The culminating event for the breach is the assault. During home-station training, ensure the assaulting force does not neglect to destroy the enemy on the far side of the obstacle. Failing to do so allows the enemy to place or observe direct and indirect fires on the reduction area. Next, integrate direct and indirect fires to establish and maintain the offense. Additionally, train on the triggers that synchronize:

- Shifting fire
- Lifting fire
- Ceasing direct fire
- Ceasing indirect fire

Home-station training is the foundation to a successful CTC CALFEX. This must involve mastery of the basics. If home-station training focuses on the trends listed above, units will reach the level of training required to succeed at any level of CALFEX.

Conclusion

This article describes the JRTC battalion-level CALFEX, highlights its value for GRF and RAF training, and offers a practical framework for home-station, battalion-level live-fire training. The focus of LFXs at JRTC has been on the platoon and company levels and has now grown to battalion. There is no doubt that a brigade combat team CALFEX will soon follow. Regardless of the scale of the exercise, live-fire training is a key part of the JRTC experience.

Notes

[1] U.S. Army Forces Command (FORSCOM) Regulation 350-50-2, *Training at the Joint Readiness Training Center (*July 2000), 85.

[2] 09-50: JRTC Trends 1-2 Quarter FY09, 6.

[3] 15-04: JRTC Decisive Action Training Environment Trends FY 2013-2014, 1.

[4] Dave Grossman, *On Killing: The Psychological Cost of Learning to Kill in War and Society* (NY: Back Bay Books), 18.

[5] Army Regulation (AR) 350-50, *Combat Training Center Program* (April 2013), 1.

[6] DA Pamphlet (PAM) 385-63, *Range Safety* (April 2014), 235.

[7] Jerry Hensen, interview with author.

[8] Ibid.

[9] FORSCOM 350-50-2, 82.

[10] Live-Fire Division Handbook and SOP (December 2014), 79.

[11] CPT T.J. Tepley, interview with author.

[12] FORSCOM 350-50-2, 141.

[13] FORSCOM 350-50-2, DA PAM 385-63, AR 385-63 prerequisites.

[14] CPT T.J. Tepley, interview with author.

[15] Live-Fire Division Handbook and SOP, 77.

[16] COL Michael Barbee, "The CTC Program: Leading the March Into the Future, *Military Review* (July-August 2013).

[17] Training Circular (TC) 7-9, *Infantry Live-Fire Training*, E-1.

[18] Live-Fire Division Handbook and SOP, 98.

[19] Ibid, 23.

[20] Ibid, 25.

[21] Ibid, 25.

[22] Ibid, 29.

[23] JRTC Live-Fire Division Trends, June 2014.

[24] Army Warrior Tasks and Battle Drills, https://atn.army.mil/dsp_template.aspx?dpID=105.

[25] Ibid.

[26] ADRP 6-0, *Mission Command* (May 2012), sec 1-5, 1-1.

[27] Army Tactics, Techniques, and Procedures (ATTP) 3-21.90, *Tactical Employment of Mortars* (April 2011), 2-2.

[28] Ibid, 2-2.

[29] FM 6-0, *Commander and Staff Organization and Operations* (May 2014), 9-2.

[30] CPT T.J. Tepley, interview with author.

[31] ATTP 3-6.11, *Combined Arms Operations in Urban Terrain* (June 2011), 66a.

[32] Ibid, 7-15.

[33] ADRP 1-02, *Operational Terms and Military Symbols* (August 2012), 1-33.

[34] Army Techniques Publication (ATP) 3-21.8, *Infantry Platoon and Squad* (April 2016), H-9.

At the time this article was written, **MAJ Ryan J. Scott** was serving as the G35 Combat Training Center (CTC) planner for the 82nd Airborne Division, Fort Bragg, N.C. He was responsible for planning CTC rotations to ensure mission-ready brigade combat teams (BCTs) from three formations in preparation for XIII Airborne Corps' global response force mission. A career aviator with various command and staff positions, he was commissioned in 2002 and entered active duty in the U.S. Army Aviation Branch at Fort Rucker, Ala. MAJ Scott now serves as the brigade aviation officer for the 3rd Brigade Combat Team, 82nd Airborne Division.

BCT Walk and Shoot:

Training Tactical Leaders on Setting Conditions to Achieve Combined Arms Maneuver

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In 1997, then-COL David H. Petraeus and MAJ Robert A. Brennan published an article in *Infantry* Magazine titled "Walk and Shoot Training" that described the development of a training scenario focused on training company commanders, platoon leaders, and their respective fire supporters on planning and executing a movement to contact (approach march) and employing indirect fires in support of the operation. In the article, the authors stated that while there are many cases where Infantrymen should aggressively close with the enemy, maintain contact, and kill him with direct fires, all too often tactical leaders fail to integrate fires into their plans in order to set advantageous conditions prior to closing with and destroying the enemy. The same lessons that led the leaders of 1st Brigade, 82nd Airborne Division to develop a "walk and shoot" tactical exercise without troops (TEWT) in 1997 not only continue to be seen today, but are compounded by the introduction of a host of enablers available to leaders in the current operating environment. Our tactical leaders often transition from platoon live-fire exercises directly into company live-fire exercises without getting valuable repetitions aimed at training them on the integration of all available assets to set advantageous conditions — a leader-intensive task. In February 2016, the 2nd Brigade Combat Team (BCT), 101st Airborne Division (Air Assault) executed a redesigned walk and shoot TEWT with the objective of training company and platoon leadership in the art and science of employing both indirect and direct

fires, multiple enablers, and maneuver elements to achieve synchronized combined arms maneuver. Such training is invaluable to our company leaders as they prepare to lead their formations in company combined arms live-fire exercises (CALFEXs) and should be built into the standard training progressions for maneuver leaders and units.

Rather than develop a training exercise that focused strictly on the employment of fires, 2nd BCT's redesigned "walk and shoot" utilized arguably one of the toughest tactical scenarios — the combined arms breach — to train company-level leaders on setting advantageous conditions in terms of the enemy situation, friendly situation, terrain, and timing. Furthermore, the exercise scenario provided the training audience context on how each echelon's actions contribute to the platoon, company, and battalion's successful accomplishment of mission. This challenging problem set forced leaders to visualize their mission and how it fits into the larger scenario. The exercise forced company leadership to plan for and employ all assets to include organic elements and numerous enablers. Additionally, the scenario drove leaders to understand the use of space and time to synchronize effects to set conditions and inevitably overwhelm the enemy at the decisive point in the battle. This exercise provided leaders in squad leader positions and above valuable repetitions on the tasks they must master to truly achieve synchronized combined arms maneuver. The lessons learned during 2nd BCT's "walk and shoot" will undoubtedly increase participants'

Members of the heavy weapons squad occupy a support-by-fire position as smoke comes in beyond the wire obstacle during the 2nd BCT's walk and shoot exercise.
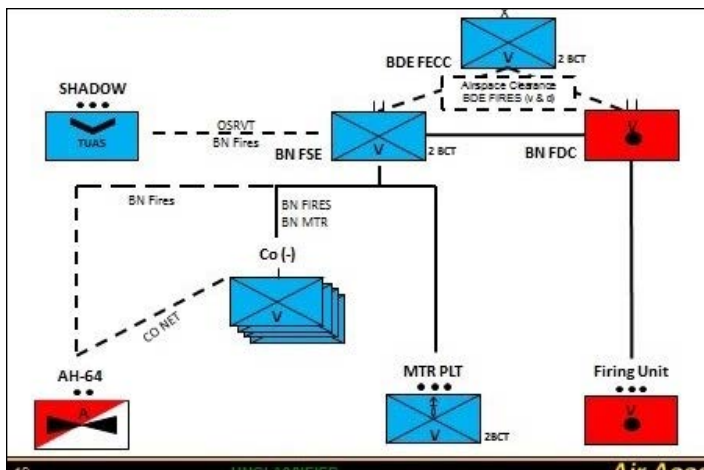
Photos courtesy of authors

Figure 1 — Walk and Shoot Exercise Communications Architecture and Clearance Process

proficiencies as they progress towards training with their entire formation and leading their Soldiers into combat.

Exercise Design

In general, the exercise centered on a company's mission to breach a linear mine/wire obstacle and set the conditions to allow another company to execute a forward passage of lines through the obstacle and assault a follow-on objective. The company team executing the lane was designated as a shaping operation focused on setting conditions for a subsequent unit to assume the decisive operation. The company team consisted of two rifle platoons, one mounted anti-tank platoon, and an engineer squad. The training audience for each element included company leadership, platoon leadership, a heavy weapons squad, company mortars, and the habitually aligned fire support teams. In addition to the elements task organized under the company, the order also outlined enablers that would be utilized in the operation. These enablers included battalion mortars, 105mm and 155mm howitzers, air weapons teams (AWTs), and the BCT's organic Shadow unmanned aerial vehicle. To add realism to the scenario, these external enablers served in a direct support role to the battalion and BCT and were allocated based on the higher-level unit's priorities. Furthermore, in order to employ these assets, company teams were required to utilize battalion and brigade mission command nodes as opposed to establishing quick fire nets. Not only did this add realism to the scenario, but it also provided a superb training opportunity for battalion and brigade fire support elements (FSEs) and tactical command posts (TACs).

Each company team executed the lane in three phases. For each of these phases, the BCT resourced both maneuver and fire support observer-controllers (OCs) for the company command team and each of the platoons as well as subject matter experts to observe each of the supporting enablers. The OCs were provided training and evaluation outlines that were used to rate the training element on the individual and collective tasks associated with each event during the exercise. The first phase consisted of executing the lane in a virtual simulation utilizing Virtual Battlespace 3 (VBS3). The virtual environment replicated the same terrain and a similar enemy situation that the units would see on the range. Additionally, the unit replicated the same communications architecture and included supporting teams that replicated the enablers. The second phase consisted of a blank iteration on Observation Point (OP) 13 in the Fort Campbell training area. Prior to the blank iterations, companies conducted a combined arms rehearsal (CAR). All direct fire weapon systems were fired using blank ammunition, and the indirect fire weapons systems used either target practice-tracer (TP-T) rounds or a single high explosive (HE) round. The signature from the indirect fire weapons systems provided the training audience feedback on the effectiveness of their fires while conserving training ammunition. Upon successful completion of the virtual and blank-fire phases, the training unit advanced to the live-fire portion of the exercise.

OP 13 consists of an area approximately 1,000 meters in length and 400 meters in width that extends into the northern impact area. There are approximately 10 clearly identifiable vehicular targets that are located just beyond the OP in the impact area. Additionally, the range has five wooden structures and pop-up direct-fire targets positioned within the cleared area of the range. As you move from east to west in the cleared area of the range, there are three sets of berms. Indirect fire weapons systems from 60mm mortars up to 155mm artillery can effectively engage the targets in the impact area from firing positions to the northeast and south of the range. Units are allowed to employ individual weapons,

Figure 2 — Example Evaluation Checklist Used by OCs

PERFORMANCE MEASURES: Maneuver	GO	NO-GO
1. Unit leaders gained or maintained situational understanding.		
2. Unit leaders adjusted the plan.		
3. Unit executed the attack.		
4. Unit conducted consolidation and reorganization.		
5. Unit reported status to higher headquarters.		
6. Directed unit reaction to the obstacle.		
7. Obtained pertinent obstacle intelligence from unit recon and reports from other units.		
8. Developed the breach plan.		
9. Directed actions of the support force to support by fire.		
10. Ensured the mounted/dismounted elements secure the near side of the obstacle.		
11. Directed the breach force to reduce the obstacle using the method designated in the order.		
12. Established far side security for breaching operation.		
13. Directed actions on the objective.		
14. Reported completion of the breach to the higher unit commander.		

crew-served weapons, M203s, M320s, .50 caliber machine guns, MK-19s, AT4s, Carl Gustavs, and Javelins on the range.

The training scenario focused on validating company-level leaders' ability to plan and execute a combined arms breach. The breach of the obstacle was the decisive point for training units. This drove each element to plan for setting the conditions and executing suppression, obscuration, security, reduction, and the assault (SOSRA). Prior to executing the lane, each company team received updated intelligence on its area of operations (AO), and the higher-level headquarters would set the conditions prior to allowing the training unit to cross the line of departure. All OCs walking the lane carried a list of lane injects that outlined targets that were safe to engage based on minimum safe distances from each berm and target descriptions that coincided with the

During the walk and shoot exercise, a platoon forward observer plots and reports his location as the platoon establishes a support-by-fire position.

tactical scenario. This allowed for a significant amount of "free play" by the training unit. After identifying the targets to the training audiences and providing a description of the situation, OCs only injected themselves if there was a gross error in target location that violated the minimum safe distances for the weapons system being utilized. The officer in charge of the range used a script to introduce injects into the scenario and drive the training audience to make decisions.

Lessons Learned

The training audience quickly realized that one does not simply "walk and shoot." Achieving synchronized combined arms maneuver against a thinking enemy while executing a complex mission exacts a heavy toll on leaders. While there were volumes of individual and collective lessons learned by each of the maneuver companies that participated in the training, there were four key lessons learned that would benefit leaders as they progress into company combined arms maneuver live fires:

* First, leaders must understand the mechanics of employing their forces or enablers.
* Second, leaders must understand the actions required to achieve their desired effects at the decisive time and place.
* Third, leaders must implement methods that create a shared understanding and allow for disciplined initiative across their formation.
* Finally, leaders must have the tools and systems to visualize and continually assess all the factors of the mission, enemy, terrain, troops available, time available, and civilian considerations (METT-TC).

The leaders and organizations that excelled during this training event had some commonalities. All of these similarities became apparent during the rehearsals and manifested themselves during execution of the lane. The first similarity was the unit's ability to understand the mechanics and math associated to maneuver, weapons employment, and enablers. When units understood the time it took to maneuver from one location to the next utilizing a certain movement technique,

they could then quantify what conditions they must achieve and the duration that they needed to achieve these effects on the battlefield. When units understood the different methods of controlling indirect fire weapons systems, they could utilize different methods based on how responsive they needed the fires in any given situation. When units understood the amount of ammunition with each weapons system and the consumption rates based on how these systems are being fired, they could ensure they maintained the required ammunition for the decisive point in the battle. When units understood minimum safe distances for all weapons systems (or risk estimate distances if used in combat), then they could quantify the risk of employing certain systems to achieve the desired effects. When units understood how long it took to emplace the Anti-Personnel Obstacle Breaching System (APOBS), they could account for the weapon systems and ammunition that would be required to suppress or obscure the enemy enough to initiate the breach. In order to be successful, the leadership had to do the battlefield math that was required to develop a feasible plan and continually update their assessments during the exercise as conditions changed. Those who truly understood the calculus executed this effectively and made informed decisions while those who did not merely guessed.

A commander's decision on "where to mass" requires precise calculations across all phases and at the decisive point. Synchronized fires and maneuver will maintain momentum, but massing fires at the decisive point is paramount to concentrating combat power while preventing the enemy to do the same. Effects must be the driving force for the delivery and concentration of combat power at key points in the operation, therefore, providing conditions to keep the desired tempo. In this scenario, the majority of the training units determined that the breach was the decisive point in the battle. Analytical planning and continuously updating statuses ensured the unit had required assets available at the exact point in time and space so they can mass and achieve the desired effects on the enemy. This, coupled with a clear understanding of

the actions required and the time it takes to execute these actions, allowed leaders to achieve true synchronization and overwhelm an enemy at the decisive point in the battle.

The heart of the walk and shoot is shaping the decisive point. How the leadership estimates, employs, and tracks assets is no small task and provides higher with a valid evaluation of the technical and tactical competence of their commanders. The ability to successfully employ all available assets to achieve desired conditions at the decisive point just doesn't happen by chance. If commanders focus too much on organic maneuver capabilities alone, they will lose sight of how to effectively integrate and synchronize everything at their disposal. In effect, it will degrade their ability to maintain the momentum. If they lose sight of the ammunition consumed, they cannot sustain a support-by-fire position during the breach. If they do not truly understand how long it takes to call for, shoot, and build an artillery-delivered obscuration smokescreen, they will not be able to maintain the suppressive fires and set the conditions for the engineers to breach the obstacle. This exercise provided leaders invaluable repetitions on the actions and knowledge required to synchronize their maneuver elements with the host of enablers available in today's operating environment.

The third similarity in successful units was the unit's ability to create a common understanding amongst leaders. This common understanding begins with a company commander's ability to clearly articulate his intent. The expanded purpose, key tasks, and desired end state provide the foundation for all leaders to visualize the operation in a similar manner. Task and purpose alone do not provide enough context to allow subordinate units to understand how their actions contribute to and fit into the larger plan. Successful units developed simple methods in order to maintain a common understanding during the execution of the lane. Units that excelled used execution checklists to articulate and communicate the actions each subordinate unit would take in executing the plan and the conditions required at each step in the process. Detailed planning prior to the exercise and war-gaming potential contingencies allowed units to change required decisions to triggers. The more decision points that could be converted to triggers allowed units to maintain the tempo of the operation. These triggers were outlined in the execution checklist and provided a method for all leaders to understand what was occurring in the operation without clogging up the radio net with unnecessary communications. Companies that created and rehearsed methods to maintain a shared understanding of conditions and triggers were able to decentralize control and maintain momentum. Additionally, when conditions changed in a manner not previously anticipated, the radio net was not jammed with unnecessary traffic, allowing leaders the ability to communicate adjustments to the plan.

Another method that successful units utilized to create a common understanding that enabled synchronized actions and mitigated risk was the use of graphical control measures and weapons control measures. The BCT developed the scenario with injects that forced leaders to understand fire support coordination measures. The placement of the brigade coordinated fire line (CFL) helped leaders understand

how the BCT commander saw each echelon's fight. Prior to crossing the line of departure, the BCT's CFL was the training companies' limit of advance. Engagements against air defense threats beyond the CFL set the conditions for allowing the company to cross its line of departure (LD) with supporting AWTs. As the training company crossed the LD, the BCT's CFL shifted deeper into the impact area. While the company was maneuvering to the objective, the BCT's radars acquired enemy indirect fire systems shooting from a location short of the CFL in the company's AO. The company had to clear the ground before the BCT conducted counter fire. Company teams that utilized the pre-established phase lines to track forward progress were quickly able to clear the ground and get effects on the enemy indirect fire systems. Units that did not have a method of tracking their forward progress lacked the common understanding to quickly clear the ground. Additionally, units that established common direct fire weapon systems control measures were able to efficiently synchronize maneuvering elements with direct fires. In all instances, success was closely tied to the leaders' understanding of time and space and their ability to put simple procedures in place to synchronize their actions across the depth, width, and height of their AO.

The final lesson learned involved the tools and procedures leaders utilized to track the battle. Since all leaders receive and interpret information differently, there was no right answer on how one maintains situational awareness in combat. The bottom line is that leaders must develop a method and create the tools that work for them. Whether it is a certain size map board or tracking charts that outline critical information, leaders must find a method that allows them to translate information into the knowledge they need to make informed decisions. Additionally, since the volume of pertinent information is extensive, they must assign responsibilities to different personnel on the team to track certain types of information. Leaders must rehearse how this information is tracked and how those tracking the information articulate it to
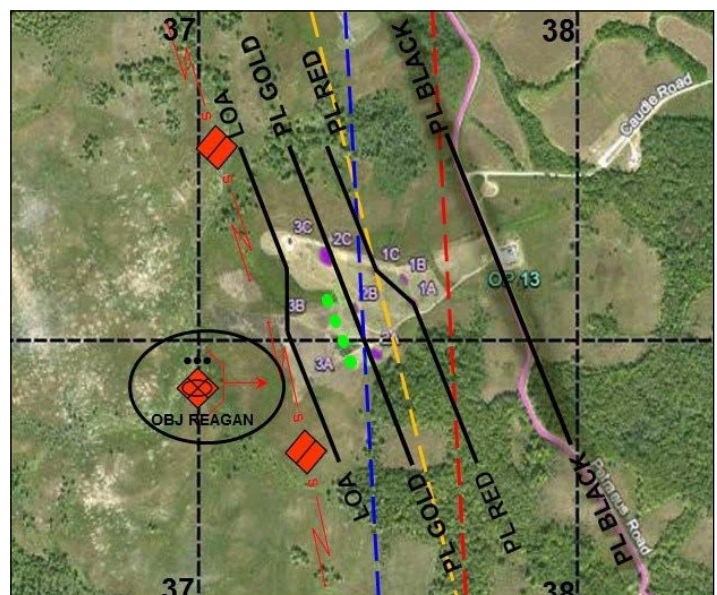

Figure 3 — Example Diagram that Outlines Higher-Level Graphical Control Measures and Basic Enemy Situation

those that need the information. What information does the company fire support officer have to track? How is the company commander utilizing his RTO? Where is the forward observer in relation to the platoon leader? What is the company executive officer or first sergeant tracking and how is this enabling the unit? These types of questions need to be addressed prior to execution. Successful units thought all of this through and rehearsed it in conditions that simulated the event prior to LD.

Conclusion

Exercises similar to the 2nd BCT's walk and shoot TEWT are low-cost, high-yield tools that are invaluable in training and certifying leaders. The 2nd BCT used this exercise to validate its company-level leaders on the actions required to achieve synchronized combined arms maneuver. Each phase of the event provided the training progression essential for units to refine how they operate prior to executing higher-level collective training with their entire formations. Through the use of rehearsals, virtual simulation, and blank and live iterations, the BCT commander was able to evaluate company leaders on their ability to exercise the principles of mission command to achieve a shared understanding, their mastery of setting the conditions to overwhelm the enemy at a time and place of their choosing, and even unit training management. Along every step of the walk and shoot, commanders and subordinates were learning and fine-tuning their plans by getting repetitions in their understanding and application of mission command. Throughout the course of a unit's progression from the virtual simulation to the live-fire exercise, leaders grew exponentially. Leaders refined how they tracked and used critical information requirements to improve their decision making. From start to finish, the company leadership gained the competencies required to lead their organizations and the confidence to exploit opportunities.

Clausewitz stated that decision making is the correct application of knowledge and experience. A combined arms fires and maneuver exercise requires analytic decision making for planning up to and including the combined arms rehearsal. During the execution of the lanes, analytical tracking of assets in time and space is still highly relevant. However, commanders and especially subordinates will rely on intuitive decision making using their assessment of the current enemy situation, their experience, and their ability to recognize key elements and conditions resulting from the current situation. This type of exercise allows observers to see if decisions are either rushed or over thought out. Conversely, it is a test to determine if commanders blend intuitive and analytical decision making to remain objective, or if they are making decisions purely by intuition.

A company commander and his company fire support officer discuss updated unit locations during the 2nd BCT's walk and shoot exercise.

As we continue to add enablers down to the lowest echelons of our formation, we will have even higher expectations of our junior leaders to achieve synchronized combined arms maneuver. There is no substitute for a combined arms maneuver exercise like the 2nd BCT's walk and shoot TEWT to train commanders and subordinates on the skills required to achieve overwhelming effects on the enemy at a time and place of their choosing.

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Training Notes

13 ARTICLES: FUNDAMENTALS OF HOSTING A MULTINATIONAL TRAINING EXERCISE

CPT SHAWN S. SCOTT
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You've just been assigned the responsibility to plan and host a multinational training exercise. You've read the history of the training exercise. You know what nation you are hosting a military unit from. You may have even partnered with other countries in a multinational training event in the past. All that being said, this exercise will present a whole other set of challenges that you have not yet experienced.

So, where do you start? What are some of the important aspects of the exercise you must consider? Who can you turn to for assistance in coordinating with your foreign guests?

In September 2015, Blackhawk Company, 1st Battalion, 23rd Infantry Regiment, 1-2 Stryker Brigade Combat Team (SBCT), 7th Infantry Division, executed Yudh Abhyas, a training exercise with a company of the Indian Army's 6th Battalion, Kumaon Regiment (a light infantry company). Not every multinational training exercise is the same, however, there are some inherent fundamentals that you may find universally applicable. What follows are observations from collective experiences rooted in the lessons learned during Yudh Abhyas 2015 and can be applied to any multinational training exercise.

1) Planning conferences are exercises in themselves

When beginning the planning process of any multinational training exercise with a foreign military, you should plan everything you can together from the start. Senior leaders should collaborate with one another to build a scheme of maneuver or the exercise framework. This framework will be the baseline for the hosting unit's staff to work. Implementing the foreign unit's input early in the planning process may prevent last-minute changes. The unit may have specific training events it wants to conduct or equipment it wants to showcase, some of which may be "red line." At a minimum, build the framework together, but ideally the final product should be a written order with a synchronization matrix.

2) Success is in the details

Like any training event, the success or failure of the exercise will be based on the coordination with adjacent units for assets. Transportation and lodging arrangements will require daily coordination, especially if the exercise encompasses two separate components — a staff exercise (STAFEX) and a field training exercise (FTX). Use rehearsal of concept (ROC) drills to discover issues that require prior coordination to resolve. A good example of this is when the visiting foreign unit is using its own strategic lift assets for transportation. To ensure personnel, crew, and cargo are properly received, you will need to coordinate with U.S. Air Force officials at the base where they are going to land.

3) Always maintain unity of command

Multi-component exercises that incorporate both a STAFEX and an FTX component should be executed within the same battalion or brigade. If not, the next higher headquarters must

Soldiers from the 1st Battalion, 23rd Infantry Regiment and Indian Army troops with the 6th Battalion of the Kumaon Regiment stand together during the opening ceremony of Yudh Abhyas 15 at Joint Base Lewis-McChord, Wash., 9 September 2015.
Photo by SGT Sinthia Rosario

provide unity of command. Just like any military mission, staffs exist to integrate numerous processes and activities within the headquarters and across the force. Failure to maintain mission command of the exercise will result in inefficiency and de-synchronization between subordinate units. This is especially prevalent during ceremonies or when logistical support requirements change.

4) Everything is a negotiation

Always build your training exercise framework with flexibility in mind. Whether you have planned too much or not enough training, or didn't plan for something altogether, the plan WILL change. "Great ideas" happen. Just ensure all leaders remain open-minded and flexible, especially when working with your counterparts. However, beware of saying "yes" before determining if requests can be fulfilled. Events like ceremonies or visits from distinguished visitors are likely situations for last-minute changes or requests. Some things like the order of precedence for national anthems or Army songs may have significant importance.

Photo by SGT Daniel Schroeder

Soldiers from 1-2 Stryker Brigade Combat Team and the Indian Army's 6th Battalion of the 6th Kumaon Regiment bound forward to assault a target while conducting company movement procedures during exercise Yudh Abhyas 15 on 21 September 2015.

5) Protocol and sensitivity

The most important thing to remember while conducting a multinational training exercise is to maintain cultural sensitivity and knowledge of foreign military protocol. Ensure cultural or religious sensitivities are clearly understood by all Soldiers participating in the exercise. Soldiers and officers should always show the same respect to visiting leaders as they would their own. They can also use the visiting unit's "motto" or proper greeting, if they have one.

It is important here to note that American dietary needs are very different than most foreign countries and thus may require prior planning and coordination. Be cognizant of foreign militaries with a cultural class system as it may cause frustration when attempting to coordinate with lower-ranking individuals.

Additionally, the U.S. military is unique because of our expected standards and work ethic. For us, a standard duty day is 0600-1700, but this might not be the case for your guests. They may be accustomed to a shorter duty day with less emphasis on training and more on team-building or esprit de corps events.

Most cultures place great emphasis on exchanging gifts from Soldier to Soldier at the completion of an exercise.

However, there are no formal means to fund gifts within regulation. The gifts are usually inexpensive, but nevertheless, proper cultural protocol should be respected. Official gifts are usually exchanged in a formal fashion, and some countries may have particular requirements, i.e., combat arms officers give gifts to combat arms officer and logistics officers give gifts to logistics officers.

6) Bureaucratic collisions

To prevent frustration and bitterness, ensure prior coordination is made with installation support organizations. This is especially true when planning to use foreign weapons and ammunition. Coordinate with range control to ensure all proper documentation is submitted. Failure to do so may halt training before it even begins for something as simple as a memorandum of agreement. Ensure there is a mutual understanding between U.S. and foreign militaries with regards to weapons storage and ammunition control and collection. This may require some deconfliction in order to ensure post security regulations and foreign military regulations are both being followed. Again, a ROC drill in the planning phase can identify this issue before it ever becomes one.

7) Teaching vs. sharing

How we in the U.S. military structure standard training

exercises is slightly different from how we should structure a multinational training exercise. Emphasis on the mutual sharing of knowledge and tactics, techniques, and procedures (TTP) should be the focus. Beware of replicating the training based off of your experience with security force assistance missions in Iraq or Afghanistan. Avoid a training structure that may lead your foreign counterparts into perceiving that there is no desire to learn their TTPs.

8) Always plan to have interpreters

Most foreign militaries have officers who are fluent in English, however, their soldiers may not be fluent. Despite the confidence your foreign counterparts have in the ability of their soldiers to understand English, this may be a slight overestimation. If possible, talk to a foreign affairs officer (FAO) of that country to determine if additional interpreters are required. After all, the English language is complicated, especially when you consider the slang and various accents of Soldiers in the U.S. military today. At a minimum, you should identify your personable Soldiers and plan for them to help bridge the language gap. Foreign soldiers will gravitate more to personable Soldiers simply because they are easier to converse with.

9) Mind the gap — the NCO gap

The U.S. military has the strongest NCO Corps in the world. However, some countries do not put a strong emphasis on empowering their junior leaders, thus creating a weak NCO corps. This may be due to their class system or centralized command structure. It could just be how they prefer to do business. However, in some cases, it may be best to positively showcase the U.S. Army NCO Corps to help passively influence other countries to follow suit.

10) Managing the media

High-profile training exercises will draw media attention which should be embraced. In this area, the public affairs officer (PAO) is your best friend. The PAO exists to bridge the gap between the architects at the tactical level and the policy makers at the strategic level. They will highlight the training to the public and promote the exercise for future support. However, more attention can cause distraction from the training objectives which should be avoided. The exercise should be promoted by the media, but not planned around media interaction. Maintain the exercise's authenticity.

11) Social events are key to integration

Social events are a great method for creating bonds between Soldiers and building cohesion between two units. Therefore, it is highly recommended that a social event be planned before the training even begins. This will act as an ice-breaker and bring the Soldiers together. Additional social events should be planned both during the exercise as well as at the conclusion of the exercise. Each social event will strengthen relations and solidify the integration of the two units, sealing the bonds built over the course of the exercise.

12) Don't forget the cultural events

When planning the exercise, remember that your counterparts may be visiting the United States for the first time. Time and effort should be placed on planning and coordinating cultural events. Ensure you take into consideration that it should be about building a team and interesting to both U.S. and foreign Soldiers.

One important note on this subject is that most foreign militaries take pride in their unit's history. Your counterparts may be eager to learn about your specific unit's history and the history of your installation as well. Also, just as U.S. Soldiers are naturally athletic, so too are the soldiers of most foreign militaries. Many Soldiers, no matter the country of origin, have an appreciation for professional sports.

Finally, discuss with your counterparts about whether they would be interested in engaging their diaspora here in the U.S.

13) Synchronization from the strategic to the tactical level

Multinational exercises are directly connected to the Army Service Component Command's (ASCC's) Theater Security and Cooperation Plan (TSCP). This may not be readily apparent during planning and execution. However, units hosting such exercises should become intimately familiar with the ways in which these exercises contribute to the mil-to-mil relationship with the hosted army and the TSCP. Appreciating this bridge provides vision and purpose for the platoons that are committing their time and energy to the exercise. It informs the way leaders engage. It also allows your PAO to communicate to specific audiences with precision. The unit's best resources to gain this understanding are the FAOs that are liaising on behalf of the host nation. FAOs provide firsthand knowledge of the affairs of the U.S. defense attaché office for the hosted nation. They may also have contacts within the strategy and policy staffs of the hosted army, and certainly do in the U.S. ASCC. As a backup, the country desk officer in the political-military section of the J5 within the appropriate ASCC can also provide key information about the mil-to-mil foundation of the exercise. Units should not hesitate to reach out to these points of contact for assistance.

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SWIFT RESPONSE 15:

EXERCISE VALIDATES JMRC AS CRITICAL PART IN FUTURE OF AIRBORNE READINESS

CPT MICHAEL P. WALLACE

In the summer of 2015, the Joint Multinational Readiness Center (JMRC) in Hohenfels, Germany, embraced a new and complex challenge with Exercise Swift Response 15 (SR15). SR15 was a combined airborne joint forcible entry exercise designed to integrate multiple allied nations' high-readiness forces to operate as a cohesive team and demonstrate NATO's capacity to rapidly deploy and maintain a strong and secure Europe. The exercise included the largest airborne operation executed on European soil since the end of the Cold War. The success of this operation has set conditions for the combined task force's continued interoperability and readiness to fight as a coalition for all the participants. The exercise presented many challenges, but after working through some friction, the 1st Brigade Combat Team, 82nd Airborne Division headquarters and its subordinate multinational battalions accomplished the mission and met all training objectives. Perhaps the most interesting outcome of this exercise was the realization that JMRC should be the new certification ground for the Army's component of the Global Response Force (GRF). The following are some of the key lessons learned regarding JMRC's role in training future GRF units and some proposals to maximize the use of JMRC to provide the Army more capable readiness forces for geographic combatant commanders.

JMRC is the perfect venue to validate the readiness for the GRF because it forces the unit to alert, marshal, and deploy to Europe. The typical mission rehearsal exercise (MRE) for a unit assuming the GRF is a deployment to the Joint Readiness Training Center (JRTC) at Fort Polk, La., or the National Training Center (NTC) at Fort Irwin, Ca. JRTC and NTC offer fantastic training venues to teach the basics of parachute assault and airfield seizure with a capable and determined opposing force (OPFOR). However, due to their proximity to home station, units deploying to JRTC or NTC do not experience the same challenges they face when deploying outside the continental United States for real-world missions. The rotational training unit's (RTU) ability to preposition personnel and equipment at JRTC and NTC during past validation exercises deprives the unit of the training value of conducting a true outload sequence. A GRF MRE at JMRC can truly test the readiness of the unit prior to assuming the GRF mission.

Executing the MRE at JMRC forces the unit to:

* Move all necessary classes of supply and equipment into a foreign country; and

* Validate unit movement personnel and overall readiness of the GRF.

It also forces the GRF to build a multinational coalition at the intermediate staging base which is a realistic and tough friction point for any unit. JMRC offers the unique challenge of partnering with a myriad of multinational units from across Europe and rapidly building an effective NATO coalition prior to executing combat operations. Most military and civilian leaders acknowledge that America will never again fight alone. The Army's GRF component must have the ability to rapidly build a NATO task force that can work together coherently, effectively, and efficiently to be truly global. JMRC

forces all rotational units to develop the three dimensions of interoperability: the technical (hardware, radios, ABCS systems), procedural (U.S. doctrine, NATO standardization agreement [STANAGs], joint NATO doctrine), and human (language, culture). If the GRF units are ever truly going to be a rapid response force capable of global employment for any combatant command, they must develop organizational experience with these challenges.

JMRC has the capacity to provide challenging and unfamiliar terrain, a near-peer threat, and enough space to conduct a joint forcible entry (JFE) exercise and build the follow-on forces in order to deploy the entire Army component of the GRF. SR15 validated that the short take-off and landing (STOL) strip is capable of supporting enough air lands to bring in the majority of the bravo echelon (non-airdrop-capable elements of the GRF). But to do this even more effectively, JMRC needs to develop the ability to allow the JFE exercise to occur on the air-land capable airstrip to allow for a more realistic JFE. The next step should be building a larger airfield with a C-17-capable field landing strip in order for the GRF to use all Air Force and Marine aircraft (C-130, C-17, and KC-130) to land the bravo echelon. Additionally, JMRC could improve the ability to certify the GRF by building an airborne objective which has all the simulated airfield architecture to more closely replicate most major airports. If JMRC had an airfield with a simulated control tower, hangers, buildings, a fire station, and an occupied military compound, it would be a more realistic airborne objective. Having a strongly defended airfield, more observer-coach-trainers (OCTs) with JFE experience and expertise, and an OPFOR with experience defending against parachute assaults would increase JMRC's ability to validate the GRF.

The Army needs to do a better job validating the GRF during future MREs. As an Army, we currently allow too many prepositioned loads, notional air-land operations, notional heavy drops, and various other ways to circumvent friction when we introduce combat power during airborne operations. Allowing these types of unrealistic methods for introducing combat power does not allow the unit to experience all

> *As an Army, we currently allow too many prepositioned loads, notional air-land operations, notional heavy drops, and various other ways to circumvent friction when we introduce combat power during airborne operations. Allowing these types of unrealistic methods for introducing combat power does not allow the unit to experience all the challenges they could face when conducting airborne operations as the GRF.*

the challenges they could face when conducting airborne operations as the GRF. If we are to be ready for a world-wide deployment anywhere in the world in 18-96 hours, we must ask ourselves to do more with our airborne units. When conducting airborne operations, we typically grant these types of concessions when resources outside of the Army's control do not match what is required to deliver all of a unit's equipment and enablers to the drop zone. Most leaders fully understand that this is required during training exercises to ensure that all warfighting functions are able to meet their training objectives during airborne operations. However, once it is time to validate our Army's readiness forces, we must resist the urge to solve our problems this way. If we do not restrict combat power to only that which we deliver via parachute assault or what we bring in on air-land operations, we will never be able to execute these missions when the call comes. We must force our airborne units and enablers to plan and execute operations by utilizing existing airborne standard operating procedures (SOPs) such as the use of door bundles with "A echelon;" the use of Joint Precision Aerial Delivery Systems (JPADS); the use of the Container Delivery System (CDS); the use secondary loads on air-land vehicles; and the proper planning and synchronization of a priority vehicle list (PVL) during JFE exercises in the future as the only methods to bring combat power into the lodgment. This will force our airborne forces to understand the capabilities of all their combat power and make tough choices during the validation exercise when resources fall short.

JMRC should become the exchange point to cross-level experience for our airborne forces. Currently, the 173rd Airborne Brigade conducts multiple multinational exercises across Europe almost every month. These exercises are critical to build relationships and interoperability with our European allies, but they do little to build the capability that we expect our airborne forces to have in order to conduct JFE operations. Proficiency jumps do not equal "trained" on the airborne mission essential

Photo by SSG Jerry Boffen

A U.S. Air Force C-130 aircraft lands at Hohenfels Training Area, Germany, on 29 July 2015. The aircraft was used to test the capabilities of the recently resurfaced and extended short take-off and landing strip at Hohenfels.

Photo by SSG Nathanial Allen

Soldiers from the 3rd Battalion, 319th Airborne Field Artillery Regiment set up the M119A2 105mm Howitzer while conducting field operations during Swift Response 15 on 28 August 2015.

task list (METL). Executing these complex NATO operations with a combined multinational task force is challenging enough for units that have completed an intensive training cycle through battalion-level training. These exercises are exponentially more difficult for units that have not completed any type of training cycle and had the chance to train leaders and validate unit SOPs. If they have not had the opportunity to validate their organizational understanding and execution of U.S. doctrine, there is no way units will be able to place the requisite emphasis on learning and understanding things like NATO doctrine; STANAGs; culture, combat power, and equipment of multinational partners; and national caveats for different nations.

"Interoperating at the tactical level is not easy. Even seemingly simple tasks bring a myriad of challenges in blending our operations, our technology, and our cognitive approach to operations. At the Joint Multinational Readiness Center in Hohenfels, Germany, we work to close these gaps every day."

— MG Christopher G. Cavoli,
Former commander of the 7th Army Training Command, quoted from Center for Army Lessons Learned (CALL) Handbook 16-18, *Multinational Interoperability Reference Guide*

Most units in the Army have experienced some level of interoperability in various partnered exercises or operations, but only JMRC due to its location can stress interoperability with a 50 percent or more multinational combined task force. More Army units would benefit from experiencing these challenges on a more regular basis.

SR15 has served to highlight numerous challenges, areas of improvement, and potential ways to increase readiness across the airborne

force for the future. One way to improve airborne readiness across all of the airborne forces in the Army would be to adopt a similar rotational concept like that currently being conducted in Korea. The XVIII Airborne Corps and 82nd Airborne Division headquarters could take ownership of certifying all airborne forces in the Army. This would allow the 173rd in Italy to return to the United States on a rotational basis, enabling more time for training on basic core competencies and airborne METL tasks. Once a unit completes the GRF training glide path and validates at JMRC, they become U.S. Army Europe's (USAEUR's) airborne force. This will allow our European allies to conduct the same security operations across Europe with a trained and validated airborne force. Increasing the training level of our airborne force in Europe will not only increase readiness across USAEUR, but it will allow that unit to place the requisite emphasis on interoperability with our European allies. There are currently three airborne Infantry brigade combat teams (IBCT[A]s) at Fort Bragg, N.C., that balance the airborne GRF requirement in nine-month cycles. Allowing the 173rd to become the 4th IBCT(A) in that cycle would allow the unit to build jumpmaster and airborne proficiency while at Fort Bragg and conduct an intensive training cycle not hindered by the restrictions they currently face in Italy. They would also build organizational experience and knowledge with JFE exercises. As part of the validation, the other Stryker and mechanized elements of the Army component of the GRF could simultaneously deploy to Europe. This would allow the airborne force to seize an airfield, open a lodgment, and conduct passage of lines with the mechanized force to defeat a robust mechanized element in the Hohenfels training area all while balancing the interoperability challenges that only JMRC can provide. This would stress the required relationship building and interoperability required between our airborne, Stryker, and mechanized components of the

Photo by SGT Ian Schell

A Soldier from the 2nd Battalion, 501st Parachute Infantry Regiment, 1st Brigade Combat Team, 82nd Airborne Division, packs up a parachute after an airborne operation as part of Swift Response 15 in Germany on 26 August 2015.

GRF and our European allies. Once the GRF validation is complete at JMRC, these forces could remain in Europe for at least one year to conduct security operations in Europe with our allied partners and would assume the footprint in Vicenza and Grafenwoehr. The validated GRF element positioned in Europe would need similar outload capabilities currently only available to the stateside GRF. The Army should look at the feasibility of providing the following: a strategic deployment facility (green ramp equivalent); some type of heavy drop rig site; a location similar to the division ready cage; and a marshalling area like the pole barns at Fort Bragg to conduct the initial issue of ammunition and rigging. If the Army could build the requisite infrastructure in Europe, then the forward-deployed GRF element would have the same ability to alert, marshal, and deploy as the GRF unit at Fort Bragg. Additionally, having some type of mobile command HQs certified to move forward and act as the higher headquarters for the GRF element forward would allow USAEUR to employ the GRF in Europe without losing capability in its headquarters.

As the Army analyzes future conflict scenarios and the readiness of airborne forces, it must consider the potential strategic impact of a more capable and ready force could provide in Europe. The ability to have a GRF element capable of conducting joint forcible entry already in Europe will have a powerful impact on the national security of the United States

and our NATO allies. The Army must place the required emphasis on truly conducting forced entry on a defended air field. Readiness and rapid deployment of forces capable of achieving decisive victory for our combatant commanders will continue to be an integral part of our national security. The Army must invest in training, preparing, equipping, and certifying forces that can respond quickly to any situation anywhere in the world and achieve decisive victory in unified land operations.

The Army will continue to fight in coalitions in the future, just as we have in recent years. If the Army Operating Concept considers multinational interoperability one of the critical warfighting challenges we will face in the future, we must seize the opportunity to adequately prepare our units to face this challenge and if necessary respond in combat.

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Photo by SFC Caleb Barrieau

A German soldier stands guard during a simulated noncombatant evacuation operation on the Hohenfels Training Area during Swift Response 15 on 30 August 2015. SR15 was the U.S. Army's largest combined airborne training event in Europe since the end of the Cold War.

GRAPHIC CONTROL MEASURES IN MULTINATIONAL OPERATIONS

CPT SHELDON BROEDEL
SFC CHRISTOPHER LYON

Graphic control measures are an essential component of a ground tactical plan. They facilitate shared understanding by creating a common language used to depict time and space. They allow a commander to synchronize the effects of combat power while affording flexibility and provide a "common language clearly understood among all users," according to Allied Procedural Publication (APP) 6C, *NATO Joint Military Symbology* (May 2011). Graphic control measures are essential during multinational operations when different languages, doctrine, and terminology constrain communication and shared understanding. They allow a multinational force to communicate fluidly and synchronize all warfighting functions without misunderstandings due to culture and language. Despite the importance of graphic control measures during multinational operations, observer-coach-trainers (OCTs) at the Joint Multinational Readiness Center (JMRC) in Germany consistently observe limited or poor graphic control measures during multinational training exercises. Use of high-quality graphic control measures will dramatically affect the interoperability of multinational task forces by creating shared understanding despite cultural and linguistic differences.

During Exercise Combined Resolve V (22 September through 21 November 2015), OCTs deliberately tested a company team in a multinational task force by observing the production of orders and graphics during the execution of offensive and defensive operations to determine the extent to which graphic control measures improved the overall interoperability and tactical effectiveness of the company. The observed company was a motorized infantry company in a battalion task force composed of four infantry companies, each from different nations.

JMRC OCT Observations Prior to Combined Resolve V

OCT observations at both the company and battalion levels, spanning seven multinational exercises prior to Combined Resolve V, consistently reported graphic control measures as an area the rotational training unit (RTU) could improve.

Three distinct negative trends were evident:

1) Little to no use of graphic control measures at the company or battalion level;

2) No refinement of higher headquarters' graphics; and

3) Limited cultural understanding during the operations process.

One positive trend, however, was that when a task force made an effort to develop quality graphics that supported the maneuver plan, all members of the multinational task force tended to quickly understand and use the graphics, regardless of which nation's doctrine and techniques were used.

Little to no use of graphic control measures at the company or battalion level was the most frequently observed of the three negative trends listed above. Training units would often create graphics that didn't support the maneuver plan and were inadequate for direct and indirect fire synchronization. Other units failed to create graphic control measures entirely, relying instead on vague intent graphics or a blank map. In a multinational operation, a unit with poor or no graphics becomes easily overwhelmed by basic communication. Descriptive language becomes imprecise and lengthy, especially when communicated across a radio between Soldiers who are not speaking their native language. For example, a Soldier sending a report of "enemy 100 meters south of the dark green tree on top of the hill that has a building on it" expends far more valuable time than a similar report of "enemy 100 meters south of Checkpoint 1." The report can also cause confusion based on the sending or receiving Soldier's understanding of the common language used in the operation. The building could be described in a number of ways that the receiving Soldier does not understand [shack, shed, cabin, lodge, etc.] or may be mistranslated, necessitating a request for clarification. OCTs frequently observed this confusion at the moment in the battle when speed and precision were most necessary and when communications were most challenging.

Training units often failed to develop their own graphics and instead relied only on graphics produced by their higher headquarters. While OCTs observed this trend across militaries to varying degrees, OCT observations indicated a clear divide in mission command philosophies between Eastern European and Western European militaries. Trends amongst former Warsaw Pact militaries included limited development of brigade graphics into battalion graphics at the battalion level and no refinement of battalion graphics at the company level. Brigade- and battalion-level graphics frequently did not contain the detail required to facilitate operations at the company level and below. As a result, companies with no graphics of their own attempted to fight using battalion graphics or discarded the graphics entirely and instead relied only on descriptive language and the military grid reference system. That may work in some instances in a unilateral task force; however, the complexities of multicultural communication necessitate the abbreviated language of graphic control measures.

The third major trend was that training units failed to account for cultural differences during the operations process. These included language, background, and military training. Of the three negative trends observed, this one was the least prevalent, but it could be severely detrimental to a multinational task force. Within this trend, the most notable sub trend was failure to account for varying levels of language proficiency, a problem that could be mitigated through quality graphic control measures. Next, OCTs reported instances in which a headquarters used naming conventions that some members of the task force did not have a frame of reference for and thus were less likely to remember. For example, "Objective Jackson" is as foreign to an Italian soldier as "Objective Garibaldi" is to an American Soldier. Lastly, military culture and doctrinal differences created confusion within the multinational task force. Units strayed from doctrine, creating their own terms and symbols, using slang and unofficial terms as if they were in doctrine, or (more frequently) using a myriad of undefined acronyms. Without explanation, these cultural misunderstandings hindered interoperability and created organizational confusion.

OCTs frequently observed that a multinational task force that used detailed graphic control measures communicated with greater speed and accuracy than those that did not. The example depicted in Figure 1 was designed by a multinational airborne task force. The battalion staff designated zones with a simple naming convention and used road junctions as target reference points, named J1 through J8. Although this system did not match the doctrine of each member nation or North Atlantic Treaty Organization (NATO) doctrine, it was easy to understand and provided sufficient detail for fluid communication on the objective. All members of the task force, regardless of national affiliation, quickly learned the system and effectively used it to interoperate with each other during a nighttime attack. The lesson learned is that simple yet detailed graphics, understood by all, will enhance the interoperability of a multinational unit.

Combined Resolve V Test Methodology

During Combined Resolve V, maneuver company OCTs tested the hypothesis that sound graphic control measures will enhance the interoperability of a multinational unit. The unit observed was a motorized infantry company equipped with variations of the BTR-60 armored personnel carrier; supported by anti-armor,

mortar, and engineer platoons; and flanked by three other infantry companies, each from a different nation. OCTs trained the company leadership on offensive and defensive planning, with emphasis on developing graphic control measures that support the maneuver plan. The company then executed three company and one battalion situational training exercise (STX) lanes, followed by eight days of continuous unified land operations. OCTs assessed and evaluated the company's and battalion's use of graphic control measures and their effect on the results of the overall mission.

Combined Resolve V Results

Throughout Combined Resolve V, the company's performance remained largely consistent with previously observed trends. The company and platoon leadership were reluctant to develop graphic control measures beyond those issued by their higher headquarters. They relied predominantly on the battalion's graphics, which were completely inadequate for company- and platoon-level operations. OCT observations of the company's performance confirmed the effects of previously observed negative trends.

In its first offensive STX lane, an advance to contact, the tested company developed intent graphics that depicted the maneuver plan but did not develop named graphic control measures (see Figure 2). As a result, the company net became clogged with reports once they were in contact with the enemy. Already burdened by a limited communications architecture, the company commander began receiving inaccurate reports from his platoon leaders and lost all situational awareness. Reports sent from the company to the battalion were equally inaccurate. The confusion caused two instances of indirect fire fratricide because neither the company commander nor supporting artillery had accurate friendly and enemy positions.

During defensive STX training, the company again failed to develop any direct fire graphic control measures but did develop targets for artillery and mortars. The company and the platoons built poor sector sketches that depicted battle positions and ambiguous sectors of fire but made no specific direct fire control measures. Two of the four platoons did not have a copy of the company fires overlay, and none of the platoon sector sketches included pre-planned indirect fire targets. The lack of graphic control measures constrained the platoon leaders

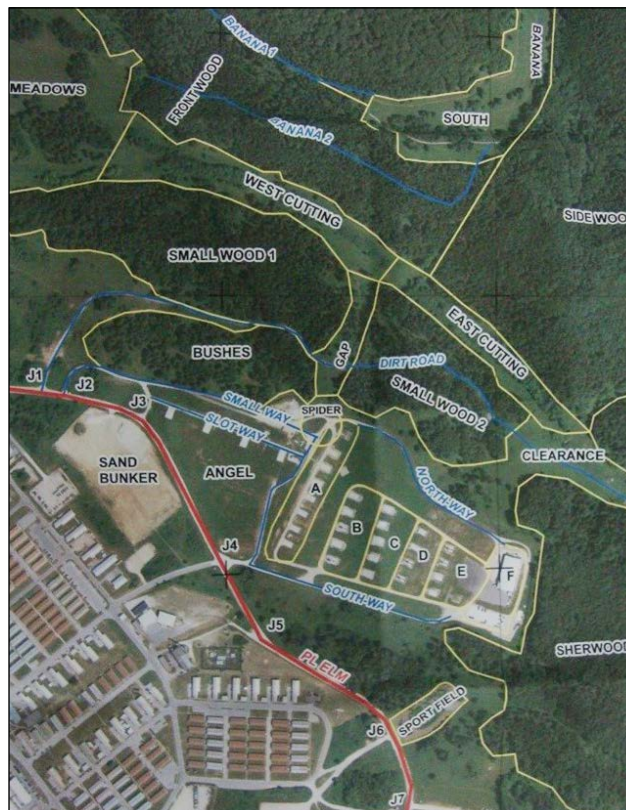**Figure 1 — Example Zone Naming Convention Used by a Multinational Airborne Task Force**

Figure 2 — Example Phase Lines Developed by the Battalion
(Note: Graphics depict maneuver but are not named control measures
that facilitate mission command)

from accurately and rapidly depicting the enemy situation for the company commander as the opposing force (OPFOR) began its attack. Because indirect fires were not integrated into platoon plans, the company commander controlled all fires personally, and he fired on targets he could not observe based on inaccurate reports from the platoon leaders. The commander managed to rally by repositioning his command post throughout the battle, but clear graphic control measures that supported the defensive plan would facilitate a better common operating picture and fluid synchronization of direct and indirect fires across the engagement area.

During an "attack urban terrain" STX lane, the tested company blanketed its objective with a combination of phase lines, alphabetical blocks, and numerical buildings. The commander used the graphic control measures to brief the scheme of maneuver in the operation order (OPORD), and the company rehearsed on a large terrain model using the same graphics. These graphics were adequate to control the execution of the assault if disseminated down to lower levels, mainly team and squad leaders. However, the company did not disseminate graphics below the platoon leader level. Some platoon leaders became casualties during the attempt to gain a foothold on the objective, leaving no one in the succession of command with a copy of the graphics. Additionally, surviving platoon leaders and the company commander completely disregarded the graphics once the assault began. This drastically disrupted the organization and momentum of the attack, causing it to quickly devolve into chaos at the decisive point. The end result was five incidents of fratricide and mission failure.

When the company progressed into full spectrum operations, it continued to under develop graphic control measures, as did the multinational battalion headquarters, which caused a significant gap in interoperability within the task force.

During a defensive operation, the battalion developed limited graphics that depicted only company battle positions and tactical tasks. All graphic control measures used from the battalion down to platoon level were a direct copy of brigade graphic control measures. The tested company developed no graphic control measures beyond its indirect fires overlay. Company and platoon sector sketches incorporated neither obstacles nor adjacent units. They did not establish interlocking sectors of fire with companies on their flanks, even though the battalion's defensive plan necessitated a cross-fire technique between the companies. This created two problems for both the company and the battalion. First, a lack of direct fire control created gaps in the defense that the OPFOR rapidly exploited. Secondly, the lack of graphic control measures hindered the effective communication of enemy composition, disposition, and location between adjacent units. The tempo of the OPFOR's attack exceeded the speed with which companies could communicate, precluding any target handover as the enemy traversed between company engagement areas. Designated target reference points, engagement areas, named areas of interest, and other graphic control measures would have facilitated better interoperability among the companies.

After the defense, the company began a steady campaign of short offensive operations, punctuated by periods of defense for planning and preparation. The company continued to rely on graphics from the battalion, which mainly used graphics from the brigade. All companies used the brigade's graphics (a system of checkpoints that mark identifiable terrain features) to communicate when they were within the vicinity of one of the checkpoints. The observed effect was discernible; reports sent as a shift from the checkpoint were substantially more fluid than reports when no graphic was available. They also began using the checkpoints as ambulance exchange points (AXPs) and logistic release points (LRPs). However, neither the companies nor the battalion used the checkpoints to facilitate the maneuver plan and rarely added graphic control measures where none existed. They did not disseminate
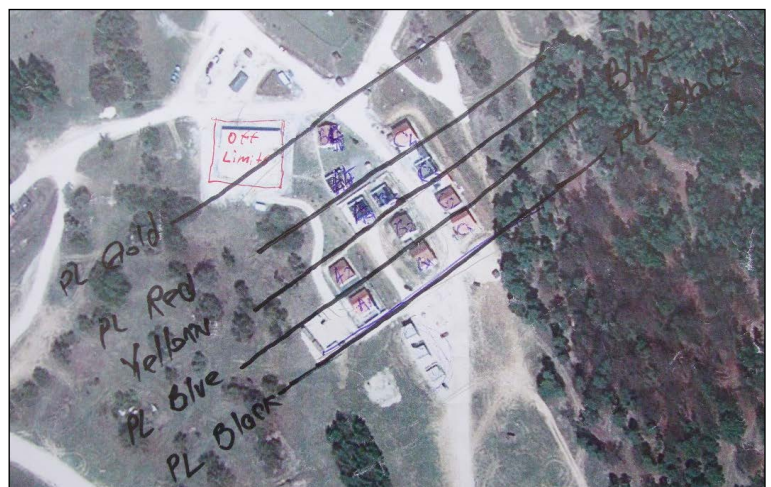

Figure 3 — Example Graphics for the Urban Attack
(Note: These graphics supported the maneuver plan. However, only officers carried copies of the graphics and they completely disregarded them once the assault began.)

graphics below the platoon-leader level, leaving NCOs and vehicle crews unable to synchronize direct fires within the confines of the company and battalion plan.

The marginal application of graphic control measures by both the tested company and battalion validated observations of negative trends made by OCTs prior to Combined Resolve V. OCTs observed improved performance when companies from different nations used a common control measure to communicate, such as checkpoints. This validates the hypothesis that graphic control measures are essential for multinational interoperability because the units were most synchronized when they used the checkpoints to communicate.

Figure 4 — Example Company Graphics Developed for the Defense
(Note: With the exception of indirect fire targets, all control measures were developed by brigade)

Recommendations/Best Practices for Tactical Leaders

Based on the performance of the tested company and past observations of JMRC OCTs, a number of interoperability lessons can be learned:

1) Graphic control measures are an essential component of multinational interoperability at the tactical level. They accelerate the pace of communications when Soldiers are not speaking their native language and allow everyone to visualize the fight.

2) Leaders must ensure everyone involved understands the graphics and knows the control measures. Inevitably, a multinational unit will use a blend of NATO and national doctrine, necessitating explanation of specific terms and symbols. Leaders should brief graphic control measures in the OPORD to ensure that subordinates understand the function of each.

3) All members of a multinational task force should avoid undefined acronyms. Military acronyms are a language of their own. Every military has its own unique lexicon of acronyms and abbreviations. Leaders must never assume that everyone understands what they are briefing.

4) Graphic control measures should include simple naming conventions. Soldiers who speak the operational language as a second language might not have a mental frame of reference for a name they just learned, making it challenging to pronounce or remember. Simple names include the phonetic alphabet, colors, basic animals, etc.

5) Leaders should understand and adhere to APP-6C, which contains a plethora of military symbols and graphic control measures that are standardized across NATO. OCTs have observed that few units training at JMRC are familiar with standardized NATO symbols. Study of this publication prior to conducting multinational operations will foster interoperability
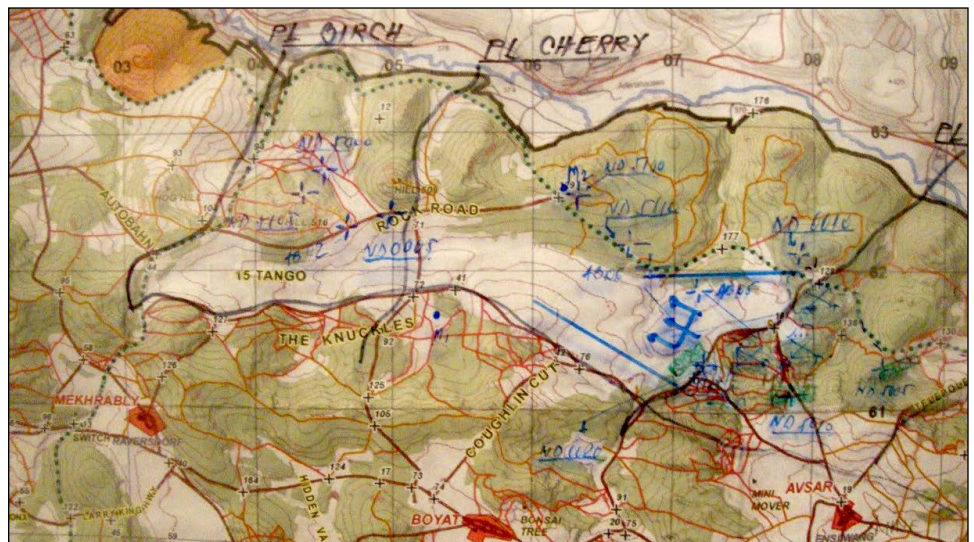
and provide useful examples of graphics that can be used to support a tactical plan. Symbols and graphics in APP-6C are closely consistent with Army Doctrine Reference Publication (ADRP) 1-02, *Terms and Military Symbols* (February 2015) with the addition of multiple joint symbols. Improved understanding of APP-6C by allied leaders will reduce the amount of time devoted to explaining graphics, allow all Soldiers to visualize an operation regardless of their native language, and facilitate communications.

6) Leaders should incorporate the best of each team member's national doctrine and techniques into operations. The advantage of a multinational task force is its diversity. This not only allows the commander to pick from the best available, but it also fosters mutual understanding, respect, and cooperation.

Final Thoughts

The results of Combined Resolve V validated previous OCT observations at JMRC. Though few positive examples of interoperability facilitated by graphic control measures emerged during the exercise, it remains evident that quality graphic control measures are essential for multinational units to interoperate at the tactical level. Fighting alongside our allies is mutually beneficial and essential today; it is also complex and challenging. Developing, disseminating, and implementing quality and mutually intelligible graphic control measures is critical for building interoperable multinational teams.

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EMPLOYING RECONNAISSANCE IN A MULTINATIONAL TASK FORCE

CPT MICHAEL CRYER

Militaries from across the North Atlantic Treaty Organization (NATO) alliance train on interoperability at the Joint Multinational Readiness Center (JMRC) in Germany in order to respond to regional threats as a common unified front, rather than a disparate collection of allies only able to operate independent of one another. Multinational task forces (TF) are frequently organized with battalions and brigades from across NATO serving as the TF headquarters. These task forces consist of companies, battalions, and assorted enablers from a wide range of NATO or Partnership for Peace armies. They typically have limited experience working together, are unfamiliar with each other's standard operating procedures, and are tenuously connected by a selected common language. A commander's biggest challenge in this situation is integrating unfamiliar subordinate units and quickly making the TF cohesive.

Based on JMRC observer-coach-trainer (OCT) observations from previous rotations, the successful integration and employment of reconnaissance units is particularly challenging for newly formed multinational TFs. This article will provide recommendations to a TF commander and staff for how they can optimally integrate a reconnaissance element from an allied nation at the battalion or brigade level. From the start, a commander should expect limited interoperability until several gaps in capacity and doctrine are filled. Essential to establishing interoperability with any reconnaissance (recce) element is determining materiel limitations, task organization, and differences in culture and doctrinal methods of employment.

Immediately upon integration, the brigade or battalion staff should determine the recce unit's materiel capacity. Not all armies employ recce units for the same purpose, and nations often equip them for a specific tactical task. Budgetary constraints might also cause limited reconnaissance-specific equipment fielding which can limit the scope of missions they are able to perform. If, at the start of integration, commanders and their staffs know the materiel limitations and strengths of the newly assigned recce element, they can employ them to rapidly and accurately answer the commander's critical information requirements (CCIR). They will also avoid committing them to a mission they're unable to accomplish due to limited or specialized capacity.

As an example, a recce platoon observed during JMRC Exercise Combined Resolve V was not equipped to operate effectively at night. The soldiers maneuvered in Soviet-era reconnaissance armored personnel carriers that lacked optics and only had night observation devices for their drivers. They also lacked other equipment and had a limited long-range communication capability. Despite these limitations, they were still ordered to conduct route reconnaissance and named area of interest (NAI) surveillance in limited visibility with full expectation of optimal information collection. In one instance, the platoon lost communications with battalion but maintained two observation posts (OPs) without reestablishing communications. A company from an adjacent U.S. battalion air assaulted into the area of operations (AO), and the recce platoon did not have the ability to conduct a reconnaissance handover. After receiving direct-fire contact from enemy counter-reconnaissance, the U.S. element called for fire danger close to the recce platoon. These types of risks can be mitigated if the TF staff takes subordinate-unit capacity into account as it generates combat power. If staff members conduct an analysis of the incoming unit's equipment capabilities, they can determine what type of equipment they should cross-load and assign with the recce.

The staff must also understand how the newly assigned recce element usually task organizes and how its chain of command is structured to successfully integrate it into the TF. In many militaries, recce units work directly for the intelligence officer (S2), and their effectiveness may hinge on how, or if, the S2 is involved in the planning process. An S2 observed during Combined Resolve V did not have a collaborative relationship with the battalion operations officer (S3) and was possessive of the battalion reconnaissance platoon. As a result, the S2 issued mission orders with no consideration of logistics, adjacent unit coordination, quick reaction force (QRF) support, engagement criteria, or a plan for rearward passage of lines (RPOL). Additionally, this platoon had historically trained to conduct split-section operations in order to cover more terrain and operated this way during the exercise. This resulted in an inability to provide mutual support, and as a second-order effect, the platoon incurred more risk than the TF commander would probably be comfortable with if he fully understood how they were operating. Unknown to the commander, in this platoon a section consisted of a single troop carrier vehicle and four personnel. If a section was compromised, destroyed, or if the vehicle broke down, the commander may have been forced to commit resources that he otherwise needed to accomplish the TF mission.

Also consider that some militaries are more officer-centric than others, and cultural barriers exist that may limit interoperability with a recce element. Breaking through that construct and empowering soldiers and leaders to use

disciplined initiative is critical to interoperability. The nature of reconnaissance missions requires trust in the tactical decision-making abilities of Soldiers on the ground and their ability to make critical decisions in the absence of the commander's direct guidance while operating within his intent. OCTs asked one BN reconnaissance platoon why it didn't displace off an OP to resupply radio batteries after they ran out of power, and a section leader answered "because we weren't ordered to." A recce element's leaders should be personally involved in the planning process and attend the TF combined arms rehearsal or rehearsal of concept drills before any major operation, and the commander should demand a back brief in order to move beyond cultural barriers like this. That same platoon's leaders took no part in TF rehearsals prior to the force-on-force mission at Combined Resolve V, and as a result the commander missed an opportunity to gain a better understanding of the reconnaissance platoon's scheme of maneuver and to provide clear guidance.

In 2014, a long range surveillance (LRS) company was attached to a U.S.-led brigade task force during JMRC Exercise Combined Resolve III. In its home country, the LRS company was intended to be employed as a division-level asset for deep infiltration and information collection. During Combined Resolve III, the brigade tasked it to overwatch NAIs far beyond the forward line of own troops (FLOT) and disrupt using joint fires, and the commander expected it to provide real-time updates in order to help pull the brigade's main body to the path of least resistance. Instead, the company occupied hide sites and used its doctrinal methods of surveillance. They went "radio-silent" until a planned communications window opened every two hours, at which time they transmitted information to the company command post (CP). The information collected could only be filtered to brigade operations and intelligence by way of a runner from the LRS Company CP, located adjacent to the brigade tactical operations center (TOC), and because of the commo-window, the runner wasn't capable of rapidly answering follow-up questions. Because it was employed contrary to its doctrinal methodology, the company became ineffective and did not meet the commander's intent.

During the after action review (AAR), the staff realized that embedding a liaison officer from the LRS company in the TOC and cross-leveling HF radio batteries would have benefited the mission. Had brigade staff understood the LRS company's capabilities, limitations, and methodology when it was first task organized, the commander could have employed it more effectively. However, the onus cannot solely rest on the supported HQ to determine the capabilities of a supporting element. While the staff is ultimately responsible for doing so, the supporting enabler must be proactive in making its "sales pitch" — a detailed capabilities brief — to the supported commander. The best reconnaissance units observed are the ones that involve themselves in the planning process and aggressively ensure their commander understands what they can provide to the TF.

JMRC OCTs regularly observe two consequences of the unsuccessful integration of reconnaissance assets. The first, as described in this article, is a misuse of the asset, and the second is a non-use of the asset. If a TF can't figure out how to employ its reconnaissance element successfully, it tends to stop employing it altogether, violating one of the principles of reconnaissance — never leave recce in the reserve. The strength of the multinational TF is its diversity of assets and capabilities; a reconnaissance unit won't always look the same, but it will always have the potential to fulfill a critical capability that the TF commander must leverage through adequate preparation and aggressive, early integration of the unit into his task force.

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Romanian soldiers of Delta Company, 191st Infantry Battalion, 18th Infantry Brigade, maneuver toward their objective during exercise Combined Resolve V on 25 October 2015.
Photo by SSG Carol A. Lehman

A Heavy Weapons Company in a Light Airborne World

CPT MICHAEL F. R. FREEMAN

Weapons companies have been employed incorrectly for many years. They have the most firepower within an infantry battalion with the most flexibility, but they are often delegated to stationary security positions such as traffic control points or base security. Heading into a training rotation at a Combat Training Center, one could predict that the weapons company will not be employed to its full potential. The various weapon systems and vehicle platforms a weapons company utilizes are often seen as a burden rather than an advantage. The perceived limitations of a smaller-sized infantry company often prevent weapons companies from being employed in an appropriate role. Weapons companies are critical to the battalion because of the way they can be utilized, the type of training they can conduct, and their unique setup.

Unique Setup

The unique setup of the weapons company does a few things: it provides an excellent leader-to-trooper ratio, allows the company to operate alone or task organized to another element, and has the advantage of the arms room concept.

The leadership ratio and task organization within a weapons company — or delta company — are fundamental reasons for its success. The leadership ratio generates options for the commander, increases flexibility of the assigned platoon, and provides tactical agility to the commander. Each platoon has a platoon leader, platoon sergeant, section sergeant, squad leader (SGT/E-5), and many senior and experienced specialists. Each platoon is approximately 16-18 paratroopers when at full strength. In a rifle company, there are roughly four E6s and eight E5s per platoon and around 26-30 E1-E4s. The smaller platoon size has advantages and disadvantages. One disadvantage is there is often a number of paratroopers on profile, taskings, or on leave/pass. Paratroopers not present for duty impact the platoon's capabilities, so closely monitoring "troop to task" is paramount. One of the advantages of the small size of a delta company platoon — and a significant reason for the success of a weapons company — is the leader involvement. Leaders not only are involved and ensure their paratroopers are doing the right thing, but they are forced to participate to accomplish the mission, whatever it may be.

Another advantage of the weapons company's unique setup is the ability it provides a commander to operate

Paratroopers from the 1st Brigade Combat Team, 82nd Airborne Division and six NATO nations established and expanded a lodgment after conducting an airborne joint forcible entry during Swift Response 15 at Hohenfels, Germany, on 27 August 2015.
Photo by SGT Juan F. Jimenez

independently or task organized to another element. Weapons companies may not have the quantity of Soldiers that a rifle company does, but they are still able to action on smaller objectives without the support of another company. By utilizing higher echelon assets such as battalion mortars or attack aviation, a weapons company can function in the same way a rifle company can.

Another method for employment is found in habitual relationships with the rifle companies within the battalion. Each platoon is aligned to a rifle company while the fourth platoon remains free to act as the quick reaction force, escort the forward support company, or provide a personal security detail as needed. Having such relationships greatly increases the shared understanding and facilitates the development of tactics, techniques, and procedures. Additionally, each relationship is mutually beneficial. A rifle company benefits by gaining the additional firepower of anti-vehicle/tank weapon systems. Support companies are able to focus on resupply by allowing the weapons company to secure the resupply convoy. A headquarters company gains a rapid response and flexible maneuver force to reinforce success or exploit weaknesses with a weapons company platoon attached.

With many varied employment options available to the commander, one must tailor the loadout of the company to the mission. Each platoon is broken down into two sections which employ the arms room concept as armament. The arms room concept means the sections have the capability to mount M2, M240B, MK19, and/or the tube-launched, optically-tracked, wireless-guided/Individual Target Acquisition System (TOW/ITAS). Typically each platoon is employed in the hunter/killer methodology where two vehicles have an ITAS and an M240B while the other two vehicles have M2s. While the unique setup is important, it is only part of what makes weapons companies successful.

Training a Weapons Company

With such a wide variety of roles, training a weapons company can be challenging. Not only do you have to train Soldiers on individual skills, but you must also train them to operate mounted and dismounted as a squad, platoon, and company. This can be daunting, but with the right approach and flexible planning it can be accomplished.

Over the past year, Delta Company, 2nd Battalion, 501st Parachute Infantry Regiment (PIR), has participated in two major training rotations: a Joint Readiness Training Center (JRTC) rotation at Fort Polk, La., and a training rotation in Europe. As Delta Company prepared for the initial JRTC rotation, the main focus was on training gunners, qualifying crews and sections, and supporting rifle company platoon live fires from mounted platforms. The gunners became lethally accurate; sections within the platoons did an excellent job of communicating between crews and with the rifle company; and command and control on the move became second nature. However, there was friction during actions at the halt or what to do once there was no longer a

Photo courtesy of author

Soldiers with Delta Company, 2nd Battalion, 501st Parachute Infantry Regiment, discuss a mission during Swift Response 15.

40-man dismounted platoon around the vehicles.

Each vehicle has a driver, gunner, truck commander (TC), and one to two dismounts. Some platoons have more than others, but that is the task organization Delta Company, 2-501st PIR had at JRTC. While at JRTC, Delta Company executed numerous missions in as many ways as possible (platoons attached to rifle companies, weapons company organic, in conjunction with brigade and battalion assets, etc.). Initially, in the defense around the forward landing strip, the company was able to repel the enemy's advances ultimately destroying dismounted, vehicle, and armored enemies within the engagement area. The mission then transitioned to the offense with the battalion moving to assault enemy forces strong pointed in urban areas. During this phase, the company operated within a battalion task force providing security to the ground assault convoy; then upon arrival at the assembly area, it transitioned to support of the assault force.

In both phases of the rotation (offense and defense), Delta Company performed well with a few key learning points for each. Upon return from JRTC, Delta Company, 2-501st PIR transitioned to dismounted tactics, focusing mainly on platoon attack and enter building/clear room training. Admittedly, there was risk assumed in not focusing on as many machine-gun ranges or mounted exercises given the short training window before our European training rotation. The paratroopers practiced reflexive fire, executed squad and platoon attacks, and executed team-level enter building/clear room live-fire training in a shoot house. This enabled the paratroopers to really learn how to operate dismounted and provided the battalion the capability of utilizing the weapons company as an additional rifle company for smaller objectives or missions (i.e. check point security, dismounted reconnaissance of objectives and tactical operation center locations, and quick reaction force from a rotary wing platform).

There were struggles, at least initially, returning to mounted operations. Simple tasks such as mounted land navigation, FM communication, and logistics status took more time to plan/execute properly or consolidate/reorganize. Ultimately, Delta Company was able to overcome these obstacles; however, those small setbacks added up and caused undue stress, which detracted from the mission.

I believe the winning formula in most cases is to train both dismounted and mounted tactics simultaneously. While it may be more efficient or simple to focus on one or the other, it will come at the cost of atrophy in those skills not focused on. Working with the battalion operations officer and commander on the importance of being able to train both methodologies will greatly improve the readiness of the company and battalion. Of course, all this cannot be accomplished if you are unable to balance training with readiness of your paratroopers and equipment.

Utilization of the Weapons Company

A delta company commander needs to be prepared for offensive, defensive, and stability operations. As previously discussed, how a weapons company is employed in each of those components of decisive action can vary, but in the offense is where weapons companies can be most destructive. Defensively, a delta company can provide the battalion with strong points to plan and transition to the offense again.

While in the offense, the weapons company provides a battalion commander a number of options. If the objective is in an urban area, the weapons company can isolate the target area while the rifle companies clear through urban structures. Given a weapons company's four platoons, this mission only requires two to three platoons with the fourth platoon as the battalion reserve. With so many different weapon systems available, understanding the battalion commander's tactical task/end state provides the company commander with options to employ his platoons. For example, given the task of isolating an objective, commanders may utilize the M2, M240B, and MK19s to engage forces attempting to retrograde or reinforce them; once the objective has been seized, they may reinforce the battalion with TOW/ITAS systems to destroy any enemy armored threat.

In the defense, the weapons company can perform a screen in front of the rifle companies to provide defense in depth, be divided up amongst the rifle companies to bolster defenses, concentrate on engagement areas to maximize destruction in a given area, or provide a mobile defense. Having an understanding of the battalion's plan of how and where to destroy the enemy will dictate where the forces are arrayed. There are advantages and disadvantages to any course of action, mobile defense, defense in depth, or strong pointing, but the battalion commander and operations officer will help determine the mission. The ultimate takeaway when performing the defense is that the company is defending in order to transition to the offense. Delta company commanders

need to keep this in mind when placing the company trains and working with the first sergeant on the resupply plan to stay mobile and agile.

As discussed previously, it is common for a weapons company to attach a platoon to another company. This platoon greatly enhances a rifle company's combat power by being able to provide a base of fire to maneuver on an objective, isolate enemy forces in an urban area, destroy enemy vehicle threats, escort casualties or enemy prisoners of war on or off an objective, as well as many other functions. Forming that habitual relationship with a rifle company will alleviate many of the typical friction points experienced during joint operations (communications, resupply, employment of the weapons company platoon, etc.).

The mission of the 82nd Airborne Division is to "always be prepared to move without notice to any place in the world by air and/or airborne assault, and to fight immediately upon arrival," according to the 82nd Airborne Division's Airborne SOP (Edition IX). In this scenario, the weapons company could have a portion of the weapons company attached to a rifle company while the unit is on a no-notice deployment status. This leaves the rest of the company to be bravo echelon (vehicles that will arrive by air-land as opposed to air-drop) once the airfield has been seized. During the airborne operation, the portion attached to that rifle company will have vehicles that will be air dropped. This will give that alpha echelon the initial maneuver and firepower advantage over an enemy force. The bravo echelon increases those advantages until further follow-on forces can arrive.

The way a delta company is employed as a weapons company is really as creative as the commander can be given the environment. Not only does the commander have the maneuverability to move around the battlefield, he also possesses the firepower to destroy most enemies encountered with little resistance.

The Way Ahead

In summary, weapons companies are absolutely essential to the battalion because of their firepower, capability set, the personnel within the company and roles they perform, and their ability to maintain their organic equipment. Through proper focus on the commander's intent and emphasizing the right training points, weapons companies can be successful in any theater. Whether deployed or at home station, weapons companies are flexible and agile enough to perform any mission.

CPT Michael F. R. Freeman is currently serving as the commander of Headquarters and Headquarters Company (HHC), 1st Brigade Combat Team, 82nd Airborne Division, Fort Bragg, N.C. He previously served as commander of Destroyer Company, 2nd Battalion, 501st Parachute Infantry Regiment, Fort Bragg. His other assignments include serving as a platoon leader and executive officer with Comanche Troop, 1st Battalion, 91st Cavalry Regiment, 173rd Airborne Brigade, in Schweinfurt, Germany, and Logar Province, Afghanistan. He earned a bachelor's degree in information technology and administrative management from Central Washington University.

TOMAHAWKS AND RED LIONS

THE HISTORICAL RELATIONSHIP BETWEEN 1-23 INFANTRY AND 1-37 FIELD ARTILLERY

1LT MICHAEL C. EDWARDS

Since the invention of artillery in the mid-12th century, militaries have increasingly integrated indirect fires with maneuver units in order to destroy enemies at depth with layers of weapon platforms and munitions. During the course of our nation's wars, the U.S. Army Field Artillery, nicknamed the King of Battle, has molded an inseparable relationship with the Infantry — the Queen of Battle. Although both the Field Artillery and the Infantry operate at many echelons in existing combined arms maneuver formations in the U.S. Army, few other relationships have evolved quite like that of the 2nd Infantry Division's 1st Battalion, 37th Field Artillery Regiment (Red Lions) and the 1st Battalion, 23rd Infantry Regiment (Tomahawks). The 1-37 FA and 1-23 IN work daily to maintain a high level of combat readiness with their battalion headquarters only 50 meters apart and their units' ties even closer.

Originally constituted as a degraded infantry regiment in 1812 and a single firing battery in 1918 respectively, 1-23 IN and 1-37 FA have enjoyed acclaimed histories with active participation in the following American wars: the Indian Wars, the Civil War, the Spanish-American War, World War I, World War II, the Korean War, Operation Iraqi Freedom (OIF), and Operation Enduring Freedom (OEF). Throughout four of these campaigns (WWII, Korean War, OIF, and OEF), the regiments served in combat together and created a relationship that continues to grow and evolve bounded by changes to equipment, technology, doctrine, and global threats.

As direct support for the 23rd IN during WWII, 1-37 FA introduced new tactics, techniques, and procedures (TTPs) that provided maneuver forces with artillery fires never before seen in the U.S. Army. Among these TTPs was the centralization of the call for fire, which provided greater oversight and procedural verification of artillery fire missions. While the Germans initially depended on horses to move artillery, 1-37 FA accelerated its mobility via self-propelled guns and motorized howitzer displacement and re-emplacement,

Department of Defense photo

Soldiers from the 2nd Infantry Division on the march during World War II.

effectively providing an exponential increase in range for fires. Additionally, the artillery's increased number of operational field radios allowed virtually every Army lieutenant the ability to call for fire. As a result, 1-37 FA effectively delivered fires in support of the 23rd IN in Normandy, northern France, the Rhineland, Ardennes-Alsace, and Central Europe.[1]

The units' WWII partnership forged most notably during the Ardennes forest battle of Elsenborn Ridge in December 1944, which was the only sector of the American front lines at the Battle of the Bulge where the Germans failed to advance.[2] After enduring a strong German offensive on 16 December, the 2nd Battalion, 394th Infantry Regiment retrograded west of Elsenborn Ridge to the town of Murringen while 1-23 IN prepared to reinforce their position and halt the German advance through the Ardennes by capturing and defending a village 1,500 yards south of Murringen.[3] In concert with a 1-23 IN counteroffensive on 17 December, 1LT Charles W. Stockell, a forward observer with 1-37 FA, "raced across the open fields," and established a prime observation post inside a church steeple; 1LT Stockell proceeded to adjust fire on the German assembly area, effectively disrupting the enemy

formation and neutralizing the impending attack.[4] According to CPT F. Luchowski, the battalion operations officer, Stockell's fire missions "gave them [Germans] hell," and characterized a critical event that enabled the Americans to defend their sector successfully.[5]

Another direct support assignment that impressively solidified 1-37 FA's relationship with the 23rd IN occurred during the famous Korean battle of Chipyong-ni in February 1951. According to historians and Soldiers, Chipyong-ni represented the decisive battle that halted Chinese Communist forces and turned the tide of the Korean War in the Americans' favor. During the course of the battle, 1-37 FA successfully accomplished its mission of digging in perimeter defensive positions outside the town of Chipyong-ni and firing hundreds of artillery missions with thousands of rounds while simultaneously reinforcing the front lines with cannoneers who served as riflemen.[6]

Prior to the three-day conflict, CPT John A. Elledge, a liaison officer who was acting in a role similar to what is now a battalion fire support officer, planned and integrated fires with Company G to support a joint defense established to stop Chinese advancement further into Korea. In the heat of battle, CPT Elledge selflessly laid his life on the line by running back and forth between the howitzer gun line, the fire direction center, and the thin infantry front lines in order to physically place reinforcements at the front and flanks. Despite receiving shrapnel from a grenade, CPT Elledge carried out the mission in support of the infantry defensive stand. More importantly, CPT Elledge and his fellow artillerymen represented the valor and strength of the 1-37 FA and its cannoneers' willingness to accomplish the mission in support of the Infantry. Thus, having driven the Chinese out of Chipyong-ni, the Soldiers of the 23rd Infantry Regiment, with their 1-37 FA brethren alongside them, handed the Chinese their first defeat since entering the Korean War.[7]

In a similar role, 1-37 FA supported various missions conducted by 1-23 IN during OIF and OEF as part of the 3rd Stryker Brigade Combat Team, 2nd Infantry Division. In April 2004, 1-37 FA and 1-23 IN collaborated as members of Task Force (TF) Duke, which operated near the Iraqi cities of Mosul and Hammam al-Alil with the mission of quelling Sunni and Shia challenges to coalition authority following the restoration of Iraqi sovereignty in the area.[8] According to current 1-23 IN Commander LTC Teddy Kleisner — who formerly served as a battle captain in the 1-23 IN element of TF Duke — 1-37 FA provided robust support from the Al Qayyara region just south of Hammam al-Alil while 1-23 IN and other TF Duke elements conducted both convoy escort operations on the main supply route and security operations around Mahmudiyah and Yusufiyah in the south. After two weeks of fighting Shia insurgents who attacked both American and Iraqi troops with mortars, rocket-propelled grenades (RPGs), small arms, and improvised explosive devices (IEDs), TF Duke successfully defeated the opposition, enabling the 1st Armored Division to effectively control the area.[9]

The 1-37 FA's brilliant integration while directly supporting the 23rd IN in WWII, the Korean War, OIF, and OEF merely represents the early stages of an association that thrives today. In March 2015, 1-37 FA became attached to the 2nd Infantry Division Artillery (DIVARTY), centralizing all artillery assets under one command within 2nd ID. Nevertheless, 1-37 FA continues to provide direct support fires for 1st Stryker Brigade Combat Team (SBCT), which includes 1-23 IN. The return of DIVARTY will improve Soldiers' artillery and fire support competency through standardized certification and gated training that will provide a more capable combined arms team in future conflicts and on future battlefields.

The 1-37 FA and 1-23 IN relationship is celebrated through Soldiers like 1LT Stockell and CPT Elledge whose

Photo by SPC Aaron Ritter

A gun crew with B Battery, 1st Battalion, 37th Field Artillery Regiment, 3rd Brigade, 2nd Infantry Division, works together to prepare to fire an M198 155mm Howitzer during a live-fire training exercise at Forward Operating Base Endurance in Iraq on 8 September 2004.

courageous actions undoubtedly deserve credit for both units' numerous honors. Both 1-37 FA and 1-23 IN proudly possess Presidential Unit Citations and campaign streamers for their Soldiers' actions in France and Korea. Additionally, 1-23 IN was awarded the Meritorious Unit Commendation and streamer for actions in Iraq in 2004. Moreover, the training and integration during 1-37 FA's transition from SBCT to DIVARTY provides 1-37 FA and 1-23 IN a seamless opportunity to build upon experiences, enhance the support to the SBCT, and establish a highly trained combat arms team.

LTC John D. Williams, the current 1-37 FA commander, expressed the relevance of both units' history and the importance of integration throughout the ranks, when he said, "The historic relationship between these two units is humbling. Two units that have been closely aligned for nearly a century. Landing at D-Day and WWII; landing at Pusan; the Battle of Chipyong-ni; deploying three times to Iraq; deploying in 2011 to Afghanistan... the same infantry battalion counting on the same artillery battalion to deliver fires. The same artillery battalion answering the calls-for-fire from the same infantry battalion. It truly is a historic relationship. Moreover, I think it is our leaders' responsibility to share this relationship with present-day Soldiers in both the Red Lions and the Tomahawks. We are adding chapters to the maneuver-fires relationship every day."

Ready to face an ever-changing enemy on a fluid battlefield, 1-37 FA and 1-23 IN look to the past to reinforce successes; train and evaluate in the present to refine skills; and look to the future to anticipate concerns and shape the environment for future leaders. The Red Lions of 1-37 FA and the Tomahawks of 1-23 IN remain the Army's premiere field artillery and infantry battalions. When the call of duty rings through the halls of these storied units, they will be more than ready to gather arms once again and just like at Elsenborn Ridge in WWII, at Chipyong-ni in Korea, and at Al Qayyara in Iraq, stand side by side to defend each other.

Notes

[1] "World War II Technology: Land Warfare Weapons — Artillery," accessed 7 October 2015, http://histclo.com/essay/war/ww2/tech/land/art/w2tlw-art.html.

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[3] William C.C. Cavanagh, *The Battle East of Elsenborn and the Twin Cities*. (South Yorkshire, Great Britain: Pen & Sword Military, 2004), 83

[4] Ibid, 85.

[5] Ibid, 85.

[6] Russell A. Gugeler, "Chipyong-ni," *Combat Actions in Korea Combat Actions in Korea*, accessed 5 October 2015, http://www.history.army.mil/books/korea/30-2/30-2_8.HTM.

[7] Ibid.

[8] John J. McGrath, ed,. *Between the Rivers: Combat Actions in Iraq 2003-2005* (Fort Leavenworth, KS: Combat Studies Institute, 2012), 111.

[9] Ibid,114.

1LT Michael Edwards is a Field Artillery officer currently serving as a battalion ammunition officer in the 1st Battalion, 37th Field Artillery. 1LT Edwards previously served as a fire support officer for A Company, 1st Battalion, 23rd Infantry Regiment. He is a graduate of the U.S. Military Academy at West Point, N.Y., and earned a bachelor's degree in American law. 1LT Edwards has conducted multiple artillery live-fire exercises alongside 1-23 IN, most notably during 3-2 Stryker Brigade Combat Team's rotation to the National Training Center at Fort Irwin, Calif., in July 2015. Along with his fellow 1-37 Field Artillery officers, NCOs, and forward observers, 1LT Edwards continues to build upon the successful relationship between 1-37 FA and 1-23 IN.

Breakthrough at Chipyong-ni — In February 1951, the 23rd Infantry Combat Team of the 2nd Infantry Division, with attached French and Dutch units, while moving forward to attack in advance of the Eighth Army, was cut off and surrounded by an overwhelming number of Chinese communist forces in the narrow Korean valley of Chipyong-ni. The Chinese forces occupied the commanding ridges while the American commander, COL Paul Freeman, isolated far in advance of the general battle line, used a ring of lower hills within the valley itself for his defensive perimeter. For more than three days in near freezing weather, the defenders held these positions. The action pictured at right is on the fourth day when an American armored unit broke through from the south. At this time, the valiant 23rd Infantry Combat Team smashed out of the perimeter at the lower end of the valley to break the encirclement, and with its units and most of its equipment intact, rejoined the Eighth Army.
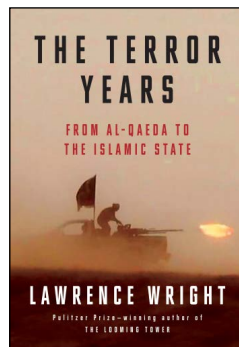
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Book Reviews
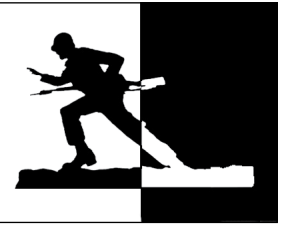
The Terror Years: From Al-Qaeda to the Islamic State
By Lawrence Wright
NY: Knopf, 2016, 384 pages

Reviewed by CPT Sam Wilkins

In *The Terror Years*, Lawrence Wright, author of the Pulitzer Prize-winning book *The Looming Tower*, amalgamates searing portraits of terrorists, counter-terrorists, spymasters, dissident filmmakers, and hostages to create a powerful, gritty, and somber narrative of this complex era. Wright's deep experience in the Middle East began with what he describes "as an accident in history" when, as a conscientious objector during the Vietnam War, he performed alternative service at the American University of Cairo. *The Terror Years* captures that experience by combining 11 pieces which originally appeared in *The New Yorker* between 2005-2015. Taken together, they form an unconventional history of "the evolution of the jihadist movement and the parallel actions of the West to attempt to contain it."

The first three chapters trace the birth of radical jihadism through the 9/11 attacks and the West's indifferent and dysfunctional attempts to stop it. The work begins with "The Man Behind Bin Laden," Lawrence's profile of Ayman Al-Zawahiri, the current leader of al-Qaeda. Wright skillfully weaves the tale of Zawahiri's path to radicalization with the intellectual birth of radical jihadism under the repression of 1950's Nasserite Egypt. He shares the roots of Zawahiri's rage in the torture cells of the Egyptian deep state and while maintaining perspective of the horrible evil of his movement. He explores pre-9/11 Western responses with two profiles of remarkable FBI agents, John O'Neil and Ali Soufan. "The Counter-Terrorist" describes O'Neil, a legendary but ultimately disgraced FBI agent whose obsession with al-Qaeda ended with his death in the World Trade Center. "The Agent" describes the remarkable Soufan, a Lebanese-American, and how his investigation into the USS Cole bombings nearly prevented the 9/11 attacks.

"The Kingdom of Silence" and "Captured on Film" offer portraits into life under repressive regimes that led many young Sunni males to jihad. "The Kingdom of Silence" is a stunning portrait of life inside Saudi Arabia, informed by Wright's time as an editor with *The Saudi Gazette* from 2002-2003. Wright captures the Orwellian contradictions of the kingdom and the resulting anger and depression in its young men. "Captured on Film" follows the Syrian film industry's muted existence under the abusive Assad regime in the years before the Arab Spring. Syria's filmmakers explain how Assad's "throttling of democratic expression" created a culture of suspicion and violence that would explode in revolt in 2012.

The next chapter is "The Terror Web" in which Wright tells the story of the Madrid train bombings, one of the few terrorist attacks to achieve its political objective.

"The Master Plan" shows the evolution of al-Qaeda after 9/11 through the writings of Abu Musab al-Suri and the second generation of al-Qaeda leaders. They despair after 9/11, labeling it a strategic disaster that forfeited al-Qaeda's only safe-haven in Afghanistan. Al-Suri branded the Bin-Laden/Zawahiri model of an underground terrorist movement "a failure on all fronts." The invasion of Iraq, Suri noted, essentially saved the jihadi movement from popular defeat. In 2005, Suri outlined a phase of jihad characterized by "leaderless resistance" that would prepare conditions for the establishment of an Islamic state, "the strategic goal of the resistance." Suri's blueprint eerily foreshadowed the shift in strategic approach that gave rise to the Islamic State.

"The Rebellion Within" focuses on Sayyid Imam al-Sharif, popularly known by his nom-de-guerre Dr. Fadl. In 2008, Al-Sharif, formerly a top council to Bin Laden and Islamist author, wrote a lengthy screed denouncing al-Qaeda's violence. At the time of writing, Wright and other experts within the Arab world saw the split as a symbol of "the group disintegrating." While in many ways they were correct, they failed to foresee that an ultra-violent strand would soon eclipse al-Qaeda and establish a physical state under jihadi control in accordance with "The Master Plan."

"The Spymaster" follows a series of interviews between the author and former Director of National Intelligence Michael McConnell concerning the balance between security and freedom in the age of terror. "Captured" tells the tale of Gaza under Hamas, Operation "Cast Lead," and the capture and eventual exchange of Israeli army Sergeant Gilad Shalit.

"Five Hostages" represents the book's emotional climax. Wright tells the heartbreaking tale of the five American journalists and aid workers captured in Syria. It shares the tale of the families' private efforts at rescue, led by media-magnate David Bradley, owner of The Atlantic Media Company. Bradley's team effectively replaced a puttering U.S. government interagency process. With the assistance of Soufan ("The Agent" from chapter three) and the Qatari government, they secured the release of Peter Padnos from the organization formally known as the Al Nusra Front. Tragically, ISIS executed the remaining four captives.

Wright's unadorned prose transforms his deep experience

with terrorism and counter-terrorism into powerful but accessible stories. In the best traditions of journalism, he educates without sermonizing or advocating policies. This allows the reader to empathize with the subjects on both sides while simultaneously maintaining a moral perspective on the evils of al-Qaeda and ISIS.

In the epilogue, Wright ponders the future of ISIS, how terrorist organizations end, and the costs of the age of terror. He predicts with chilling realism that "the conflict that the Islamic State has provoked will ultimately bring about its destruction, but not without much more havoc and heartache." Wright predicts that "this age of terror will end one day." "Terrorism as a strategy," Wright notes, "rarely succeeds, except in one respect: it creates repression on the part of the state or occupying power." While Wright acknowledges the necessity of the "security state" created since 9/11, he ponders whether America, at the inevitable conclusion of this era, will even remember "the feeling of freedom that once was our birthright... if we fail to keep in mind the country we were before 9/11, we may never steer in that direction again. In that case, the terrorists really will have won."

Storming the City: U.S. Military Performance in Urban Warfare from World War II to Vietnam
By Alec Wahlman
Denton, TX: University of North Texas Press, 2015, 368 pages
Reviewed by LTC (Retired) Rick Baillergeon
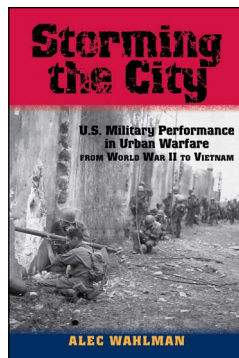
Since the beginning of Operation Iraqi Freedom in 2003, the interest level in urban warfare has clearly escalated. This in turn has spurred a large increase in the publication of books tied to the subject. In my experience, these volumes have generally fallen into two categories in terms of content and focus. First, there are the volumes in which the author has focused on a particular battle or an aspect of urban warfare. The second are those books which are more general and may address numerous urban warfare battles in the past or provide more wide-ranging discussions. Both types of volumes can have much utility to readers depending on their quality.

Alec Wahlman is one author who has crafted a sort of hybrid of these groups. Within his outstanding volume *Storming the City: U.S Military Performance in Urban Warfare from World War II to Vietnam*, Wahlman states in his introduction that, "The gap this study seeks to fill is between the detailed accounts of single battles and the broad pattern analysis across many battles that lacks tactical detail." I

believe Wahlman has clearly achieved what he sought to accomplish.

Within his pages, the author has focused on four particular battles between World War II and Vietnam. These are Aachen (1944), Manila (1945), Seoul (1950), and Hue (1968). Within each, he employs the same four-part organization to address the battle. These complementary sections are:

1) The operational context in which the battle took place;
2) The opponent U.S. forces fought against;
3) A concise synopsis of the battle; and
4) An analysis of the tactical performance of the U.S. forces in the battle.

Although each section is extremely well written, two clearly stand out in terms of quality. First, Wahlman's ability to concisely provide readers with a synopsis of each battle is very impressive. In complying with his intent, the author does not produce a comprehensive account of each battle. However, he does deliver sufficient detail of the battle itself so readers have a good understanding of the fight. His ability to attain this truly sets the conditions for the author to focus on the clear strength of the volume — the analysis of U.S. performance within each battle.

In this section, Wahlman utilizes the same organization to conduct his analysis of each battle. He has selected six areas (basically battlefield operating systems or warfighting functions) to dissect U.S. performance: Command, control, and communications; intelligence and reconnaissance; firepower and survivability; mobility and counter-mobility; logistics; and importantly, dealing with the population. I found Wahlman's analysis authoritative and sound. Importantly, he offers solid examples to reinforce his statements and opinions.

Wahlman takes his analysis one step further in his concluding paragraph. Within it, he compares performance between the battles. He offers areas in which there were significant differences within the battles. Just as critically, he suggests ways in which they were extremely similar. Wahlman summarizes each of the above when he states, "And yet, despite the variations in conditions, resources available, and foes, U.S. forces successfully executed their mission to capture the city in every case." He details his rationale on why this success occurred — transferable competence and battlefield adaptation.

Before my summary, I would be remiss in not highlighting two chapters within the volume which Wahlman has inserted. These two focus on U.S. military thought (doctrine, professional publications, etc...) as they pertain to urban warfare before and after World War II. As you would expect, he has placed them appropriately within the organization of his book. I feel readers will find these extremely informative, and they provide excellent background as readers move into the battle discussion.

In his conclusion, Wahlman states, "The central three-part question this study sought to answer was: When the

need arose to fight in urban terrain in the mid-20th century, how effective were U.S. forces, why, and how did their performance change from World War II to Vietnam?" I believe Wahlman has unquestionably answered each more than adequately. In doing so, he has provided readers with a volume which is highly informative and thought provoking. He has also provided readers with a context and background to examine urban warfare in the present and the future.

The Winter Fortress: The Epic Mission to Sabotage Hitler's Atomic Bomb
By Neil Bascomb
NY: Houghton Mifflin Harcour, 2016, 400 pages

Reviewed by
CPT Jeremy M. Phillips
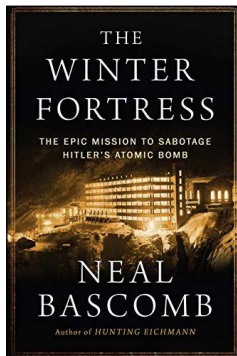
It is sometimes the case that non-fiction is more thrilling and unbelievable than the fiction it inspires. This is certainly the case for the new book *The Winter Fortress: The Epic Mission to Sabotage Hitler's Atomic Bomb*. Neal Bascomb, author of several historical narratives including *Hunting Eichmann* and *The Perfect Mile*, conducted unprecedented research into the joint Norwegian and British commando offensive against German atomic research during World War II.

Movies like "The Dirty Dozen" or "Inglorious Basterds" involved suicide missions against the Nazi war machine, but the ragtag unit at the center of this book undertook many missions where escape seemed impossible from the outset; their exploits would be unbelievable if they were not well documented. The story Bascomb explores is undeniably cinematic, so much so that a film has already been made about it — the (highly adapted) 1965 Kirk Douglas film "The Heroes of Telemark." About 150 Norwegian expatriates, former soldiers, backwoodsmen, and scientists trained in the mountains of Scotland for weeks learning commando assassination, demolition, and radio techniques. Known as the Norwegian Independent Company No. 1 (or Kompani Linge by its members), these Scandinavian warriors conducted raids, attacks, and covert operations all over Norway, but one specific campaign is the focus of *The Winter Fortress*.

In 1942, Germany and the United States were briefly at the same point in developing the atomic bomb. The source of "heavy water," an essential part of Nazi nuclear experimentation, was the cutting-edge Vemork dam in rural Rjukan, Norway. Luckily for the Allies, two Norwegian physicists, Leif Tronstad and Jomar Brun, who were essential to the design and construction of the power plant built deep into the dam, contacted British operatives once the Nazis took over production. With Tronstad guiding the Norwegian commando unit training in Scotland and the undercover assistance of Brun actively managing the Nazi-controlled heavy water facility, a mission was mounted to destroy the plant.

The Winter Fortress breathtakingly chronicles the preparation and hardship of the men involved. Bascomb manages to capture in propulsive detail men like Jens-Anton Poulsson, a 23-year-old Norwegian soldier who was driven from Norway by the Nazi invasion and traveled almost around the world in order to join Kompani Linge, or Einar Skinnarland, a Rjukan local with valuable knowledge of the Vemork power plant who refused anesthetic for excruciating knee surgery because it would delay the ship hijacking that took him to England and his calling as a commando and spy. These men, plus two more trained commandos and a local resistance operative, became the pathfinder element known as Operation Grouse, parachuting into the remorseless, broken terrain around the factory during a harsh Norwegian winter to collect intelligence and guide a glider assault onto target. Their struggle began immediately as they fought to survive in the barren snowscape around Rjukan. The Norwegian team bore setbacks with equipment, months-long delays, a disastrous failed infiltration attempt by British sappers, and ruthless German commanders. Eventually the Operation Grouse team received reinforcements from Kompani Linge and mounted a mission to destroy the plant with explosives from within.

Their final attack, against a heavily armed German garrison which knew Vemork was a target, began with the ascent of an ice-strewn cliff and ended with the Norwegian operators splitting up to variously escape the country by rail, trek to Sweden on skis, or return to the mountains to enable further resistance in the country. The author could have stopped here with a riveting narrative and a spellbinding conclusion, but thankfully he continues the story of the Norwegian Independent Company. The Nazi ordnance corps was determined to harness the atomic energy that the Vemork dam could unlock, and it fell to the British-trained Norwegian commandos to continuously thwart Nazi efforts to rebuild the facility. This book is a must-read for WWII history buffs, students of special forces or commando tactics, and a captivating option for anyone who might not usually enjoy military history or non-fiction.