PB 7-13-3

Infantry

July-September 2013

Soldier Power: A Growing Operational Concern

TCM-ABCT Identifies Gaps in Bradley Training

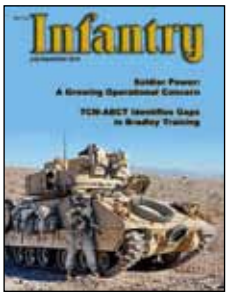
PB 7-13-3

BG DAVID B. HAIGHT
Commandant,
U.S. Army Infantry School

RUSSELL A. ENO
Editor

MICHELLE J. ROWAN
Deputy Editor

This will be our last printed issue before taking a printing hiatus. Please continue to read *Infantry* online at www.benning.army.mil/infantry/magazine.



FRONT COVER:

A Soldier from the 3rd Armored Brigade Combat Team, 1st Infantry Division pulls security next to a Bradley Fighting Vehicle on 19 January 2013 during a decisive action rotation at the National Training Center, Fort Irwin, Calif. (Photo by SGT Eric M. Garland II)

BACK COVER:

Infantrymen with D Company, 1st Battalion,158th Infantry Regiment (Bushmasters) conduct a TOW (Tube-launched, Optically-tracked, Wire command-link guided) missile live-fire exercise at Yuma Proving Grounds, Ariz., on 16 June 2013. (Photo by SGT Adrian Borunda)

This medium is approved for official dissemination of material designed to keep individuals within the Army knowledgeable of current and emerging developments within their areas of expertise for the purpose of enhancing their professional development.

By Order of the Secretary of the Army:

RAYMOND T. ODIERNO
General, United States Army
Chief of Staff

Official:

JOYCE E. MORROW
Administrative Assistant to the
Secretary of the Army
1326204

Distribution: Special

Approved for public release; distribution is unlimited.

Infantry

JULY-SEPTEMBER 2013 **Volume 102, Number 3**

FEATURES

DEPARTMENTS

• ***INFANTRY*** (ISSN: 0019-9532) is an Army professional bulletin prepared for quarterly publication by the U.S. Army Infantry School at Fort Benning, Ga. • Although it contains professional information for the Infantryman, the content does not necessarily reflect the official Army position and does not supersede any information presented in other official Army publications. • Unless otherwise stated, the views herein are those of the authors and not necessarily those of the Department of Defense or any element of it. • Official distribution is to Infantry and Infantry-related units and to appropriate staff agencies and service schools. • Direct communication concerning editorial policies and subscription rates is authorized to Editor, *Infantry*, P.O. Box 52005, Fort Benning, GA 31995-2005. • Telephones: (706) 545-2350 or 545-6951, DSN 835-2350 or 835-6951; email: usarmy.benning.tradoc.mbx.infantry-magazine@mail.mil • Bulk rate postage paid at Columbus, Ga., and other mailing offices. • **POSTMASTER: Send address changes to *Infantry* Magazine, P.O. Box 52005, Fort Benning, GA 31995-2005.** • USPS Publication No. 370630.

Commandant's Note

BG DAVID B. HAIGHT

Preparing the Maneuver Force for Future Armed Conflict

Today, the U.S. Army faces challenges on a level comparable to those we faced in the post-Vietnam era; reduced size, budgetary uncertainty complicated by Service-level competition for reset dollars, meeting our NATO commitments, and domestic priorities all demand that senior leaders in the U.S. Army find ever more creative and cost-effective ways to accomplish the mission. Failure to do so is simply not an option. During those uncertain times, the Army remained committed to training and maintaining a force capable of meeting its commitments at home and abroad. Our future success will depend to a large extent on training and retaining adaptive, innovative leaders, and in this Commandant's Note, my last as Chief of Infantry, I want to highlight some of the initiatives that the U.S. Army Infantry School, partnered with the U.S. Army Armor School, is continuing to implement to ensure that the Army can field a maneuver force that deploys rapidly, strikes hard, and returns to home station to train for the next mission.

Fort Benning, Ga., is the home to more high-risk training than any other installation, and trains 35 percent of all new Soldiers in the Army and all Infantry and Armor lieutenants, captains, and NCOs. Rangers, Snipers, Airborne students, Army reconnaissance and Cavalry leader courses, and others train day and night for the missions that await them around the globe. On a typical day more than 12,000 Soldiers are undergoing training in some of the 157 courses that both Branch Schools offer. More than 85,000 Soldiers and other service members train safely to standard every year.

The global war on terrorism presented challenges that forced us to examine how we train in light of the complex cultures, customs, and environments of Iraq and Afghanistan, and we adapted our training methods accordingly. This does not imply, however, that we will continue to train with a focus solely on Afghanistan. Many nations unfriendly to the U.S. have learned from the past 12 years; they have varying capabilities that we as a nation could face in the near future. We must continue to develop doctrine that enables us to understand and fight unified land operations and its two components of combined arms maneuver and wide area security. Additionally, we must continue to improve our situational and cultural awareness, understanding of the roles of non-state terrorism, and gain the ability to effectively assess the intentions, resourcefulness, values, and commitment of an enemy that will operate in close proximity to the people and government services. Other aspects of today's operations include the acclimatization of Soldiers operating at high altitudes; the challenges of airborne assault or helicopter insertion, resupply, and extraction; artillery employment and reduction of civilian casualties by positively identifying the enemy; and the criticality of operations security measures needed for increased coalition warfare. Future combat operations will also see more emphasis on how an enemy attempts to or is likely to seek ways to offset materiel, tactical, or doctrinal advantages of our Army, requiring us to continue our own capabilities development.

The lessons of Infantry operating over extended distances in increasingly complex environments is continuing to receive attention with an eye to reducing the load carried by the Soldier without impairing maneuverability or survivability. The great physical demands on Soldiers in combat have led us to increase the rigor of resident courses within the Infantry School. We will be increasing the physical training requirements in the Officer Candidate School, and demolition and combatives training are once again part of the Ranger School curriculum. The Henry Caro NCO Academy will include increased field training, and the Bradley Master Gunner course will require students to undergo prerequisite training at home station prior to arrival to the institutional course. As the U.S. Army Sniper School (USASS) ties the Adaptive Soldier/Leader Training and Education (ASLTE) initiative into its program of instruction, the tenets of Army Situational Awareness Training (ASAT) will be presented during Week 1 and reinforced throughout the course. ASAT will also be included in the 17-week Infantry Basic Officer Leader Course (IBOLC). Further changes to USASS include the use of instructor experiences to enhance relevancy, a field craft culmination evaluation, and a 48-hour field training exercise in which IBOLC students assist in planning, USASS cadre evaluate students' sniper tactics, and ASAT cadre evaluate critical-thinking skills. The Pathfinder course will increase its operational rigor by focusing on the Pathfinder in the field and mission requirements of Pathfinder operations to increase larger unit operations in both the offense and defense.

Fort Benning has established a concept that will improve the quality of instruction and provide incentives for officers and NCOs to further develop individual skills that will be useful throughout their future career assignments and after they transition to civilian life. Other initiatives under way will enhance leaders' understanding of combined arms training. Commanders across Fort Benning continue the practice of integrating capabilities from across the installation to facilitate multi-echelon leader development. The Army's business is warfighting. Emphasis on training, leader development, and doctrine and combat developments at the Infantry School will ensure that our Army can seize the initiative and remain the decisive force on future battlefields.

One force, one fight! Follow me!

MCoE Revising COIN Doctrine

NICK DUKE

Throughout the course of the war on terror, one of the constant themes has been the need for the American military to conduct counterinsurgency (COIN) operations in environments such as Iraq and Afghanistan.

The Maneuver Center of Excellence's (MCoE's) Directorate of Training and Doctrine has been updating Army Field Manual (FM) 3-24.2, which deals with tactics used during COIN operations.

The effort to revise FM 3-24.2 coincides with plans to revise the Army's overall COIN field manual, FM 3-24, which is set for publication later this year.

CPT Jeffrey Johnson, a foreign area officer and COIN subject matter expert, said the main goal of a revision such as this one is to ensure that experiences gained during the last 12 years of combat are being applied to doctrine.

Photo by SSG Sean A. Foley

An understanding of the people and culture of the host country is an important aspect of counterinsurgency. Above, 1LT Jeff Harris, center, and CPT Robert Erdman from Troop A, 1st Squadron, 40th Cavalry Regiment, explain to a sheik what was found in houses belonging to members of his tribe during a November 2006 cordon and search mission in Hawr Rajab, Iraq.

"We have to make sure our doctrine is both effective and timely by incorporating our lessons learned, our observations, and our insights as an operating force that has been doing this for the last 12 years, coupled with those lessons learned, observations, and insights from our allied partners," he said.

During the effort to revise FM 3-24.2, which will be published in 2015 as an Army techniques publication, Johnson has spent time developing a common language for COIN instruction that he hopes to see implemented across the MCoE.

Johnson collaborated with training specialists to develop a relevant program of instruction (POI), lesson plan, and teaching support package for a potential updated COIN instruction program for the Henry Caro NCO Academy.

Johnson presented his proposed revision to NCO Academy instructors during a four-hour session in June.

"We observed the training that was there, which was good training, but what we wanted to do was give it more robust counterinsurgent information," Johnson said. "We're widening the aperture on counterinsurgency."

He said that the major difference between the newly developed POI and the previous one is that it focuses not just on the insurgencies themselves, but rather the conditions that allow insurgencies to operate in a given environment.

"It's one thing to understand an insurgent's strategies or dynamics, but it's also very important to understand what allows an insurgency to occur," he said. "That's what this does."

Johnson said one of the issues that Soldiers often have in relation to COIN is an inability to agree on what constitutes an insurgency.

"We've identified that everybody has his or her own concept of what counterinsurgency is or of what insurgency is," he said. "Sometimes individuals mistake terrorism for insurgency or criminal organizations for insurgencies."

For the purposes of doctrine, an insurgency is defined as an organized movement aimed at the overthrow of a constituted government through the use of subversion and armed conflict.

"The part of that definition that says 'aimed' is very important," Johnson said. "It's almost more important than the insurgency itself because if an organized movement that is nefarious in nature is trying to overthrow an established government, it's not only important that you just look at the insurgency and the government. What's also important is trying to figure out how they're aiming to do that and

what gives them freedom of movement.

"That's what we want to do and we are doing with revised, renewed counterinsurgency doctrine. We're trying to show the Soldier why an insurgent has the ability to conduct operations and why the insurgent organization garners, uses, and maintains freedom of movement in the same operational environment we're conducting operations in."

Part of the need to revise COIN doctrine and instruction stems from a shift in the Army's approach to counterinsurgency operations, Johnson said.

"What we've developed in counter-insurgency is this thing we used to call 'clear, hold, build,' but what we're moving to and what we're understanding more is that it's not just 'clear, hold, build,'" Johnson said. "I don't just go and clear the threat away because if I do that, I haven't identified the vulnerabilities that allowed that threat to exist in the first place. Then, the threat continues to repopulate, re-emerge, and regenerate to exploit those vulnerabilities.

"We've moved from 'clear, hold, build' to 'shape, clear, hold, build, transition. ...What shape allows the commander to do is to try and understand that environment and either shape the current existing conditions through planning or allow that environment to adjust, modify, and create a level of flexibility with planned operations before executing."

While the Army's future as an active player in Afghanistan is uncertain, Johnson said there will continue to be a need for COIN doctrine and instruction to be as up to date as possible.

"In my mind's eye, counterinsurgency is not going to go away," he said. "I think there's always going to be a level of traditional warfare, a level of irregular warfare, but more importantly it's going to be trying to identify the crossover between the two and how to effectively leverage our assets to win a particular objective. Our doctrine has to support the most effective way of understanding that and showing how to employ the host of assets we have available to us in order to consolidate the gains achieved along a particular line of effort in what are very complex environments."

(Nick Duke writes for the Fort Benning weekly newspaper Bayonet and Saber*.)*

MCoE Rolls Out Self-Study Program

NICK DUKE

The Maneuver Center of Excellence (MCoE), in support of Armywide plans for leader development, has instituted the Maneuver Self-Study Program (MSSP).

The program, which was identified by MCoE Commanding General MG H. R. McMaster as one of his initiatives in 2012, consists of books, articles, doctrine, films, lectures and practical application exercises to help educate maneuver leaders about the nature and character of war, as well as their responsibilities to prepare Soldiers for combat, lead them in battle, and accomplish the mission.

The online program includes an introduction and list of topics, as well as recommended publications for each topic, at the MSSP website at www.benning.army.mil/mssp/.

Participants in the program take part in discussion forums through the use of LinkedIn, a social networking website for people in professional occupations.

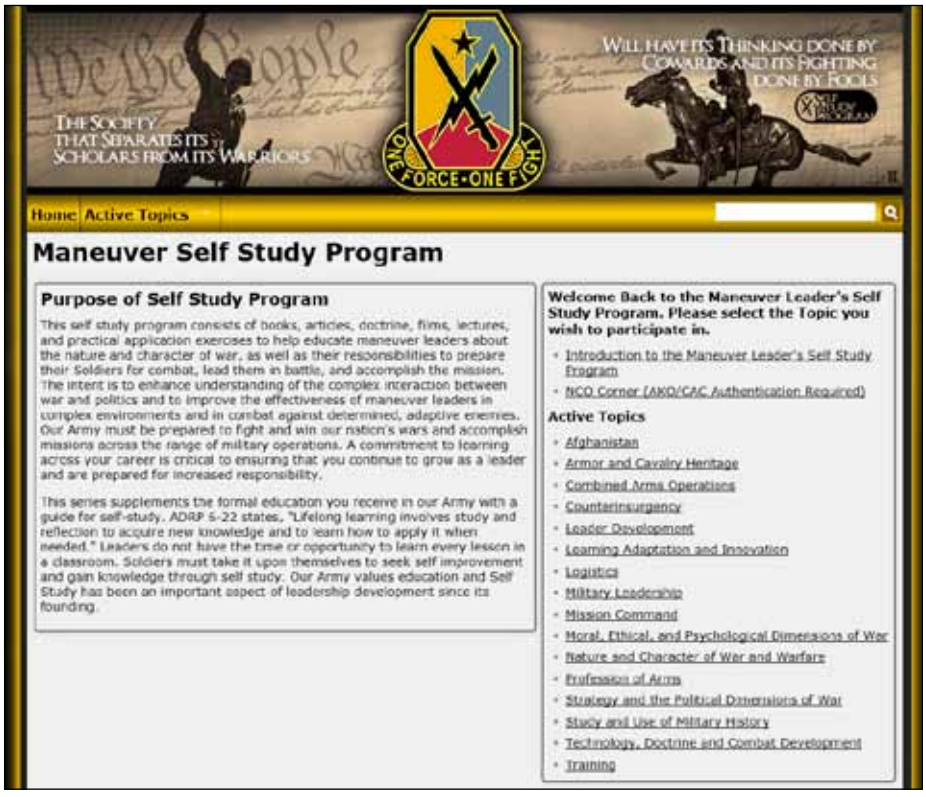
MCoE staff members can moderate the discussion forums and ensure discussions are productive and on topic.

The effort to build the program began roughly a year ago, said LTC John Argue, program manager.

A pilot program went online in March, with the first students using the program in May. However, that pilot version of the program featured a major difference from the version that will be used going forward. "For a student to be able to access the program, they had to have a common access card and a computer that is CAC-card accessible," Argue said.

"It limits so many people, such as retirees who might want to be mentors. There are retirees who have published

Figure 1 — MSSP website - www.benning.army.mil/mssp



some of the documentation that is part of the program, and they weren't even able to participate."

At the behest of McMaster, Argue said the MSSP team eventually found a way to open the program to everyone through the use of online library collaborative tools and LinkedIn.

The public-facing version of the program went into its own brief pilot stage last week, with students from the Maneuver Captains Career Course using it and providing feedback before the program was unveiled Tuesday and made open to the public and operational force.

Already, Argue said the two pilot versions have shown there is a benefit to using the program in conjunction with pre-course required reading.

"What we're finding is that when students read those topics, it better prepares the student for in-class conversation," he said. "They're already ready to talk about the topic when they come in. Also, they've already collaborated. Even if they don't know each other, they've met each other virtually. It enhances the group dynamic before the class even starts."

All courses and commanders are now required to implement and promote MSSP, but Argue said how each organization chooses to do that is up to them.

"When we say implement, we're not talking about implementing it into the core instruction," Argue said. "You can't do that because instruction is rigid. To add something, you have to remove something. So, that's why we're doing it as pre-reading and we're following course material that's already in the program. The topics chosen should assist classroom discussion."

The topics chosen for the program were suggested by McMaster and his initiatives group. Argue said topics will be updated to ensure relevancy, and that other ways to improve the program are already in the works.

"One thing we're looking at is the incentive," Argue said. "Do the students see enough incentive to participate in the program? We know as leaders that the incentive is the habit of lifelong learning, but we need to make sure there's enough incentives for young sergeants or lieutenants to participate."

The program could also see expansion and could be used for leader development exercises within various units.

"Commanders in the force are mandated to do leader development once per quarter," Argue said. "This is a package that will already be available that involves a low amount of planning. They'll already have the documents and topics that have questions to use or that lend themselves to creating new questions. ...It'll be there and set up for commanders that want to use it."

Argue said the program could also see expansion to an international level if it is well received.

"International liaison officers are taking on some topic management assistance, so they're helping us facilitate conversation with students," he said. "If the program grows, we'd like them to help us facilitate with students in other international militaries."

(Nick Duke writes for the Fort Benning weekly newspaper Bayonet and Saber.*)*

SUBMIT YOUR ARTICLES TO INFANTRY

As we continue our transition to a web-based publication, please continue to send us your articles. Topics for articles can include information on organization, weapons, equipment, and experiences while deployed to Iraq and Afghanistan. We can also use relevant historical articles with emphasis on the lessons we can learn from the past.

Our fully developed feature articles are usually between 2,000 and 3,500 words, but these are not rigid guidelines. Shorter articles can be used in our Professional Forum and Training Notes sections. We prefer clear, correct, concise, and consistent wording expressed in the active voice. Also, please spell out all acronyms/abbreviations the first time you use them.

Sketches, photographs, maps, and line drawings that support your article are encouraged. When you submit your article, please include the original electronic file of all graphics (jpeg, tiff, Powerpoint, etc.). Please also include the origin of all artwork and, if necessary, written permission for any copyrighted items to be reprinted.

Authors are responsible for ensuring their articles receive a proper security review through their respective organizations before being submitted. A complete writer's guide can be found on our website at www.benning.army.mil/infantry/magazine or contact us with any questions. Articles can be submitted by email to: usarmy.benning.tradoc.mbx.infantry-magazine@mail.mil.

For more information, call (706) 545-2350/6951 or DSN 835-2350/6951.

Visit us online at www.benning.army.mil/infantry/magazine

Soldier Power:

A Growing Operational Concern

MAJ STEVEN P. MEREDITH AND MAJ DAVID BERGMANN

"In World War II, it took one to two gallons of fuel per day to sustain a Soldier on the battlefield. Today, it takes 20 plus gallons per Soldier, per day."

— LTG Raymond V. Mason
Deputy Chief of Staff of the U.S. Army, G4 Logistics

"Every time we deliver fuel or batteries on the battlefield, we put Soldiers at risk."

— ***Call for Action***, signed by **SMA Raymond F. Chandler III**, Sergeant Major of the Army; **GEN Raymond T. Odierno**, Army Chief of Staff; and **Hon. John M. McHugh**, Secretary of the Army

With the proliferation of Soldier and squad-borne technologies, Soldier power solutions are becoming a critical operational concern. Without access to adequate power, the Army's dismounted unit capabilities rapidly become degraded on the battlefield. The Army prides itself on providing its Soldiers with the most technologically advanced equipment that overmatches potential enemies' systems and weapons. However, technological overmatch is unlikely if Soldiers are unable to power these systems. This article explores some of the current and emerging power and battery limitations and potential developmental solutions.

Operational Energy — Meeting a Growing Demand

It is one thing to create a battery that provides twice the amount of power within the same package, but when Soldiers already conduct battery swaps more than seven times over a 72-hour mission, this does not eliminate the need to carry spare batteries or recharge them. Additionally, with the given state of small, lightweight power generation technologies, current batteries cannot be charged rapidly enough to fully self-sustain the unit.

In an effort to address potential energy shortages and logistical challenges, the Army is exploring a wide range of solutions to sustain the force through an operational energy initiative. Operational energy initiatives at the small unit level are reducing

Soldiers with Bravo Company, 2nd Battalion, 23rd Infantry Regiment, conduct a dismounted presence patrol on 2 June 2013 in Kandahar Province, Afghanistan.

Photo by SGT Shane Hamann

the frequency of resupply (both aerial and ground), the number of batteries Soldiers must carry, how often Soldiers must replace their batteries, and providing solutions to better manage the power they do have. The ultimate goal of the operational energy initiative is to improve combat effectiveness by becoming "net zero" — thereby saving Soldiers' lives and reducing Soldier load. Net zero at the small unit level is the ability for Soldiers to produce sufficient energy to power their own individual equipment, reducing the need for resupply related to power demand. The Army continues to seek revolutionary solutions to generate power on-site, reduce system power demand, and eliminate the need for spare batteries. Eventually, the Army will measure power-source life in terms of weeks and months rather than hours and days.

The Maneuver Center of Excellence's vision is to provide every Soldier with the ability to wirelessly power every system within a one-meter radius of a centrally worn power source and create a power surplus at each echelon. The less power Soldiers use, the more power they preserve; the more efficiently power is produced, the smaller the cumulative power demand is on the squad. The same concept is true from squad to platoon, platoon to company, etc. In turn, the next higher echelon would require a lighter, more agile power generation solution to support the power demand. For example, to meet the power demand a platoon could use a lightweight, compact 500-watt solar blanket as opposed to a heavier 900-watt generator. Or, a squad could use a lightweight solid oxide fuel cell instead of a cumbersome solar blanket, which requires sunlight. Regardless of the ultimate materiel solution, the objective is to increase the small unit's ability to gain and maintain contact with the enemy by lightening Soldier load, increasing unit self-sustainability and self-sufficiency, and reducing the frequency of mission interruptions due to resupply operations and battery swaps.

Today's Operational Energy Challenge

Soldiers are unnecessarily placed in danger due to the frequency of exchanging batteries and exhaustion from carrying additional weight. Excessive loads, in both weight and bulk, negatively impact the mobility, lethality, survivability, and combat effectiveness of Soldiers and small units. More physical energy is expended to perform each assigned task. The fatigue resulting from heavy loads decreases a Soldier's alertness and ability to move quickly thereby making the Soldier and small unit more vulnerable. Reduced mobility requires small units to travel shorter durations and distances between routine resupply. Additionally, excessive loads may dictate which route a unit takes, potentially exposing them to threats.

The mass proliferation of Soldier-networked radios, advanced Soldier-borne sensors, optics, and targeting devices requires a holistic approach to Soldier energy, with a focus on intelligent power management, low power electronics, and networked Smart Battlefield Energy on-Demand (smartBED) solutions. Included in this approach are both advanced energy sources and improvements in managing energy use and consumption by new Soldier-borne devices. This ensures dismounted small units and Soldiers will be better postured to conduct sustained combat operations in austere environments.

Science & Technology and Research & Development Focus Areas

- Soldier-borne intelligent power management tools/devices
- Networked applications to enhance Soldier energy awareness and provide data-to-decision capability
- Energy demand efficiency considerations designed into new and future Soldier devices to extend the use of available energy
- Lightweight, compact highly efficient battery charging devices and advanced energy dense rechargeable batteries
- Improved battery energy density that is smaller, lighter, and conformal to the Soldier
- Wireless energy transfer and charging at very efficient levels and meaningful distances
- Intelligent energy interfaces that maintain/improve Soldier energy reserves across transitions
- Highly efficient compact power sources for Soldiers that may take advantage of solid state energy conversion, micro-combustors and micro power, and bio-energy harvesting

Current Limitations

The dismounted Infantryman or scout deployed in Afghanistan carries roughly 9.7 pounds of batteries. Soldiers are unable to recharge these batteries when they are not in or near a vehicle or have access to power from a combat outpost or forward operating base. This situation will become increasingly challenging as Soldiers are brought into the network.

Battery weight will likely increase to more than 14 pounds for a 72-hour mission if every Soldier is brought into the network. This weight increase will inevitably force small unit leaders to make tough decisions to either leave equipment behind or further burden their Soldiers with more weight. As most of these systems have battery durations of eight hours or less, Soldiers will have to make approximately seven battery exchanges for each of their systems over the course of the mission. These battery exchanges could occur during decisive actions, not only reducing the effectiveness of that Soldier and the small unit but also compromising mission accomplishment.

Potential Solutions

The following are examples of the solutions the Army is researching and developing to help maintain sufficient operational energy at the small unit level.

Integrated Soldier Power and Data System (ISPDS)

Powering multiple Soldier-borne devices by a central conformal battery is one way the operational energy community is trying to solve the energy limitations. The ISPDS will eliminate the need for spare batteries for each individual system. This central battery is flexible, lightweight, and provides significant improvement in power duration.

The first generation of ISPDS and conformal batteries were evaluated at the Network Integration Evaluation (NIE) 13.1 with enormously positive results. During NIE 13.1, Soldiers were able to operate for more than 24 hours without having to exchange a single radio or Nett Warrior end user device (EUD) battery. This reduced the number of batteries Soldiers had to carry and increased their confidence that systems would have sufficient power when required. Without the conformal battery and cables, the radio and EUD only lasted four to six hours. The short battery durations dictated numerous battery exchanges while engaged with the enemy. There were times when Soldiers had no power to operate their communication devices to coordinate for unit enablers (adjacent units, fire support, etc.).

Army culture and individual attitudes must change if the Army intends to overcome its operational power challenge by reducing power demand and using power more efficiently. Finding non-materiel solutions to this operational concern can only be accomplished through educating our Soldiers and leaders, developing their confidence in newly established operational power practices, and making these new practices routine and habitual.

Battery Charging and Power Generation

Although the conformal battery and power distribution system showed significant promise for enhancing Soldier power, the Army recognizes this is not enough. This alone will not reduce energy demand required by dismounted Soldiers and units. To become net zero, the conformal battery needs to be charged daily. Currently, this can only be done using a vehicle or while in a secure location like a forward operating base that has inherent generator support. To help remedy this issue, the Army is working on a lightweight, man-portable battery charger that can charge numerous battery types simultaneously, including the conformal battery, using various power generation inputs such as solar energy.

Another solution is providing a power distribution and management device in conjunction with a solar blanket or folding solar panels that can recharge batteries or directly provide power to small electronic systems. This power management device can scavenge power from almost any available energy source (AC, DC, vehicle, solar, etc.) and convert it into useable power for Army communications and electronics devices. It can transfer power from batteries to other batteries and systems allowing for more flexibility for the unit. Recently, the 1st Brigade Combat Team of the 82nd Airborne Division deployed to Afghanistan with this capability within the 3rd Squadron, 73rd Cavalry. Although the first generation solar technology did not allow for rapid battery charging, the power management device did allow them to transfer power from partially depleted disposable batteries to rechargeable batteries and devices, thereby reducing wasted energy that would normally be lost when a battery is replaced before being depleted of energy or thrown away. This device allowed a mortar position to operate continuously without battery resupply — an enormous benefit to the unit in that it could only receive aerial resupply.

The currently fielded state of solar technology provides a good backup at a secure location when fuel is unavailable or impractical such as while a squad is occupying a combat outpost; however, current solar technology does not provide enough power to support the Soldier indefinitely at the tactical edge. Soldiers in Afghanistan and at the NIE have harnessed solar power and used this energy to power their personal devices. This level of confidence and trust in solar panels is witnessed at home station as well and is demonstrated by large numbers of Soldiers who use solar panels to charge their personal devices while camping, hiking, or at the beach. Even with the current success of solar technologies, further development is required for lightweight, flexible solar technology to become a viable solution for the dismounted Soldier and offset the large quantities of batteries now required.

Kinetic Energy

As technology improves, kinetic energy could prove to be a viable option to further reduce the dependency on fuel, allowing more autonomy in small units. Harnessing the kinetic energy generated from Soldier movement is another way to improve operational energy efforts. This would provide energy to the conformal battery and other electronic devices. Possible locations for capturing this kinetic energy are the assault pack, rucksack, or the Soldier's leg. Early prototypes of these technologies demonstrated potential; however, the energy produced did not merit the additional burden on the Soldier at this time.

Culture Change — Cultivating Positive Mindsets

Though this article has mainly focused on the materiel aspects of operational power, non-materiel solutions are just as important in addressing the power challenges of today and the future. Army culture and individual attitudes must change if the Army intends to overcome its operational power challenge by reducing power demand and using power more efficiently. Finding non-materiel solutions to this operational concern can only be accomplished through educating our Soldiers and leaders, developing their confidence in newly established operational power practices, and making these new practices routine and habitual.

Army leaders and Soldiers must be educated so they understand the positive and negative impacts of their actions from an operational power and energy perspective. To accomplish this, institutional courses from initial entry level training through senior leader courses must include operational power and energy as it relates to their levels of responsibility and accountability. Education must include strategic, operational, and tactical impacts; it must also include power and energy operating fundamentals, principals, and best practices. Operational power and energy impacts every principle of war, warfighting function, formation, and form of maneuver across the operational environment. There is not a single aspect of the profession of arms untouched by operational power and energy. It is important; it is ubiquitous; and it can be the difference between winning and losing. Education is the starting point for changing the current Army culture and attitudes, but it is not the ending point.

Photo by SGT Bob Yarbrough

Soldiers with Bravo Company, 3rd Battalion, 7th Infantry Regiment, coordinate their unit's movements during a mission in Logar Province, Afghanistan, on 26 June 2013.

The Army must make the paradigm shift toward operational power and energy an enduring consideration. This is not a fad, here today and gone tomorrow. To achieve permanence, the Army must prove that real progress in all indices of operational power and energy can be achieved by changing its institutional and individual behaviors. From these demonstrated and marked improvements in operational power and energy, individual confidence will take root and grow. Success will encourage expansion of operational power and energy best practices and further solidify the confidence Soldiers and leaders have for future improvements. Finally, a culminating point is achieved when operational power and energy best practices and a "net zero" state become the norm. This must be the enduring end state of operational power and energy in the Army.

The Way Ahead — Creating Power and Energy Solutions for the Future

Power and energy represents a unique challenge to Soldiers, units, and the Army at large. With the advent and proliferation of advanced technologies, the Army becomes more reliant on power to sustain operations.

Advancements must continue in rechargeable and non-rechargeable battery designs and chemistries. It is likely that electro-chemical batteries, particularly rechargeable batteries, will remain the primary means for Soldier power and energy for decades to come. Battery modernization may be achieved through investment in science and technology such as advanced high density battery improvements, nanotechnology applications to battery materials and design, lithium-based battery improvements, and the capability for rapid recharging. Improved battery density will reduce battery size and weight, thereby improving operational effectiveness and unit self-sufficiency. There will be a continuing need to adapt advanced battery technologies for Soldiers through ergonomic design of conformal batteries. Other focus areas include enhanced battery designs, intelligent power management, SmartBED apps, wireless energy sensing and wireless energy transfer, fuel cell use of JP-8, energy systems integrated with other systems (clothing and protection), and novel energy harvesting sources.

The Army is also exploring the use of computing, networking, and analysis tools to automate Soldier power management and controls. For example, when a Soldier sits in a vehicle seat, the vehicle's intelligent power management systems activates embedded seat sensors to analyze the Soldier's energy reserves. The sensors then activate the seat's embedded wireless charging pads and passively bring systems to a full state of charge.

To take advantage of this new paradigm, there must be novel approaches to Soldier-borne power and energy sources and a strategic imperative for energy demand-side management. There are opportunities to harvest Soldier-energy from numerous sources such as solid state energy conversion devices, micro-combustors, and from physiological motion and reactions. These approaches will be essential to enable the Soldier systems of the future. Wireless energy transfer will align with wireless information exchange. Opportunities exist to integrate power storage and harvesting into revolutionary concepts in Soldier protection and clothing systems, thereby easing Soldier power and energy supply demands and overall Soldier load.

For the near future, operational power and energy demands will continue to increase rather than decrease. Consequently, finding viable solutions are a driving force behind the growing Army support and activity in power-related research and development. As a result, advancement in Soldier power and energy solutions are an integral element of the Army's operational energy requirements document and the soon-to-be-published Army Campaign Plan.

At the time this article was written, **MAJ Stephen P. Meredith** was serving as branch chief, Operational Energy, Soldier Division, Capabilities Development and Integration Directorate, MCoE, Fort Benning, Ga. His previous assignments include serving as assistant program manager, Warfighter Information Network-Tactical (WIN-T), Program Executive Office (PEO) for Command, Control and Communications-Tactical, Aberdeen Proving Ground (APG), Md.; deputy product director, Test Equipment, Strategy, and Support, Joint Project Manager NBC Contamination Avoidance, Joint PEO Chem Bio Defense, APG; assistant brigade engineer, 2nd Brigade, 1st Infantry Division, Germany; and assistant task force engineer, 1st Brigade, 1st Cavalry Division, Fort Hood, Texas. MAJ Meredith earned a bachelor's degree in kinesiology from Stephen F. Austin State University and a master's degree from Webster University in St. Louis, Mo.

MAJ David Bergmann is currently serving as assistant TRADOC Capabilities Manager, Soldier Division, MCoE, Fort Benning. His previous assignments include serving as commander of Headquarters and Headquarters Troop, 2nd Squadron, 16th Cavalry, Fort Knox, Ky.; an instructor with the Armor Basic Officer Leaders Course, 2-16 CAV, Fort Knox; executive officer for B Troop, 1st Squadron, 14th Cavalry, Fort Lewis, Wash.; and platoon leader in B Troop, 1-14 CAV, Fort Lewis. MAJ Bergmann graduated from the U.S. Military Academy at West Point, N.Y., with a bachelor's degree in computer science.

Recognizing Negotiating Traits:
A Junior Leader's Ability to Successfully Conduct KLEs

CPT JASON GUFFEY
CPT THOMAS WESTPHAL

"(Successful negotiation) is the art of letting the other party have things your way."

— Daniele Vare
Italian diplomat

Photo by LT Chad A. Dulac, USN

Soldiers tour the grounds of a high school with the school's director of education during a key leader engagement in the Farah Province of Afghanistan on 2 July 2013.

Over the last decade of conducting counterinsurgency (COIN) operations, the Army's junior officers (JOs) have faced a number of challenges. Among them is the key leader engagement (KLE) process, in which JOs have found it necessary to negotiate and build relationships with a wide variety of local tribal, government, and armed forces officials. Despite the end of our involvement in Iraq and the beginning of the drawdown of forces in Afghanistan, it is reasonable to suspect that JOs will need to conduct similar KLEs in future operations. Looming budget cuts and the large number of simultaneous commitments that the Army will have to manage means that Army leaders will be expected to do more with less. Under these conditions, the importance of strong relationships and "soft power" influence with local national leaders will exponentially have to increase, as fewer troops and resources stretch commanders' abilities to accomplish our mission objectives solely utilizing coercion and force.

JOs must therefore actively seek to improve their skills of building and maintaining relationships with local officials in their commanders' areas of operations (AOs). While we saw that limited attempts have been made to introduce KLEs to pre-deployment training requirements, current literature mostly focuses on the KLE process as it relates to targeting or on general KLE tactics rather than as it relates to the particular capabilities and limitations of junior Army officers.

The bulk of these KLEs have taken place within operating environments that are high-context cultures. JOs have to realize the nature of the meetings they are conducting and understand their own American tendencies just as much as they understand their foreign counterpart. If JOs can grasp a better understanding of the negotiating process between different cultures, the knee-jerk reactions to fixing problems can be minimized. This article will argue that when operating in high-context cultures, our own cultural traits put us at a disadvantage when conducting KLEs. A few strategies will then be discussed that JOs can utilize to mitigate this disadvantage.

Definitions

Key leader engagement — the sustained process of building a professional connection with local national officials for the purpose of gaining their cooperation in fulfilling the commander's intent.

Culture — the characteristics of a particular group of people, distinct by shared experiences.

Low Context vs. High Context Cultures

Generally speaking, America is a low-context culture where relationships are based on achieving a goal in the shortest time possible. A low-context setting is one in which verbal communication is the key, the message is clear and informative, and meetings are fast paced. Asian and Middle Eastern cultures are usually identified as high-context cultures. They are much keener on building relationships, and indirect communication is just as important as direct communication. In meetings, the actual process of achieving a goal takes a backseat to the art of building a relationship.

The Foundation: American Strategic Culture

Field Manual (FM) 3-0, *Operations*, states: "Cultural awareness helps identify points of friction within populations, helps build rapport, and reduces misunderstandings." Most of the Army's cultural awareness training focuses on the cultures that exist within our current operating environments; however, we also need to be

Photo by HMC Josh Ives, USN

A security force platoon leader for Provincial Reconstruction Team Farah greets a Farahi man as he walks to a key leader engagement in Farah City, Afghanistan, on 10 April 2013.

aware of our own cultural traits in order to appropriately manage any cultural biases that may put us at a disadvantage while operating within other cultures.

Our nation has developed a "strategic culture" that has become a collective identity that determines appropriate means to achieving security objectives. Since the military is one of the primary means of achieving these objectives, the military — the Army in particular — has come to reflect its society. America's strategic culture has been shaped by geographic security and inspired with exceptionalism, and has in turn affected our outlook on the world. This becomes very evident in our negotiations within other cultures.

From our founding, we have seen ourselves as exceptional and are optimistic for it. This optimism gives us the belief that we can change the nature of another's system. Just as Americans as a whole exhibit certain traits related to the U.S.'s foreign endeavors, so too does the Army. A historical tendency has always been a direct approach to strategy over an indirect, meaning swiftness is the key. This reflection can be seen throughout all of our operations, but specifically the U.S.'s strategic culture has influenced negotiating behavior, which then influences the Army leader's negotiation behavior. The leader conducting the KLE may not even realize this is happening. In a sense, certain negotiation behavior is ingrained within us from being American.

Negotiation Traits

When negotiating, we exhibit four distinct traits. Depending on the negotiator, these traits may not be exhibited together; they could be used in combination or singularly.

Business-like: A results-oriented, straightforward approach to problem solving. The solutions sought will be somewhat mutually benefitting. Negotiations will be unimpassioned yet optimistic, and feelings are not as important as results.

Legalistic: Negotiations will be based on facts and professionalism. Preparation and intelligence are utilized prior to the meeting and will tend to only look at the issue at hand. This mindset believes that the other side does not have our best interest in mind.

Moralistic: Americans often tend to have a deep-rooted belief that we are morally superior to our counterparts and that American exceptionalism gives us a God-given reason to exert our influence on others.

Hegemonic: We are the mighty Army with countless resources compared to others. We have the power to do what we want, where we want. Even if this trait is not openly displayed, the other party often picks up on tendencies displayed by the fact that we come with all the resources of the U.S. military to bear.

Avoiding Cultural Pitfalls

These inherent, low-context cultural biases cause many JOs to encounter problems when attempting to maneuver within high-context cultural environments. Based on our experiences conducting KLEs in Afghanistan, the Republic of Korea, and Iraq, we have highlighted some common pitfalls that some JOs fall into and suggest techniques to address them.

Business-like & Legalistic: Avoiding a Transactional Relationship

It is often a struggle for any person raised in a low-context culture to avoid turning interpersonal relationships with foreign nationals into transactional relationships, especially over relatively short overseas tours. The prevailing understanding among the officer corps is that engaging with local nationals is part of the targeting process and merely a means to an end. This leads JOs to be transactional in their interactions. The line of thinking is often something like "we're busy, and we don't have time to drink tea and talk about irrelevant things if you can't do something for me here and now." Often, we also do not know exactly what a local national can provide us until

a relationship is established, and the value of a relationship can commonly grow in direct correlation to the amount of time invested in it.

Many JOs know that in current operating environments a certain amount of small talk is expected before any business should be conducted. But some JOs take this too far and feel obligated to have a specific time period of forced small talk before abruptly transitioning to the real purpose of their visit. In our experience, if the engagement seems forced and inauthentic, your counterpart will recognize this, and it is likely that your relationship will suffer. In most cases, securing an abrupt agreement to your desired outcome is probably not worth setting your relationship back a few steps. Therefore, making an effort to find shared interests with your counterpart in early engagements will likely build a stronger relationship, becoming advantageous over time.

When you are unable to meet with your counterparts, cell-phone calls will help keep your relationship from atrophying and can create a culture of communication that is not dependent on your ability to meet in person. It will help to avoid the perception that you only talk to your contact when you need something from him. An important factor to consider, however, is that many cultures pay for their cell phone time by the minute, and your counterpart might be unwilling to talk for long periods of time purely based on financial constraints. Yet, this too can be an advantage, as a counterpart that typically talks for hours in person before getting to business might want to get directly to business when speaking on the cell phone.

Moralistic & Hegemonic vs. Respect

Most of the Army's cultural awareness training centers around teaching Soldiers lists of behavioral "do's and don'ts" of the particular culture. Soldiers are usually taught things like to gesture and shake hands with only their right hand and to avoid showing locals the bottom of their feet. However, while these cultural behaviors are important, they will only get any relationship so far. As this is frequently the focus of the training, some JOs seem to gravitate toward these physical rituals as the most important facet of personal interaction. Demonstrating respect toward foreign counterparts through cultural niceties is one thing, but showing respect through your general demeanor, tone, and conversational style is another.

The moralistic and hegemonic cultural biases sometimes contributes to a feeling that other cultures are hopelessly parochial and that we only have to follow their rituals and customs to be instantly accepted. In our experience, your general demeanor and approach to interacting with local nationals is the most important thing, regardless of where you are operating. Being a genuine, friendly, honest person seems to be behavior that permeates cultural boundaries with relative ease.

Treat every operation like an information operation in the sense that every time a patrol leaves the "wire," junior leaders must be conscious that the behavior of their patrol will influence the population you encounter and will shape the attitudes of local nationals you will interact with during future KLEs. While this is common sense, this is something junior leaders must continually emphasize to their Soldiers. For example, one tribal leader in our area bitterly recollected a past U.S. patrol refusing to apologize for tearing down his power lines. Although this occurred before our unit arrived in country, the leader continually used that event as a pretext for his refusal to cooperate.

Additionally, always make an effort to define the outcome in terms of your counterpart's goals and present the desired outcome in such a way that your counterpart views it as a matter of his own self-interest, rather than some sort of command (For example,

Soldiers with Company B, 1st Battalion, 327th Infantry Regiment, 1st Brigade Combat Team, 101st Airborne Division, conduct a key leader engagement with local village elders on 1 March 2013 outside Forward Operating Base Finley-Shields, Afghanistan.

Photo by SGT Jon Heinrich

"Decreasing violence along this route will significantly contribute to securing your area and prove how effective your Soldiers are to your commander," rather than "You need to secure this route.") Even if you do have the ability to coerce your counterpart into doing what you want, putting it in terms of his own self-interest will help build the perception that you have a relationship based on equality and mutual respect. For soft power to be truly successful, the JO will have to set an agenda where shared goals converge. Cooperation has to be emphasized through a process that convinces local nationals that both parties have the same goal. It could be quite possible that prior to this, they did have the same goal as you; they just need to be made aware of it.

Additionally, our hegemonic trait often leads us to unconsciously oversell our capabilities to our local national counterparts, and often we can't or won't deliver on these high expectations. Unfortunately, this is compounded by our country's powerful image in the world, and locals often expect things to turn around rapidly when the U.S. military arrives. Therefore, expectation management needs to be part of every engagement.

Time is also viewed differently between low- and high-context cultures. Americans view time in a linear fashion, where appointment times and schedules are very important. We are likely to interrupt whatever we are doing in order to avoid being late for something. High-context cultures see time but not the clock as important. Thus, things such as conversations, jobs, and so forth have a time of their own, and if that means that someone is late according to the clock, it is not that big of a deal. Times are more of a general guideline rather than a rigid deadline. From this understanding, it becomes incumbent on the leader to manage the differing perceptions of time and may require additional patience and allow time for a more flexible schedule.

Conclusion

Negotiations have become an important task in the current operating environment, and our ability to change local perceptions and gain their support cannot be underestimated. Future operations will likely require JOs to conduct similar engagements, and from what we have learned in the past decade, this could quite possibly be more important going forward. To be successful, JOs will have to set an agenda where shared goals converge and be able to recognize their own cultural biases to operate in these settings. We cannot and should not expect a foreign culture to fully understand us or change on our behalf; therefore, to be successful as JOs, we must take it upon ourselves to have the best understanding possible of the people we are dealing with to reach our desired endstates.

Further Reading Suggestions

"An Important Weapon in COIN Operations: The Key Leader's Engagement" by CPT Joe Curtis (*Infantry* Magazine, July-August 2008).

This article focuses on the experience of an Infantry company conducting KLEs over the course of a year in Afghanistan. The author incorporates specific tactics, techniques, and procedures (TTPs) for conducting KLEs within the Pastun cultural context with great step-by-step advice that can be applied to any operating environment.

"Influencing the Population: Using Interpreters, Conducing KLEs, and Executing IO in Afghanistan" by CPT Michael Cummings (*Infantry* Magazine, May-August 2010).

This is another article from Infantry Magazine about effective TTPs for KLEs in Afghanistan. However, this author provides solid, in-depth advice for junior leaders on best utilizing their interpreters and should be extremely useful for leaders in all combat theaters.

FM 3-05.401, *Civil Affairs Tactics, Techniques, and Procedures,* 5 July 2007

In Appendix, this FM lists a step-by-step approach for preparing for and executing KLEs. While it is focused on the specific operating requirements of the Civil Affairs branch and tactics for mediating between two opposing parties, it still contains information useful to junior combat-arms leaders.

FM 3-24.2, *Tactics in Counter-insurgency*, 21 April 2009

Appendixes A through D of this FM contain a lot of great information for junior leaders, including the distilled wisdom of counterinsurgency experts David Kilcullen and T.E. Lawrence, as well as suggestions for further reading. In particular, T.E. Lawrence's 'Twenty-Seven Articles' are still as useful as they were 100 years ago to small unit leaders interacting with people in the Arab world.

"Challenges and Pitfalls in Key Leader Engagement" by Jenny L. Hammervik (Swedish Defense Research Agency, September 2010, http://www2.foi.se/rapp/foir3034.pdf).

The terms of this research paper are too broad to provide specific advice to junior officers, but it is useful for the purpose of learning how one of our ISAF partners in Afghanistan, the Swedish armed forces, approaches the issue.

"Negotiation in the New Strategic Context" by David M. Tressler (The Strategic Studies Institute, U.S. Army War College, August 2007, http://www.au.af.mil/au/awc/awcgate/ssi/tressler-iraq-negot.pdf).

This paper is an academic approach to explaining the science of negotiation and publishes recommendations for improvements to the Army's pre-deployment training in the KLE and negotiation process. It provides an academic foundation for junior leaders interested in improving their negotiating skills.

CPT Jason Guffey is currently a student at the Army's Special Warfare Education Group at Fort Bragg, N.C. He previously served as a company executive officer with the 3rd Brigade, 1st Armored Division at Fort Bliss, Texas, and is a recent graduate of the Army Special Operations Forces (ARSOF) Captains Career Course at Fort Bragg. CPT Guffey deployed to Afghanistan in 2011-2012 and to Iraq in 2004. He earned a bachelor's degree in history and political science from Middle Tennessee State University in 2008 and is currently enrolled in graduate coursework in diplomacy in international affairs at Texas A&M's Bush School of Government and Public Service.

CPT Tom Westphal is currently a student at the Army's Special Warfare Education Group at Fort Bragg. His previous assignments include serving as a tank platoon leader with the 1st Squadron, 3rd Armored Cavalry Regiment, Fort Hood, Texas, and company executive officer with the Headquarters and Headquarters Battalion, 2nd Infantry Division, Camp Red Cloud, Korea. He completed a deployment to Iraq in 2010-2011. CPT Westphal is a recent graduate of the ARSOF Captains Career Course and graduated Washington State University with a bachelor's degree in global politics.

A Short Note on PACE Plans

MAJ MICHAEL S. RYAN

Many of us are aware of the communications staff officer's (S6's) responsibility to develop a communications plan to support the maneuver warfighting function's (WFF) mission command requirement to maintain communications. This plan is usually expressed in an order of communication precedence list called a primary, alternate, contingency, and emergency (PACE) plan. It designates the order in which an element will move through available communications systems until contact can be established with the desired distant element.

Photo by SPC Tim Morgan

A lieutenant with the 2nd Battalion, 23rd Infantry Regiment, 4th Stryker Brigade Combat Team, 2nd Infantry Division, gives a situation report during a mission in Afghanistan on 26 April 2013.

The S6 must develop a PACE plan for each phase of an operation to insure that the maneuver commander can maintain mission command of the formation. The plan must also reflect the training, equipment status, and true capabilities of the formation. If a subordinate element has a communication system but is untrained or lacks all of the subcomponents to make the system mission capable, including it in the PACE plan does nothing to ensure continuity of mission command. Therefore, it should not be included. During a branch or sequel of an operation, mission command can suffer due to some communication systems not being available because they are in transit or otherwise unavailable. If a formation does not have four viable methods of communications, it is appropriate to issue a PACE plan that may only have two or three systems listed. Accurate PACE plans are crucial to the commander's situational awareness.

Upon receipt of an order from a higher command, the receiving unit must evaluate the PACE plan for two key elements. Does the receiving unit have the assets to execute the plan to higher, and how can it nest the higher command's plan when it develops its own plan to subordinate elements? If the unit cannot execute the full PACE plan to its higher command, it must inform the issuing headquarters with an assessment of shortfalls, gaps, and possible mitigations as part of the mission analysis process during the military decision-making process (MDMP). During course of action development, the S6 should try and nest his element's plan with higher whenever practical. This aids in maintaining continuity of effort.

As staffs work through the MDMP process, it is important to remember that PACE plans are not just for the maneuver WFF. Each WFF should evaluate its communication requirements with subordinate echelons and work with the S6 to develop an effective plan. If a WFF places any form of information requirement on one or more of its subordinates, that requirement should be accompanied with an executable PACE plan. The PACE plan must be included in the operations order (OPORD) or fragmentary order (FRAGO) when published. It is suggested that the data requirement be published in the base OPORD/FRAGO's execution paragraph in the tasks sections with a reference to the specific annex for detailed format and PACE.

PACE planning is not the sole responsibility of the S6 or focused only on the maneuver WFF. It is not a single, all encompassing plan. PACE plans must be developed for each phase, branch, and sequel of the operation, by each echelon of the formation, and by each WFF in the staff. Developing comprehensive PACE plans will not win you the battle, but they will help to ensure that you have removed one more layer in the fog and friction of war and further set conditions for mission success.

MAJ Michael S. Ryan is currently serving as chief of communications for the Operations Group, National Training Center (NTC), Fort Irwin, Calif. His previous assignments include serving as a tactical signal trainer at NTC; deputy G6, 20th Support Command (Chemical, Biological, Radiological, Nuclear, Explosives), Aberdeen Proving Grounds, Md.; task force G6, Task Force McCall, Operation Iraqi Freedom 07-08; and commander of A Company, 40th Signal Battalion, 11th Signal Brigade, Fort Huachuca, Ariz. MAJ Ryan earned a bachelor's degree in computer science from the University of North Carolina-Charlotte and a master's degree in information technology management from Webster University.

Shotguns Still a Valuable Asset

CPT JEREMY PHILLIPS

Introduced to military service during World War I as a tool for clearing trenches, shotguns have been in the Army's arms rooms for almost 100 years. Although shotguns are still as effective as ever in a limited close-quarters battle role, the utility of shotguns these days is generally restricted to breaching or non-lethal munitions delivery. However, as more units deploy for unit closure, as part of security force assistance teams (SFATs), or on other less kinetic missions in Afghanistan, shotguns are being left in a container express (CONEX) or back on the forward operating base (FOB). That is a waste of resources; a 12-gauge shotgun is a very versatile weapon that can be used effectively as a vehicle gunner's secondary weapon.

The most common types of shotguns issued to Soldiers are the pump action Mossberg M500 (identical to the civilian model 500) and its replacement, the straight pull bolt-action M26 Modular Accessory Shotgun System (MASS). The Mossberg 500 usually comes with a full butt stock or a pistol grip, an 18-inch barrel, and a five-round capacity magazine tube. The M26 MASS is based on the "master-key" concept, basically a secondary weapon slung underneath an M4 to allow the operator to switch between 5.56 and 12-gauge rounds quickly without taking his eyes off the target or his hands off of his rifle. It has a five-round magazine and the ability to be used as a stand-alone weapon with an M4-style collapsible buttstock. The barrel length of the M26 MASS is only about eight inches with an integral breaching stand-off adapter. The design differences between the 500 and the M26 are significant, but the ways in which they are employed are identical.

Ballistic breaching, the most common shotgun task, is familiar and trained often by Infantry units. Too often, though, that training consists of merely pantomiming a breach. There's some, but not much, training value in pointing a shotgun in the air before beginning a glass-house drill and saying "bang." A better way to train ballistic breaching is to actually fire live rounds at some sort of training device. One way to construct a reusable ballistic breach trainer is simply to rig up a door in a frame of 2x4s and insert a wooden dowel through the 2x4 and into the area most manufactured doors have cut out for a doorknob. Another, even simpler way is to use a sheet of plywood and attach, or draw with a marker, a doorknob and shoot holes in the plywood. There are commercial training products available as well including one designed by Mike Gibson Manufacturing. It features plywood squares inserted into a slot on a frame, which you can approach from multiple angles and rotate after each shot for quick, variable training.

Delivery of non-lethal munitions can be an incredibly useful tool for small units. The Army supply system stocks an array of

A Soldier with the 2nd Brigade Combat Team, 101st Airborne Division (Air Assault), fires the stand-alone version of the M26 Modular Accessory Shotgun System at Fort Campbell's Range 44b on 10 February 2012.

Photo by SGT Joe Padula

non-lethal 12-gauge ammunition including fin-stabilized rubber slugs, rubber buckshot, beanbags, and more exotic fare; Soldiers can be issued the perfect round for any situation. Fin-stabilized slugs out of a longer barrel like the M500's can be effective at mid-range distances; beanbag rounds can subdue targets up close; rubber buckshot is effective for crowds. Utilizing non-lethal ammunition has some specific training requirements though. One example is the 80-hour Non-Lethal Weapons Instructor Course that is listed in the Army Training Requirements and Resources System (ATRRS). Once a Soldier is certified as an instructor, he can train other Soldiers in his unit on the use of non-lethal weapons. Although it may seem like unnecessary red tape to certify Soldiers who are already carrying lethal ammunition on non-lethal, the purpose of the training is two-fold: familiarize Soldiers with ammunition capabilities and ensure proper employment.

Soldiers who are issued non-lethal ammunition have to understand that most types of non-lethal ammunition are still potentially deadly. The capabilities of each specific round are important because some types have minimum safe engagement distances or can hit hard enough to break bones. All of them can put out an eye or seriously injure a target if they are fired at the face or head. Proper employment is crucial to prevent overuse, a problem that is illustrated by civilian police use of Tasers. In poorly trained or undisciplined organizations, law enforcement officers use non-lethal force in situations that they would have previously handled without any force at all. The same thing can happen to Soldiers who might have tried diplomacy or simply ignored an uncooperative or belligerent civilian otherwise now fire at him with a rubber baton to "teach him a lesson." The other concern with utilizing non-lethal ammunition is that it can be seen as a required step in escalation of force (EOF). Soldiers need to know that, as with any step in EOF, in certain circumstances they can decide to immediately use deadly force. No leader wants a Soldier to respond to an enemy shooting an AK-47 at close range by firing a bean bag. For this reason, vignettes are a valuable tool in the rules of engagement (ROE)/EOF portion of a pre-mission brief, and dynamic ranges that require Soldiers to switch between weapons are a great drill if they can be safely executed.

A less common use for shotguns is as a secondary weapon for crew-served gunners on high mobility multi-wheeled vehicles (HMMWVs) or mine-resistant ambush-protected vehicles (MRAPs). The limitations of the shotgun as a long-distance weapon are what make this such a good choice for gunners to carry in the turret. Sporting shotguns usually have a choke screwed into the muzzle in order to constrict the spread of shot, which tightens the shotgun's pattern and extends its effective range. Military shotguns are not choked, also called a cylinder choke. This allows slugs or non-lethal ammunition to be fired immediately after regular shot shells, but it also means that at 37 meters the shot fired will spread out up to 1.5 meters apart. The lethality of buckshot at that range and that spread out is minimal, lighter shot even less so. Warning shots fired over, around, or even directly at targets are much less likely to incur collateral damage or to kill. Any bullet fired from a rifle will come to rest with enough speed to seriously hurt someone, but buckshot — because of its non-aerodynamic shape and small mass — will usually come to rest much less harmfully.

No matter what role you plan to employ your unit's shotguns, have a plan for them and integrate them into your other training events.

When my platoon in the 3rd Brigade Combat Team, 1st Cavalry Division was deployed to Basrah Province in southern Iraq during Operation New Dawn, a tactic the enemy developed was to throw hand grenades and RKG-3 anti-tank grenades at passing convoys from over the walls of courtyards or down narrow alleys. Our response to this new tactic was complicated by the fact that young men, some as young as 12 or 13, sometimes threw rocks at our gunners or windshields. Because we would not be able to distinguish a grenade from a rock until it hit the vehicle, I began to brief my platoon that if they saw someone winding up to throw an unidentified object they could fire a warning shot in a safe direction. A burst from a 240 would not have been appropriate, however, and a rifle shot could ricochet or go past the target, so I gave pistol grip Mossberg 500 shotguns with buckshot to the second and fourth gunners. The next time someone stepped out from a side street with their hand cocked back to throw, the blast of a 12-gauge shotgun pointed somewhere near his feet caused him to duck and cover, dropping whatever he had been holding into the dirt. By using buckshot, we almost completely eliminated the possibility of killing someone in response to a thrown stone, as well as the possibility of a 5.56 bullet hitting a civilian near the end of its maximum range, while still cutting down on the incidence of grenade attacks during patrols inside Basrah.

As with any time shotguns are employed, the small amount of range time most Soldiers get with shotguns should be taken into account. The two gunners that I chose were relatively experienced, and so they were able to employ and switch between two different weapons. One of them was an avid hunter as well and familiar with pump-action shotguns. Both gunners demonstrated to their vehicle commanders that they could safely load and unload the weapons, and clearing them became a part of our routine when we returned from missions just like every other weapon system.

No matter what role you plan to employ your unit's shotguns, have a plan for them and integrate them into your other training events. Let Soldiers figure out during National Training Center (NTC) or Joint Readiness Training Center (JRTC) rotations how they will carry shotguns so that they can be readily employed when necessary either dismounted or in the turret. With a little forethought, shotgun practice — at least dry runs and assembly/disassembly classes — can be conducted concurrently during basic rifle marksmanship ranges.

At the time this article was written, **CPT Jeremy M. Phillips** was a student at the Maneuver Captains Career Course at Fort Benning, Ga. His previous assignments include serving as a rifle platoon leader and company executive officer with the 1st Squadron, 12th Cavalry Battalion, 3rd Brigade Combat Team, 1st Cavalry Division. He graduated from the U.S. Military Academy at West Point, N.Y., with a bachelor's degree in literature.

"... A PERFECT STORM OF SHOT AND SHELL"

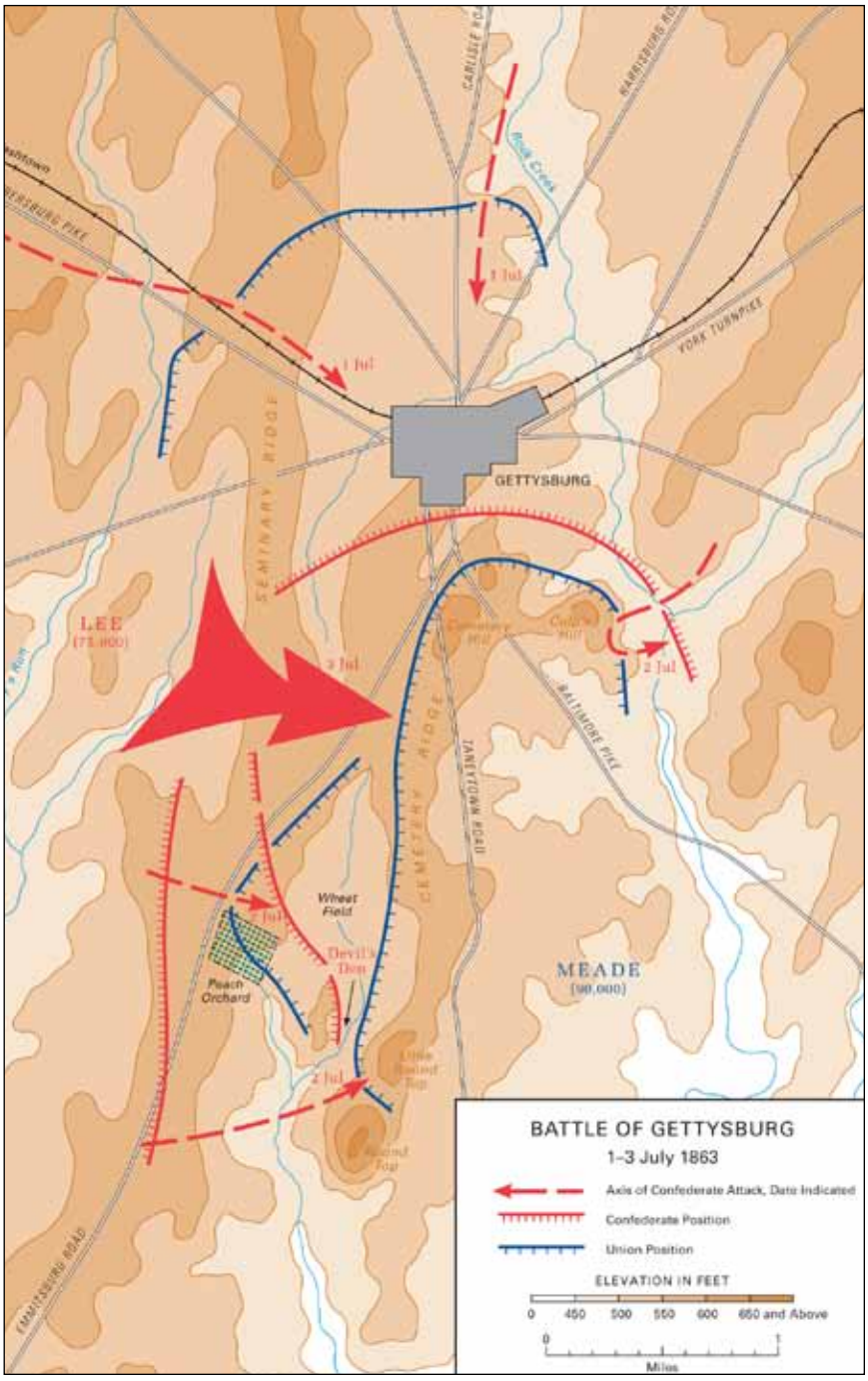
COMPANY H, 4TH US INFANTRY JULY 1863

DONALD MCCONNELL
GUSTAV PERSON

When the Civil War erupted in April 1861, the 10 companies of the 4th U.S. Infantry were spread along the West Coast from Puget Sound to the Gulf of California in small far-flung garrisons. After distinguished service in the Mexican War (1846-48) and garrison duty along the Great Lakes from Mackinac to Plattsburgh, the regiment had embarked on the steamship Ohio at New York City for its long, arduous journey to the West Coast where it arrived in August 1852. The companies, garrisoning posts much like modern forward operating bases, guarded the coast, escorted new settlers, and fought Indians. Company H, commanded by Captain Ulysses S. Grant in the early 1850s, occupied Fort Vancouver in the Washington Territory.[1]

With the outbreak of hostilities, Army authorities quickly realized that the main body of the regular army would be needed in the Eastern Theater to form a reserve force and to train the multitude of state volunteer forces that were hurriedly being raised to suppress the rebellion. The regiment returned to the East Coast by sea and a disease-ridden march across the Isthmus of Panama. It arrived at New York and then traveled by train to the camps of the Army of the Potomac around Washington, D.C., by November 1861.

This article is divided into two parts. The first part describes Company H, 4th U.S. Infantry during the early period of the war and its desperate fight in the Wheatfield at Gettysburg on 2 July 1863. The second part is based on an intensive study of the relevant regimental returns, muster rolls, and service and pension records of every officer and enlisted man assigned to the company on that memorable day. It provides a remarkable demographic and human interest story of a regular Infantry company in the third year of the Civil War. Attempts have been made to tie the experience of these Civil War Infantrymen to modern practices.



U.S. Army Center of Military History

Figure 1 — Battle of Gettysburg

Gettysburg

In the spring of 1862, the available regular Infantry regiments in the capital area were formed into two brigades in the 2nd Division of the V Army Corps, commanded by Major General George Sykes who had commanded the regular battalion during the 1st Bull Run in July 1861. They accompanied the Army of the Potomac to the James Peninsula in March 1862 and later fought in the Seven Days battles in June and July. Returning to northern Virginia that summer, the regulars fought at 2nd Bull Run and later at Antietam on 17 September. They were heavily engaged at Fredericksburg in December, and then went into winter quarters around Falmouth, Va. After service at Chancellorsville in April/

May 1863, they returned to their winter camps while their main opponent, General Robert E. Lee, made plans for his second invasion of the North. By the late spring of 1863, the 4th Infantry, through casualties and attrition, had been consolidated into four companies (C, F, H and K), commanded by Captain Julius W. Adams Jr., who acceded to command of the battalion-sized regiment on 31 May. Adams, the son of a former West Point cadet and commander of the 67th New York Volunteer Infantry during the war, graduated from the U.S. Military Academy (USMA) in June 1861. After commissioning, he remained at the academy (along with George Armstrong Custer, who was under arrest) to train the incoming class of cadets in leadership and Infantry tactics. On 27 June 1862, he survived a serious groin wound sustained at Gaines' Mill, Va.[2]

With the Confederate Army of Northern Virginia headed toward Maryland and Pennsylvania, the 4th Infantry left its winter camp on 4 June and marched west eight miles to Banks Ford on the Rappahannock River to provide a picketing force. They remained there for nine days before receiving orders to pursue the Confederates. The regiment crossed the Potomac River at Edward's Ferry.

When the Battle of Gettysburg started on 1 July, the V Corps arrived in Hanover, Pa., in the late afternoon after a hot, tiring march of 15 miles from Union Mills, Md. Sykes, now elevated to command the corps, received a peremptory order from army headquarters to bring his corps to Gettysburg without delay. He decided to keep the troops on the road for a few more hours. They finally went into bivouac around midnight, but reveille sounded in the camps at 3 a.m. The troops were soon on the march again after a quick breakfast and arrived near Gettysburg around 7 a.m. They occupied an assembly area on Powell's Hill, southeast of the town. Since leaving camp at Falmouth, the regulars had marched an incredible total of 195 miles.[3]

The 4th Infantry, along with the 3rd, 6th, 12th, and 14th U.S. Infantry Regiments, formed the 1st Brigade of the 2nd Division. On 28 June, Colonel Hannibal Day arrived to take command of the brigade. At almost 60 years old, he

The U.S. National Archives

Hannibal Day

had graduated in the USMA class of 1823. Day was originally commissioned in the 2nd U.S. Infantry. He served in a number of operational and administrative postings until 7 June 1862 when he was appointed as the colonel of the 6th Infantry. However, for a number of recent years his questionable health had kept him from an active field command.[4]

Around 1 p.m. on Thursday, 2 July, the regulars moved to a new assembly area behind the center of the Union line where the soldiers dozed, lounged, and talked. Confederate Lieutenant General James Longstreet launched his sledgehammer attack on the Union left flank at 4 p.m. that afternoon. The Confederates stormed through the Peach Orchard and the Rose Farm and decimated the Union III Corps. Portions of the Union II Corps and all of V Corps were directed to the south to save III Corps from destruction and restore the threatened flank. The 2nd Division of V Corps set off at double-quick time, cross-country over fields and fences, and panting with the exertions of recent days. While Brigadier General Stephen H. Weed's 3rd Brigade was rushed onto Little Round Top, the two brigades of regulars deployed on the north slope of that key terrain feature. Colonel Sidney Burbank, commanding the 2nd Brigade of regulars, formed his brigade into a single line of battle with the 2nd Infantry on the right, followed to the left by the 7th, 10th, 11th and 17th Infantry Regiments. Day's 1st Brigade formed in column behind the 2nd Brigade with the 3rd, 4th and 6th Infantries in the first line, followed by the 14th Infantry in the second line, and the 12th Infantry in the third line.[5]

The regulars were ordered into the Wheatfield to support John C. Caldwell's 1st Division of the II Army Corps. They set off down the slope of Little Round Top at double-quick time and crossed Plum Run, an ankle-deep marshy area about 50 yards wide. The 2nd Brigade mounted Houck's Ridge at the east side of the Wheatfield, while Day's brigade adopted a supporting position in Burbank's rear along the west slope of the valley. As they moved forward, the regulars received considerable fire from Confederate snipers firing from Devil's Den on their left flank. The 17th Infantry refused their left flank to provide covering fire. After sheltering momentarily behind the stone wall on the crest of the ridge, the 2nd Brigade then passed through a thin strip of Rose Woods before executing a half-left wheel into the open Wheatfield when Caldwell's division and Schweitzer's brigade of the V Corps withdrew from the field after running out of ammunition.[6]

Attempting to stem Longstreet's onslaught, Burbank's brigade was opposed by two Confederate brigades. A heavy firefight ensued, creating great noise, smoke, and rampant confusion. When two further Confederate brigades entered the fight on the regulars' right flank and rear, it was quickly realized that they could not hold their position. The noise was so loud that some of Burbank's men did not hear the order to fall back, and the Wheatfield was now swarming with Georgians and South Carolinians inspired by the prospect of victory. By this time, both brigades were receiving fire from three directions in "…a perfect storm of shot and shell." The hell in the Wheatfield was remembered by an officer in the 11th Infantry as "…almost a semi-circle of fire," and "…the slaughter was fearful."[7]

The regulars had spent less than an hour in the Wheatfield fight. In the words

of Lieutenant Colonel William F. Fox, New York's official historian of the battle, "…they moved off the field in admirable style, with well-aligned ranks, facing about at times to deliver their [volley] fire and check pursuit. Recrossing Plum Run Valley, under a storm of bullets that told fearfully on their ranks, they returned to their original position. In this action the regulars sustained severe losses, but gave ample evidence of the fighting qualities, discipline, and steadiness under fire which made them the pattern and admiration of the entire army."[8]

The regulars fought their way back 250 yards across the swampy ground, having lost a total of 53 officers and 776 men out of 2,500 engaged in the fight. Day's brigade, which had occupied a relatively safe supporting position in the initial action, still lost 25 percent of its men. Most of these losses occurred during the withdrawal from the Wheatfield sector. For the 4th Infantry, Adams reported that 10 enlisted men were killed and two officers and 28 enlisted men were wounded. Unquestionably, the regulars' superior discipline and professionalism served them very well in this extremely difficult situation. Less-disciplined troops would have undoubtedly folded under the considerable Confederate pressure. A notable absence was the lack of effective artillery support ordinarily coordinated by the regulars' commanders. The Confederates now controlled all of the Wheatfield and Houck's Ridge. The regulars remained in their original positions on Little Round Top throughout the rest of the battle, skirmishing periodically with the enemy. On 5 July, the entire V Corps left its positions at Gettysburg and set off in pursuit of the Confederates, who were now on their way back to Virginia. When the regulars finally ended the campaign at Warrenton, Va., on 27 July, they had marched a total of 320 miles since 1 June. The Gettysburg Campaign was thus an excellent example of the Infantry's ability to maneuver over long distances.[9]

Photo courtesy of West Point Association of Graduates

Julius W. Adams Jr. as a West Point Cadet, Class of June 1861

The Company

The 4th U.S. Infantry was a regiment in name only when it approached Gettysburg at the end of June 1863. Reduced from 10 to just four companies, its total strength was just 230 enlisted men and 32 officers, counting the regimental staff and band. In actual numbers, there were only 179 enlisted men that could be counted as present for duty.[10]

In response to manpower shortfalls, army headquarters in January 1862 diverted 26 recruits intended for the 9th U.S. Infantry, which was stationed in the Pacific Northwest, to the 4th Infantry. Later that year, the Adjutant General approved plans that allowed regiments to reduce some companies to cadre-strength and transfer the privates to other companies. As a result, the 4th Infantry disbanded Companies D and E in July 1862, and four more companies (A, B, G and I) in March 1863. Another 77 men joined the regiment after a short-lived policy that allowed regular army commanders to recruit directly from state volunteer regiments.[11]

Infantry companies were authorized three commissioned officers. Captain Samuel Sprole was assigned to command Company H on 11 June 1863 but was still on sick leave and missed the battle. First Lieutenant Thomas A. Martin had been under arrest for undetermined causes earlier that spring. He took temporary command of the company in June but was dismissed from the service on 25 August 1864. Second Lieutenant George W. Dost was a long-service enlisted man prior to commissioning on 19 February 1863. He continued to serve in the army after the war but was cashiered in 1874. Second Lieutenant George Williams was temporarily attached to the company from Company I. He was wounded at Gettysburg and later received a brevet promotion to captain for gallantry in the battle.[12] After treatment at a hospital in Annapolis, Md., Williams was medically retired on 11 November 1863.[13]

At the time, fully authorized strength for a regular army infantry company was 82 enlisted men. When Company H departed its winter camp on the Rappahannock River on 4 June 1863, it numbered 67 Soldiers, but not all finished the march. Over the next 29 days, the men covered an average of more than 12 miles per day on nine separate occasions. The longest marches were made during the six days leading up to their fight on 2 July when they averaged 18 miles per day. The heat, fatigue, and combat stress had a significant impact on these Soldiers.[14]

Soldiers in the Civil War received no formal training for recognition or prevention of heat injuries, and they typically applied completely ineffective or counterproductive remedies to treat men downed by the heat in the field. One preventive measure involved wetting leaves and placing them inside the soldier's cap to "keep the heat from the brain." On 17 June, the company marched about 17 miles from Manassas Junction to Gum Springs, Va., where they stopped to rest. Second Lieutenant Gerhard L. Luhn, a sergeant who had recently been commissioned into the 4th Infantry, kept a diary during the march to Gettysburg. He recorded that day as "very warm" and that a lieutenant colonel had died of sunstroke. That information was confirmed by an entry in the *Register of Deaths of Volunteers* for 1863.[15]

On 26 June at about 8 a.m., the company left its camp at Aldie,

Civil War Combat Loads

During the disorderly retreat after the battle of Chancellorsville in early May 1863, most of the regulars lost their heavy Model 1853 knapsacks which weighed up to 50 lbs. The knapsacks carried the Soldiers' greatcoats, spare clothing, wool blankets, and personal items. Because the knapsacks were not replaced before the Gettysburg Campaign, most Soldiers adapted by rolling their remaining personal items in a vulcanized, gumrubber blanket (the forerunner of the modern poncho), tied in a horseshoe roll and worn over the right shoulder. This greatly reduced their marching load in the oppressive, hot, and humid June weather.[30]

Photos by Donald McConnell

The photos above show two living historians dressed in the uniforms and equipment of mid-1863. The Soldier on the right carries the heavily loaded knapsack in full marching order. The Soldier on the left has rolled his belongings in a gumrubber blanket. These soldiers are carrying blackened canvas haversacks on their left hips for their field rations, and canteens containing about three pints of water. The basic load of 40 rounds for the .58 cal. Model 1861 Springfield Rifle-Musket is carried in the cartridge box worn on the right hip. Their waistbelts support the small pouch for percussion caps, worn to the right of their brass U.S. belt buckle, and the triangular socket bayonet in its scabbard worn on the left hip.

Per General Orders of the Army of the Potomac in March 1863, each regular soldier wore a white Maltese Cross cloth badge on the crown of his Model 1858 Forage Cap. This was the insignia of the 2nd Division, V Army Corps. These cloth badges were the origin of the organizational patches each modern Soldier wears on the sleeves of the Army Combat Uniform (ACU). One can also see the origins of the modern Army Service Uniform (ASU) in the sky-blue trousers, authorized in December 1861, and the dark-blue Model 1858 fatigue jacket.

Va., marched through Leesburg, and crossed the Potomac River before halting in Maryland about 12 hours later, having covered more than 25 miles — all in constant drizzling rain. Three men were left sick in Frederick, Md., following this march. All were probably heat casualties. One of the soldiers, Private Pratt Day, was hospitalized in Frederick until early September and then transferred to Fort Columbus in New York harbor where he died on 6 October 1863 from the effects of sunstroke incurred while on the march to Gettysburg.[16]

Army regulations required commanders to conduct musters and inspect their men every two months. Luhn recorded that the regiment strictly observed this requirement by mustering its four companies "by moonlight" on the evening of 30 June following a 25-mile, 13.5-hour march. The total enlisted strength for the company stood at 54 men. Nine men had completed their five-year enlistments in June and received discharges.[17]

Based on an extensive examination of the service records of these 54 men, more than two-thirds were immigrants. Typical of other regular army units at this point in the war, the vast majority (26) were from Ireland. Another six hailed from Germany and three from England. The other two immigrants came from Canada and France. Sixteen men claimed birth in the United States. New York was home to the most with nine while Pennsylvania provided three. One man each claimed his birthplace in Maryland, Michigan, New Jersey, and Ohio, and one man's place of birth could not be determined from available records.[18]

More than 20 different civilian occupations were noted on the enlistment forms: the majority of the men (16) were unskilled laborers; seven men worked in construction; six were shoemakers; and another five were farmers. The most educated men in the company were Private William Hamilton, who listed his occupation as a druggist (pharmacist), and First Sergeant John Rowlands and Private Leon Dandelooy, who were both clerks before the war. Dandelooy often worked as a clerk in the regimental headquarters.[19]

The core of the company was composed of 44 "Old Army" regulars from various companies of the 4th and 9th Infantry Regiments — men who served together in California, Oregon, and Washington Territory prior to the war. They were experienced Soldiers with an average age of about 30 with just over six years in service. Three Soldiers had been in the army at least 15 years. Another three were approaching the end of their second five-year enlistment. At least one had fought in the Mexican War. These veterans would bear the brunt of the company's casualties at Gettysburg.[20]

The other 10 men in the company had either been recruited from volunteer units in late-1862, or recently enlisted. As a group, they averaged only about 7 and a half months in uniform. They tended to be younger, had minimal training or combat experience, and shared no common bonds with the "Old Army" veterans. All four of the men who "went over the hill" on the march to Gettysburg were from this group.[21]

While total enlisted strength stood at 54 on paper, just 43 Soldiers marched with Company H onto the field at Gettysburg — barely 50 percent of authorized strength. Two Soldiers were on detached service (temporary duty), and eight more were sick in various hospitals. Another Soldier, Private Richard Bears,

Desertion

Desertion posed a problem for the regular army throughout the entire 19th century. In peacetime, posted to far-flung garrisons, Soldiers were forced to endure a dreary existence, boredom, low-pay, and often dangerous conditions.

During wartime, combat stress and harsh discipline often drove men out of the ranks. During the march to Gettysburg, four Company H men deserted in June 1863. Notably, only one man deserted after the battle.[31]

The case of Private Adolphus Pickney illustrates an unusual example of desertion and its consequences. Pickney enlisted in early 1860 in the 9th U.S. Infantry, and by early 1862 had transferred into Company H of the 4th Infantry. Just days before the battle of 2nd Bull Run in August 1862, Pickney "went over the hill," and remained a fugitive until apprehended on 11 March 1863. Tried by a general court martial and found guilty, he was sentenced to forfeit all pay and allowances, and to be dishonorably discharged. The court clearly decided to make an example of him to discourage further desertion. The Muster Rolls for April 1863 record that Pickney was "to be marked indelibly on his left hip with the letter 'D'; then to have his head shaved and to be drummed out of the service." Regular army discipline was exacting and rigorously enforced.[32]

probably the luckiest man in the regiment, received his discharge papers in camp at Union Mills, Md., on the morning of 1 July. He did not reenlist.[22]

Four soldiers in Company H were killed in action on 2 July, and nine others were wounded that day. Of the wounded, four died of their wounds before 15 August 1863. Below is a summary of the men from Company H killed and wounded at Gettysburg.[23]

From Hanover, Germany, Private Christian Abert had been in the army for almost 15 years and was at the end of his third enlistment when he was killed. He had served in three separate regiments in Texas, California, and the Washington Territory. Private Peter McManaman from County Mayo, Ireland, was among the oldest soldiers in the unit at 42 and had served 14 years. Like Abert, he first enlisted in 1848 but served his entire time in the 4th Infantry. Both are buried in the regulars' section of the Gettysburg National Military Park Cemetery.[24]

Private Christian Engers was a cabinet maker from Prussia and had been in the army for nine years when he was killed. He initially enlisted in 1854 in the 2nd U.S. Infantry and served in Minnesota; he then reenlisted in 1859 into Company I, 4th Infantry at Fort Steilacoom in Washington. Engers was one of the 37 privates transferred into Company H in March 1863. Private Roger McDonald, a shoemaker from Ireland, enlisted in the 9th Infantry in early 1860 and was among the group transferred into the 4th infantry in January 1862. Both are buried at Gettysburg.[25]

Private William Becker, a carpenter from Marburg, Germany, was shot in the left chest on 2 July and died of his wound about a week later. Becker presents an unusual case. He enlisted in 1852, but deserted in July 1853 along with 15 other men in California. Becker probably didn't find his fortune in the gold fields, but remained a fugitive for seven years before surrendering on 21 November 1860 at Fort Vancouver. He was tried by court martial, sentenced to one year at hard labor, and transferred into Company H to make good the time he lost to desertion. His service record indicates that his subsequent service was honorable. Private Michael Carroll was shot in both legs on 2 July and died of his wounds on 5 July. He had about nine years in the army when he marched into the Wheatfield. Carroll, from Tipperary, Ireland, had served in the 4th U.S. Artillery and the 9th Infantry before his transfer to Company H in early 1862.[26]

Private William Hamilton was wounded in the left leg and died on 22 July from complications following amputation. A pharmacist from Maryland in civilian life, Hamilton was called a "hospital steward" — an unofficial company medic — by his fellow Soldiers. Corporal Richard Patterson was wounded in the right arm on 2 July. He was treated on the field and evacuated to a general hospital in Germantown, Pa. Medical records indicate he contracted an infection there and died on 15 August. His comrades, engaged in pursuing Lee's army back to Virginia, did not find out about his death until September.[27]

Private David Dunbar was the first man wounded in the entire regiment, according to Lieutenant Dost. Dunbar was shot in the left leg; the bullet fractured "both shin bones, leaving the leg entirely useless," according to a surgeon's report. After treatment in a number of hospitals in the army medical system, Dunbar was transferred to the General Hospital at Fort Columbus on Governors Island in New York harbor where was discharged for disability in January 1864. He died on 23 June 1926 at the Soldiers' Home in Washington, D.C., and is buried in the U.S. Soldiers' and Airmen's Home National Cemetery nearby. Corporal Martin Kenna was 40 years old with almost 10 years in the army when he was wounded. Kenna survived and was later promoted to sergeant. Private George Farnham received a shell wound, causing a severe bruise to his left foot, but was able to return to duty in late-July. Records do not reveal how Private Eugene Mahoney was wounded but only that he was discharged in 1864 at the end of his five-year enlistment.[28]

On 14 August, the 4th Infantry embarked at Alexandria, Va., on the steamship *W.P. Clyde* to New York City to help quell the on-going draft riots. Company H had more than 40 men on its rolls from September 1863 to April 1864 when most were attached to Company K. In the spring of 1864, the regiment was transferred to Virginia to participate in Grant's Overland Campaign. Assigned to Brigadier General James Ledlie's brigade in the IX Army Corps, the regiment lost 12 men killed in action, 35 wounded, and 35 missing by the end of May 1864. The following month, the 4th was posted as headquarters guard for Grant at City Point, Va., where it would remain for the remainder of the war.[29]

Notes

[1] Lieutenant James A. Leyden, "The Fourth Regiment of Infantry," *The Army of the United States*, eds. Theophilus F. Rodenbough and

William L. Haskin (1896; reprint New York: Argonaut Press, 1966), 460-63.

[2] Mary Elizabeth Sergent, *An Unremaining Glory: A Class Album for the Class of June 1861* (Middletown, NY: Prior King Press, Inc., 1997), 14-15; Roger D. Hunt, *Colonels in Blue: Union Army Colonels in the Civil War, New Yor*k (Atglen, PA: Schiffer Publishing Ltd., 2003), 25-26; Frederick Phisterer, comp., *New York in the War of the Rebellion 1861 to 1865,* 2nd ed. (Albany, NY: Weed, Parsons and Company, 1890), 426; Francis B. Heitman, *Historical Register and Dictionary of the United States Army, From Its Organization, September 29, 1789, to March 2, 1903* (Washington, D.C.: Government Printing Office, 1903), 2:13.

[3] Brigadier General Romeyn B. Ayres' Report, 28 July 1863, in U.S. War Department, *The War of the Rebellion: A Compilation of the Union and Confederate Armies* (Washington, D.C.: Government Printing Office, 1889), Series I, Vol. XXVII, Part I, 634-36.

[4] Timothy J. Reese, *Sykes' Regular Infantry Division, 1861-1864* (Jefferson, NC: McFarland & Company, Inc., Publishers, 1990), 235; Heitman, *Historical Register*, 1:92, 362.

[5] Reese, *Sykes' Regular Infantry Division*, 241-42.

[6] Harry W. Pfanz, *Gettysburg: The Second Day* (Chapel Hill, NC: The University of North Carolina Press, 1987), 297-98; Major Arthur T. Lee's Report, 4 July 1863, in OR, 646.

[7] Pfanz, *Gettysburg: The Second Day*, 300; J. David Petruzzi, *The Complete Gettysburg Guide* (New York: Savas Beatie, 2009), 98; Major Lee's Report in OR, 646; Bradley M. Gottfried, *The Maps of Gettysburg* (New York: Savas Beatie, 2007), 180.

[8] Pfanz, *Gettysburg: The Second Day*, 301; New York Monuments Commission for the Battlefields of Gettysburg and Chattanooga, *Final Report on the Battlefield of Gettysburg* (Albany, NY: J.B. Lyon Company, Printers, 1900), 1:55.

[9] William H. Powell, *The Fifth Army Corps* (1895; repr., Dayton, OH: Press of Morningside Bookshop, 1984), 536; Gottfried, T*he Maps of Gettysburg*, 180; Captain Julius W. Adams' Report, 17 July 1863, in OR, 639; Brigadier General Ayres' Report in OR, 636.

[10] Record Group 94 (RG 94), Returns from Regular Army Infantry Regiments, June 1821 - December 1916, National Archives and Records Administration (NARA), microfilm publication M665, rolls 1-244, 297-300; Records of the Adjutant General's Office, 1780s-1917, and Record Group 391 (RG 391), Records of the United States Army Mobile Units, 1921-1942, NARA, Washington, D.C.; Letter, New York Governor Edwin Morgan to Secretary of War Edwin Stanton, 27 October 1862, in OR, Series III, Vol. II, 845; Ibid., General Order No. 38, 10 February 1863. According to the Muster Rolls, nine of these 77 men transferred to the regiment were assigned to Company H on 20 December 1862.

[11] Thos. M. O'Brian and Oliver Diefendorf, comps., *General Orders of the War Department Embracing the Years 1861, 1862 & 1863* (Derby & Miller, 1864), 1:408.

[12] Heitman, Historical Register, 379-80, 693, 1040.

[13] Ibid.; RG 15, Records of the Department of Veterans Affairs, Pension Application Files Based on Service in the Civil War and Spanish-American War (CW Pension Files).

[14] RG 391, Records of the Infantry Regiments Raised Prior to the Civil War, Muster Rolls of the 4th U.S. Infantry Regiment, Records of the United States Regular Army Mobile Units, 1821-1942, NARA.

[15] CW Pension Files; Letter in pension file for Miles F. Newberry, Invalid Pension Application 686936, and Invalid Pension Certificate 971040; RG 94 Regimental Returns; *Autobiography of Gerhard Luhn 1831-1930* (Gerhard Luhn Collection #3954, American Heritage Center, University of Wyoming, 1000 E. University Ave. Dept. 3924, Laramie, WY); Volunteer Army Death Registers, Record for Lieutenant Colonel Sheppard Gleason, 25th New York Volunteers, 17 June 1863.

[16] RG 391, Muster Rolls for 1 May - 30 June 1863.

[17] *Gerhard Luhn Autobiography;* RG 391 Muster Rolls, 1 May - 30 June 1863; RG 94, Regimental Return for 30 June 1863.

[18] RG 94, Regimental Returns; Ancestry.com, U.S. Army Register of Enlistments, 1798-1914 (database-on-line), Original data: Register of Enlistments in the U.S. Army, 1798-1914, (NARA) microfilm publication M233, 81 rolls. Records of the Adjutant General's Office, 1780s-1917, RG 94.

[19] RG 94, Enlistment Register. The occupations of three men could not be determined.

[20] RG 391, Muster Rolls for 30 May - 1 June 1863; RG 94, Enlistment Register.

[21] Ibid.

[22] Ibid.

[23] Ibid., RG 94, Regimental Return for 31 July 1863.

[24] Ibid.

[25] Ibid.

[26] Ibid., Regular Army Death Registers.

[27] Ibid.; CW Pension Files.

[28] Ibid.; CW Pension Files.

[29] RG 94, Regimental Returns, RG 391, Muster Rolls.

[30] Edward K. Cassedy, ed., *Dear Friends at Home: The Civil War Letters and Diaries of Sergeant Charles T. Bowen, Twelfth United States Infantry, First Battalion, 1861-1864* (Baltimore, MD: Butternut & Blue, 2001), 257, 260-61.

[31] RG 94, Regimental Returns for 30 June 1863, and 31 July 1863.

[32] RG 391, Muster Rolls for 1 May - 30 June 1863.

Donald McConnell is a retired Army Military Intelligence officer, now working for the Department of Defense. He is a graduate of the Naval Postgraduate School in Monterey, Calif., and the National War College in Washington, D.C. His current projects include compiling the personnel records of enlisted men in the "Old Army" regiment from 1860-1865 and researching the staff and operations of the Bureau of Military Information — the Army of the Potomac's intelligence organization during the Civil War.

Gustav Person is a native New Yorker with bachelor's and master's degrees in history from Queens College in New York City. He served three years on active duty with the U.S. Army and 26 years in the New York Army National Guard, retiring as a lieutenant colonel in 1999. After discharge from active duty, he worked for 30 years in the New York State Division of Parole, retiring in 2002 as an area supervisor. Since March 2003, he has worked as the installation historian at Fort Belvoir, Va.

Both authors are members of Sykes' Regulars, a living history organization dedicated to studying and portraying the role of regular army Infantry regiments during the Civil War.

TCM-ABCT Identifies Gaps in Bradley Training

SGM (RETIRED) DEREK D. MCCREA

The TRADOC Capability Manager - Armored Brigade Combat Team (TCM-ABCT) identified Bradley individual and collective skills as a critical capability gap and unit deficiency during visits to ABCTs from 2010-2013. The ABCT priority over the past decade has not included repetitive and traditional Bradley gunnery, maintenance, and maneuver training due to repeat deployments on non-standard vehicles (mine-resistant ambush protected [MRAP] vehicles, etc.) Bradley crews and leaders have demonstrated the following trends at the National Training Center (NTC) at Fort Irwin, Calif., during the past five decisive action training environment (DATE) rotations. (Review TCM-ABCT observations, insights, and lessons learned reports for NTC rotations at https://www.milsuite.mil/book/groups/t/content?filterID=contentstatus[published]~category[decisive-action-ntc-reports].)

Live-Fire Training

Bradley crews have recently experienced challenges with fire control systems induced by crew error. Common errors have included: improper loading and unloading, failure to time the feeder, bolts and tracks not locked in, tension not released from ammunition, ghost rounds not cycled, excessive links not swept out from the plenum chamber, expended round casings not cleared out of the ejection port during clearing operations, and lack of awareness of sectors and surface danger zones (SDZ). Some Bradley crews did not demonstrate an understanding of how to clear malfunctions on the M240C machine gun during the live-fire exercise (LFX) or fully understand that boresighting procedures require lengthy times to accomplish.

In addition, crews were not following or did not know appropriate live-fire preparation of their fire control systems, gun systems, or gunnery techniques. According to master gunners, this resulted in reduced time for the live fire and also increased weapons malfunctions. Crews did not have or use paper copies of pre-fire checks and relied solely on the Force XXI Battle Command Brigade and Below (FBCB2) Commander's Tactical Display digital pre-fire checklist. Master gunners expressed that paper copies are better than the digital checklist because they serve as a means to ensure vehicle commanders conduct the checks prior to live fire. The hard copy pre-fire checklists contain the vehicle commander's signature. Master gunners identified this issue and established a policy to require paper pre-fire checklists prior to drawing ammunition. After this policy was initiated, master gunners reported that malfunctions were significantly reduced. TCM-ABCT recommends that units laminate two pre-fire checklists and that one be maintained in the turret and one signed copy be turned into the master gunner or range NCOIC prior to firing. This technique is a way to ensure vehicle commanders have an established process for checking the turret functionality prior to live fires and should produce repetitive training to reduce turret

Soldiers from the 2nd Armored Brigade Combat Team, 1st Infantry Division maneuver a Bradley Fighting Vehicle at the National Training Center in Fort Irwin, Calif., on 24 February 2013.

Photo by EJ Hersom

malfunctions. Sample pre-fire checklists can be located at our milsuite site at https://www.milsuite.mil/book/docs/DOC-116350.

Without the TOW missile, Bradley crews have a reduced armor defeat capability and reduced standoff to provide lethality overmatch. The TOW missile is the longest range direct-fire weapon system available for the ABCT rifle company.

TOW (Tube-launched, Optically-tracked, Wire command-link guided) Missile Proficiency

Master gunner observer coach/trainers (OC/Ts) at NTC expressed that one of the biggest challenges units have is with the TOW missile. Although the 25mm is the main gun for the Bradley, the TOW 2B Aero missile provides an added capability to destroy armored vehicles at ranges comparable with the Abrams. Without the TOW missile, Bradley crews have a reduced armor defeat capability and reduced standoff to provide lethality overmatch. The TOW missile is the longest range direct-fire weapon system available for the ABCT rifle company. The TOW 2B provides units the capability to engage fortified targets at a stand-off distance without being required to use dismounted Infantry or indirect fires.

Bradley crews commonly demonstrate limited or no knowledge of loading, unloading, misfire, or firing procedures for the missile. During first-time live-fire engagements with the TOW at NTC, they were only successfully fired about 20 percent of the time. Of those that did successfully fire, only about 50 percent hit the target. This means that only one of 10 TOW missile engagements were successful. This issue's root cause is a combination of doctrine, material, and training. Doctrinal changes in gunnery manuals between 1996 and 2009 gradually rescinded TOW training requirements for the Gunnery Skills Test (GST) and also deleted the "TOW Training Program." The current heavy brigade combat team manual (2009) does not have Bradley crew TOW tasks, conditions, or standards listed under GST or a "TOW Training Program" section. TOW tasks in current gunnery doctrine are limited to ST 3-20.21-1 (Live-Fire Prerequisites) which includes "Perform Misfire on TOW" and "Remove a Misfired TOW Missile" as gunnery Table I tasks. The lack of doctrinal references and training requirements has led to degraded TOW proficiency in Bradley crews.

Note: The Direct Fire Gunnery manual scheduled for release in 2014 will address this training gap by incorporating TOW tasks back into GST. In addition, there will be anti-tank guided missile (ATGM)/TOW tasks during Tables III, IV, V, and VI to augment the training aids, devices, simulators and simulations (TADSS) training requirement. This includes the requirement to raise the TOW launcher for all defensive and short halt engagements; failure to do so will result in an automatic score of zero for the engagement. Units can still find Skill Level 1-4 TOW tasks in Soldiers Training Publications (STP) 7-11B1-SM-TG and STP 7-11B24-SM-TG. TCM-ABCT recommends that units train these critical TOW tasks now, prior to the release of the Direct Fire Gunnery manual next year to ensure Bradley crews understand how to operate the TOW missile.

TOW Training Aids

The reduced use of TOW training aids is a contributing factor to reduced TOW proficiency. The missile simulation round (MSR) is used to train all non-fire TOW-related tasks. During unit visits, TCM-ABCT identified that many units no longer have adequate MSRs to conduct TOW training. Historically, two dummy TOW missiles per platoon were used for this purpose, which allowed sergeants to conduct opportunity training without having to draw resources from the Training Support Center (TSC). Also, the Multiple Integrated Laser Engagement System (MILES) XXI system does not contain MILES TOWs like previous systems, so crews may not get experience handling and loading TOW missiles when conducting force-on-force training. TCM-ABCT recommends units train on the Skill Level 1-4 TOW tasks listed in the Infantry STPs as a required task prior to gunnery. In addition to STP tasks, there are work packages (WPs) in M2/M3A3 technical manuals. WPs contain detailed instructions for crews and maintainers to operate and maintain equipment. Crews can reference Technical Manual (TM) 9-2350-294-10-2-1 and TM 9-2350-294-10-2-2 for TOW WPs at https://www.logsa.army.mil/etms/online.cfm.

Combat Vehicle Identification

During the past three DATE rotations, units have demonstrated atrophy in the identification of friendly and threat vehicles with mounted day and thermal sights. Vehicle identification is currently trained during simulation in the Bradley Advanced Training System (BATS) and as a common task conducted by crews during the GST. The new Direct Fire Gunnery manual will address this training gap through an improved combat vehicle recognition training requirement and improved software. Recognition of Combat Vehicles (ROC-V) software is currently available to conduct individual training for a single crew member. Units have expressed that it takes too much time to train and test one person at a time with limited computers on hand. To remedy this issue, the ROC-V team will produce an application that unit master gunners will be able to use to test multiple Soldiers at one time with a common standard. Units will still have the capability to conduct individual ROC-V training and testing. Testing criteria will be based off of a specific threat region consisting of up to 50 specific enemy vehicle types to include friendly recognition requirements. Tests will consist of a number of artillery, aircraft, tracked vehicles, wheeled vehicles, and no more than five friendly vehicles for a total of 25 vehicles for the specific threat region. Master gunners will be able to choose whether or not the vehicles are presented as daylight or thermal images and will be able to choose the target distance. Until the new manual is released, TCM-ABCT recommends units add ROC-V and vehicle identification training as part of their training strategy.

Action, Crew, and Battle Drills

Battle, crew, and action drills conducted by Bradley crews and sections have also atrophied. Unit leaders exercise different tactics, techniques, and procedures, and sometimes use common Warrior Battle Drills for executing operational tasks. However, platoons and below either do not conduct the drills to standard or do not understand how to execute the drills. A battle drill is a

collective action executed by a platoon or smaller element without the application of a deliberate decision-making process. The action is vital to success in combat or critical to preserve life. The drill is initiated on a cue, such as an enemy action or simply a leader's order, and is a trained response to the given stimulus. A crew drill is a collective action that a crew of a weapons system or a piece of equipment must perform to use the weapon or equipment successfully in combat or to preserve life. This action is a trained response to a given stimulus such as a leader's simple order or the status of the weapon or equipment. Both require minimum leader orders to accomplish are the standard throughout the Army.

Units should be able to conduct their specific battle, crew, or action drills without applying a deliberate decision-making process and with minimal leader orders. Leaders should train and rehearse drills at every opportunity. While observing training, leaders at the platoon level have expressed during previous NTC rotations that they didn't know where or how to find Army Training and Evaluation Program (ARTEP) or battle drill manuals from the Army Publishing Directorate (APD). They either did not know or did not understand that the ARTEP manuals have been replaced by Combined Arms Training Strategies (CATS) and are located on the Army Training Network (ATN), or that battle drills were removed from platoon and squad manuals and placed in CATS and on ATN. As the Maneuver Center of Excellence (MCoE) Directorate of Training and Doctrine's (DOTD) Doctrine and Collective Training Division rewrites or revises platoon and squad manuals, they are placing most battle, crew, and action drills back into the manuals. Units at all levels can find all battle drills with required actions for their unit in CATS. ABCT CATs can be found at https://atn.army.mil/dsp_CATSviewer01.aspx.

Movement and Maneuver

In the last decade, combat arms formations have commonly used two different movement techniques (traveling and bounding overwatch) due to unsuspected near ambushes that have occurred during route security and other missions. A technique units have not been using is traveling overwatch. During DATE rotations at NTC, units are not planning for transitions at the appropriate time based upon the known or suspected enemy situation or the terrain. Units are staying in the traveling formation regardless of the enemy situation until contact is made, and then they are conducting bounding overwatch. This means the unit may not have support-by-fire positions established when they make contact, which results in not making contact with the smallest element possible. In cases where units did occupy support-by-fire positions, Bradley crews did not perform survivability moves. Vehicle crews conducted berm drills but continued to expose themselves at the same location instead of moving behind concealed terrain to alternate positions to increase survivability.

Platoons are also not transitioning to the appropriate movement formation based upon mission, enemy, terrain and weather, troops and support available - time available, civilians (METT-TC). In cases where platoons transitioned to the wedge formation, they were positioned too close in the open desert terrain. Bradley platoons can increase force protection and observation by opening up their formations in desert terrain.

TCM-ABCT recommends that units conduct detailed mission analysis, resulting in plotting and rehearsing graphical control measures that serve as triggers for transitioning from movement to maneuver, and train crews and squads on the three movement techniques and when to transition. Units should rehearse movement formations and techniques under conditions that are as close as possible to those expected to the upcoming operation.

Maintenance Management

In the past decade, ABCTs have not routinely planned or executed maintenance on Bradleys in garrison or in a DATE. Units have performed maintenance and services at forward operating base (FOB) hard stands at fixed sites with sustainment support provided mostly by contractors on site. In cases where units did perform maintenance when deployed, many times it was conducted on non-standard vehicles (MRAPs) vice Abrams and Bradleys. Command maintenance, preventive maintenance checks and services (PMCS), semi-annual services, and single equipment services are required to be placed on the unit's training schedule. During four previous NTC rotations, OC/Ts said vehicle crews turned in 5988Es, but that units need improvement on having a sound maintenance plan that includes proper quality assurance and quality control. During several NTC rotations, maintenance collection points (MCP) had too many combat platforms disabled or non-mission capable (NMC) by -10 standards and could have been X'd by the commander to participate in the fight. Some units did not understand the difference between NMC by -10 standards verses combat power.

TCM-ABCT recommends ABCTs look at a holistic strategy for command maintenance that includes all equipment assigned. Command maintenance should include weapons, vehicles, radios, classes of supply, class IX parts status, etc. Units should ensure 100 percent of unit personnel are available and focused on command maintenance with a strong leadership presence. Commanders should develop a unit culture where preventive maintenance and parts ordering is conducted throughout the year as soon as faults are identified to reduce requirements during services. We have observed that units can streamline maintenance procedures by better outlining maintenance responsibilities. On many occasions mechanics have reported they have performed maintenance tasks that are listed as operator tasks in vehicle technical manuals and this has reduced time available for mechanics to conduct -20 level maintenance tasks. Operators and leaders in some cases have demonstrated a basic knowledge of the vehicle, but no knowledge of required crew responsibilities for vehicle services and/or lubrication order requirements. For example, if it is a mechanic task to replace an engine part, the crew may be required to drain the oil in order for the mechanic to conduct the primary task, etc. (See technical manuals and lube orders for specifics.) Recommended tips for improving maintenance management in ABCTs include:

- Ensure timelines account for all required milestones with detailed services and maintenance plans that maximize the unit's ability to conduct training events with 100 percent of their vehicles, weapons, and other assigned equipment.
- Conduct PMCS certification classes as part of the driver's training program and also certify NCOs and officers through a one- or two-day PMCS certification course.
- Cross-train alternate drivers.
- Teach leaders supervision tasks and processes for maintenance from the initial fault identification all the way through delivery of

Photo by EJ Hersom

Vehicles from the 2nd Armored Brigade Combat Team, 1st Infantry Division maneuver through the desert at Fort Irwin, Calif., on 24 February 2013.

the part to the user that includes vehicles, arms room equipment, and items issued by the supply room.

• Conduct leader professional development (LPD) maintenance classes led by senior mechanics and supply process classes led by supply sergeants, etc.

• Standardize pre-combat inspections (PCIs) for leaders to use as a guide in preparation for training and events (include recovery tasks). Leaders at all levels conduct PCIs and spot check maintenance.

• The command supply discipline program (CSDP) and property accountability also need to be addressed during scheduled maintenance activities.

• Ensure crews are present and conduct operator-level tasks when mechanics conduct services on their vehicles.

ATN contains lessons plans for the Company Commander and First Sergeant Pre-Command Course (CCFSPCC). The purpose of CCFSPCC is to provide company command teams knowledge in key areas leading to effective leadership in garrison operations. Module 11, CSDP and Unit Maintenance Organizational Inspection Program (OIP), is a great training tool for units to train maintenance leader tasks. The slides for this class are located at https://atn.army.mil/media/docs/CCFSC_Unit_Maintenance&OIP.pptx.

Rifle Platoon Collective Task Proficiency

Every ABCT that conducted a DATE rotation at NTC in the past year needed improvement on maximizing the use of Infantry squads in unison with Bradley crews. Units experience challenges finding the right balance of training and synchronizing Bradley crews and dismounted Infantry for missions. The root cause is a combination of reduced operational and institutional training requirements over the past decade and reduced operations of Bradleys supporting dismounted Infantry in traditional roles. It is common for Infantry leaders to be assigned to ABCT company teams the first time as company commanders, first sergeants, or platoon sergeants. In the 1990s, NCOs assigned to the ABCT company team were prepared through repetitive experiences in education and assignments to plan and conduct decisive action tasks for Bradley crews and squads. This specific decisive action experience enabled NCOs to advise platoon leaders and company commanders who were new to the mechanized formation. Having NCOs with this experience is no longer as common in the formation. Infantry NCOs assigned to ABCTs for the first time have a broad range of Infantry skills but lack many of the specific tactical and technical skills needed to support ABCT mission essential task list (METL) tasks. The result is a steep learning curve for leaders when planning and conducting operations requiring the simultaneous application of both crews and squads. This task becomes even more challenging for leaders at NTC when placed in a time-constrained environment requiring planning for both mounted and dismounted operations. Units should be able to conduct their specific battle, crew, or action drills without applying a deliberate decision-making process and with minimal leader orders. Leaders should train and rehearse drills at every opportunity.

Leaders need improvement on combining crews and squads

to provide the most lethal combination of firepower in the DATE fight. History has told us the importance of qualified lethal crews and Infantry squads. After reviewing *Infantry* Magazine articles from about 1985 to 1994 — and from speaking with OC/Ts and ABCT leaders who were in ABCTs in the 1990s — leaders have had this same problem since the arrival of the Bradley Infantry Fighting Vehicle (IFV). The Bradley required an additional training requirement for Infantry Soldiers. One *Infantry* Magazine article from a platoon leader's perspective at the time is "The Bradley Challenge," which appeared in the January-February 1991 issue (available for download at https://www.benning.army.mil/magazine/1991/1991_1/fa01.pdf). Even in the 1990s, it took repetitive training against a near-peer threat and institutional and operational training to result in a shift where ABCT rifle platoons applied lessons learned. Repetitive experiences by leaders resulted in an increased understanding of the importance of how to train and employ crews and squads simultaneously in a decisive action fight.

Commanders must schedule consecutive tough and realistic training events for both dismounts and crews, and ensure company and platoon leadership understand how to maximize the benefits of synchronizing all elements in ABCT rifle platoons. Command sergeants major and first sergeants should manage NCO careers to include a mix of Bradley section and squad leader time in order to produce the most qualified platoon sergeants. Leadership climate and culture must adapt to focus combined and simultaneous efforts to improve both crews and squads. It will take time, energy, and resources to rebuild the knowledge and capability for Soldiers, crews, squads, and leaders in ABCT rifle platoons to reach mastery of METL tasks related to decisive actions.

The Bradley was designed to replace the M113 Infantry Carrier Vehicle (ICV). There is a distinct difference between the two in that the IFV is designed to support ABCT operations in support of dismounted Infantry and support direct

Soldiers with the 1st Battalion, 15th Infantry Regiment, 3rd Armored Brigade Combat Team, 3rd Infantry Division, pull security while setting up camp for the day at the National Training Center, Fort Irwin, Calif., on 13 March 2012.

Photo by SSG Renae Saylock

fire engagements in coordination with tank platoons. The IFV provides superior firepower to the ICV through a complex digital fire control system. The M2A3 Bradley Fighting Vehicle requires a much higher level of crew proficiency than the ICV or the baseline Bradley fielded in 1983.

Platoons that master both mounted and dismounted proficiency can enhance lethality, mobility, and survivability. An understanding of how to effectively employ both elements is vital to the success of the rifle platoon. The ABCT rifle platoon requires skills beyond that of rest of the Infantry force due the additional Bradley tasks. ABCT rifle platoons require a holistic training effort that includes progressive institutional and operational training opportunities to develop competent Soldiers, NCOs, and officers capable of maximizing the deployment of squads and crews.

MILES XXI

Bradley crews have experienced challenges with MILES XXI during DATE rotations at NTC. ABCTs have not performed training with MILES on Bradleys consistently over the past decade. The result is a lack of proficiency on the installation, use, and troubleshooting of the system. Recommended tips for improving this skill set include:

- Inspect locking levers and safe switches prior to installation.
- Crews need to understand that silent watch continues to drain vehicle batteries. At a certain point, the vehicle will have warnings pop up and the system may not function correctly. Maintaining a watchful eye on voltage is a key to success.
- Crews should review installation and operating instructions prior to use of MILES XXI systems and understand basic troubleshooting procedures.
- Crews should know proper power up procedures.
- Inspect MILES XXI upon receipt for broken pins and/or dirty connections.
- Enforce strict cleanliness and maintenance inspections.
- Continue to conduct MILES XXI train-the-trainer events at home station to include installation, maintenance, operation, and troubleshooting procedures.
- Do not tighten connections with pliers. Repeated tightening with pliers has caused connectors to wear making it difficult to install. If all cables are not fully tightened and clean, the MILES will not function properly.

Institutional Training

The Henry Caro NCO Academy at Fort Benning, Ga., has instituted program of instruction (POI) changes that include a field training exercise (FTX). Although the FTX does not include training on the Bradley, NCOs will receive hands-on instruction on critical tasks that are common to all Infantrymen. In order for NCOs to acquire Bradley-specific NCO skills, they need to attend the functional courses at the MCoE that train Bradley technical and tactical tasks. Current courses include the Bradley Leader Course and the Bradley Master Gunner Course.

ABCTs have not maximized NCO attendance to the Bradley Leader Course. During Fiscal Year 2013, a very small percentage of the overall student attendance at the course consisted of NCOs assigned or en route to ABCTs. A shortage of assigned Bradley master gunners also contributes to the problem. Rifle companies commonly only contain one of four qualified Bradley master gunners. The only opportunity for Infantry Soldiers to receive institutional Bradley training is through the Bradley Leader Course or the Master Gunner Course. The combined result is a lack of internal expertise to sustain Bradley skills when new equipment training (NET) concludes in March 2014.

ABCTs can make the largest impact now by sending more NCOs to these two Bradley courses. TCM-ABCT recommends that all Infantry NCOs attend the Bradley Leader Course en route to assignments with ABCTs for the first time; units should try to schedule the course in conjunction with already scheduled NCO Education System courses. Units should also send NCOs to the Bradley Master Gunner Course to attain 100 percent of their required master gunners at the platoon and company levels and forecast manning requirements to retain this skill set.

Future *Armor* and *Infantry* Magazine articles by TCM-ABCT will address recommendations for units to order required training aids that support GST requirements. Follow TCM-ABCT on MilBook at https://www.milsuite.mil/book/groups/t.

TRADOC Capability Manager - Armored Brigade Combat Team

TCM-ABCT serves as TRADOC's centralized manager for all activities related to the ABCT. The office serves as the ABCT Soldier's user representative to the Program Executive Office (PEO) Ground Systems, Program Manager (PM) ABCT, Department of the Army, TRADOC, and the MCoE. In the past year, TCM-ABCT has completed trend analysis from five separate DATE rotations at NTC/JRTC, seven unit visits/umbrella week data collection efforts, and multiple leader engagement sessions with ABCT officer and NCO leaders attending training at Fort Benning to develop an observations, insights, and lessons (OIL)-based doctrine, organization, training, materiel, leadership and education, personnel, and facilities (DOTMLPF) integration action plan. Since 2010, TCM-ABCT has conducted 31 unit visits to identify trends and assist the Army with improving ABCT capabilities.

SGM (Retired) Derek D. McCrea is currently serving as the training, leadership development, and safety integrator for TCM-ABCT, Jacobs ASG. His previous assignments include serving as the MCoE Base Realignment and Closure Commission (BRAC) transformation SGM; operations SGM for the 197th Infantry Brigade; operations SGM for the 158th Infantry Brigade, operations SGM for the 3rd Battalion, 15th Infantry Regiment; first sergeant for C Company, 3-15 IN; first sergeant for A Company, 1st Battalion, 64th Armor; and first sergeant for HHC, 1-64 AR. McCrea has ABCT deployment experience during Operation Iraqi Freedom I and III. He has a master's degree in business administration from Columbia Southern University.

Security Force Advise and Assist Teams

Team Shares Lessons Learned

1LT ANDREI DOOHOVSKOY
MAJ LORETO BORCE

As the United States transitions to an advisory role in Afghanistan, Security Force Advise and Assist Teams (SFAATs) play an increasingly prominent role in coalition force (CF) efforts in Afghanistan. Their problem set is one traditionally addressed by Special Forces (SF) troops engaged in foreign internal defense (FID) missions, but due to the scale and urgency of the mission, conventional units have also been tasked with advising and assisting Afghan National Security Forces (ANSF). Inherently challenging work — and even more so for conventional units not specifically organized or trained for developing, advising, or assisting foreign defense forces — the SFAAT mission warrants special attention. Each SFAAT faces a unique set of challenges based on their Afghan counterparts and location, but some principles are broadly applicable. This article captures some of these common principles to stimulate discussion about the SFAAT mission. Our lessons learned are generated both from the successes and setbacks our SFAAT has experienced in Afghanistan and are intended as a starting point for further discussion and analysis. These notes are written humbly with the understanding that each situation varies and with the knowledge that our assessments may contradict the experience of others in the field. We hope that these notes can serve both as a useful tool for future SFAATs and as a catalyst for discussion or debate about important aspects of the SFAAT mission.

Photo by SFC Kenneth Foss

Soldiers with the 1st Battalion, 87th Infantry Regiment conduct mortar training with Afghan National Army soldiers from the 6th Battalion, 3rd Brigade, 203rd Corps, in Ghazni Province, Afghanistan, on 7 July 2013.

Build Internal Team Cohesion

The SFAAT is not a familiar element for most Soldiers. It's important to recognize that learning to function as an SFAAT will require adjustment. In the context of platoon, company, or battalion staffs, most Soldiers intuitively know who is supposed to do what and how each individual fits into the hierarchy. Not so with the SFAAT team. Moreover, SFAATs are typically manned by Soldiers from different units, branches, and military occupational specialties (MOS), which can create an eclectic mix of perceptions of how things ought to be done. For this reason, it becomes even more important to build team cohesion to overcome the friction associated with transitioning to a new organizational dynamic. Building cohesion early on will facilitate all other efforts the SFAAT undertakes.

Clearly Define Roles and Responsibilities on the Team and Identify Strengths, Weaknesses, and Interests

The SFAAT should look closely at roles and responsibilities within the team. A cursory glance at a manual or slide deck will add little value. Each team member will inevitably occupy a niche on the team based on his position, skills, and interests. Working this out as early as possible will position the team for success and help ensure that the team is fully capitalizing on its human resources. Additionally, creating an S2 (intelligence) and S3 (operations) cell of two to three people each will help manage the team's responsibilities and tasks both as an advising entity and as a self-contained element within a U.S. battalion or brigade. Once primary roles and responsibilities are defined, the SFAAT should assign an alternate for each position, which generates valuable

redundancy and stimulates heightened cross-talk and teamwork within the SFAAT.

Integrate with Your "Parent" Battalion and Brigade as Early as Possible

While still at home station, integrate the SFAAT with your "parent" battalion and brigade area of operations support command/area of operations command (AOSC/AOC) and security force (SECFOR) as much and as early as possible. Integrating into applicable brigade, battalion, and company battle rhythm events help set the stage for working relationships in theater. Showing up to company physical training (PT) sessions and training meetings will make a difference and will make your faces familiar to those you'll be depending on when deployed.

It is also important to identify and integrate with your SECFOR platoon (or platoons) as soon as possible. The more the SECFOR is included in and understands the SFAAT's mission, the more effective they will be. No one wants to go on patrol and pull security so that an SFAAT can drink chai with Afghans. Ensure that there is cohesion with your SECFOR, and that every Soldier — from the gunner to the SECFOR platoon leader or company commander — understands your mission, tasks, and the purpose behind the risks you ask them to accept.

Start the Relief in Place (RIP) Process While in the Rear

Spend time thinking collectively about what the team will need to know upon arrival in country. Make contact with the unit you're replacing as early as possible (by email, phone, and video-teleconference [VTC]); send questions and listen to what they think is important. Get read-ahead materials on the area of operations (AO), significant trends and themes, and key individuals in the ANSF, district/provincial government, villages, and insurgency. Conduct terrain and enemy analysis and familiarize the team with maps of the AO. Establish requisite email accounts in the rear for as many team members as possible (at minimum for the team lead, executive officer, S3, and S2) so that the team can process and disseminate classified information as appropriate. This will facilitate the information flow from the current team that will help inform preparation in the rear and position the SFAAT for a smooth transition. Building on robust communication with the unit you are replacing, take an active role in laying out the schedule and content for your RIP/transfer of authority (TOA). Show up ready to play.

Start Language Training Early

Dari is generally the most useful language for those working with ANSF units. Your ability to personally communicate key phrases, thoughts, and ideas will make a difference with counterparts. While few people can become fluent without substantial time and effort and not all team members can attend specialized language training, the SFAAT can become proficient in basic conversation through self-study. This level of language proficiency provides a marked advantage in building rapport. Think about the concepts that you consider vital to your relationship with your counterpart and to your job as an advisor. Your ability to communicate at least some of these ideas without an interpreter will convey your point much more effectively and does not necessarily require unrealistic time spent on language study. The Pimsleur Language Program and Rosetta Stone are useful tools in this effort.

Understand Your AO

There are often negative associations with excessive or academic reading materials on Afghanistan, but even themes that seem broad/abstract can have concrete application in an SFAAT's everyday work. Balance study of Afghanistan as a whole with focus on your target province and district. Those serving in the ANSF come from everywhere, so limiting your study to one province or district is not advisable. Understanding your counterpart's background is important in building a relationship with him, and also for understanding his relationships with other Afghans.

Photos courtesy of authors

Members of SFAAT Team 6 (with the 1st Battalion, 87th Infantry Regiment) assist as Afghan Uniformed Police (Ghazni Province) conduct law enforcement training.

Studying Afghanistan does not need to be an overly academic task requiring reading long books or sitting through mind-numbing PowerPoint briefs. Breaking down key concepts and focusing on key takeaways substantiated by choice examples/specific information could be a useful approach to achieving a level of proficiency in area study. Building knowledge of key cultural, historical, professional, and linguistic themes can yield significant rewards with relatively low effort. This process should not be confined to individual study, which tends to be procrastinated or ineffective. It is a team effort, and each team member's knowledge or lack of knowledge affects the team as a whole. For example, instead of trying to learn the twists and turns of Afghan history and leaders by wading through long dry chapters, the SFAAT team could hunt down those key themes that:

* Are at the root of compelling current Afghan affairs and

* Retain meaning for Afghans today.

In other words, the team can become familiar with those things that either affect

many Afghans or that almost all Afghans know about (e.g. historical figures/events, ethnic themes, common phrases, cultural references). This will promote an understanding of your counterparts — their motivations and inter-relationships — and accelerate the process of building rapport. For example, Afghans of a certain age and position often allude to the "British" or the "Russians." Understanding the basic history of these time periods and how Afghans perceive these historical events will provide SFAAT members a more nuanced understanding of their counterparts. This sets the stage for effective advising.

Ensure that the SFAAT appreciates the varying requirements, pressures, and cultures found in battalion/brigade staffs, SF teams, and civilian organizations. Failure to navigate these cultures effectively will inhibit your efforts across the board.

By absorbing the cultural, historical, and linguistic themes that shape the perceptions and opinions of large groups of Afghans, you can set the conditions for building common understanding with your counterparts. This process of knowledge acquisition need not be painful or slow, it can be done "Cliff Notes" style and executed with a clear purpose: to facilitate advising, influencing, and relationships — NOT to conduct a literature review on available material on Afghanistan. Afghan language and culture teachers can assist in this effort by focusing their lessons and condensing material to emphasize the "actionable nuggets" necessary to close the distance with counterparts. Efforts should focus on making this process easy, straightforward, and efficient. There isn't enough time for slow, methodical study regardless of how effective this approach may be.

Develop Simple Standard Operating Procedures (SOPs) for Mounted and Dismounted Movement

Developing and training on basic SOPs will allow more time to focus on advising and will position the SFAAT to integrate with SECFOR more smoothly. Writing a tactical SOP (TACSOP) at home station with input from the SECFOR and AOSC/AOC can be a valuable reference tool in this area.

Do NOT Forget That Relationships Come First

As much as this may be repeated (sometimes ad nauseam), it can be easy to forget, especially when feeling a sense of urgency to accomplish a task. Never walk past a relationship. A simple exchange of greeting with Afghans — whether you know them or not and regardless of rank — can build/preserve a positive working relationship. Neglecting greetings or pleasantries can put things off balance. Building cooperative and positive relationships with all surrounding entities — ANSF personnel, other Afghan leaders, interpreters, U.S. AOSC/AOC, SECFOR, U.S. agencies and civilians — is vital to the SFAAT's ability to function effectively. Ensure that the SFAAT appreciates the varying requirements, pressures, and cultures found in battalion/brigade staffs, SF teams, and civilian organizations. Failure to navigate these cultures effectively will inhibit your efforts across the board. To maintain these key relationships, we found it useful for each SFAAT member to develop at least two counterpart relationships: one within the ANSF and one within the higher CF unit. For example, the SFAAT S3 links with the ANA S3 as well as the U.S. battalion assistant S3 through face-to-face meetings, phone calls, email, and VTC, if necessary. This ensures continuity and support from the larger U.S. unit that will help in influencing Afghan counterparts. It also provides SFAAT members (especially junior ones) valuable perspective on our own organization that can inform his advising efforts with ANSF units.

Ensure That Your SFAAT and Any Adjacent Advising Teams Speak With One Voice and Achieve Unity of Effort

The message that you work to communicate to your counterparts is difficult enough to develop and effectively convey. Do not let your team hinder its own efforts by sending mixed messages to counterparts. Ensure that every team member team clearly understands the key concepts and initiatives towards which you are working. This will result in the SFAAT addressing priority issues from multiple angles as each team member engages his staff counterpart in his respective area. It is also important speak with one voice with adjacent advisor teams, especially as you encourage your counterparts to integrate with other ANSF units and government entities. We found it useful to compare notes with other advisors before conducting any joint meetings, events, or operations. Additionally, we found it extremely important to conduct informal after action reviews (AARs) with other advisor teams after key events and to share reports laterally as well as vertically across organizations. This is easy to pass over, but post-event meetings/reports ensure that advisor teams share a common understanding, collaborate, and pursue mutually supporting ways forward. Synchronization meetings — in person or online — approximately once a week are useful for achieving this unity of effort. The bottom line is that it's vital to advise interacting Afghan organizations towards common goals and methods.

Use All Available Enablers — Don't Forget That You Are a Decisive Effort

In the context of a battalion or brigade, it can be easy to lose sight of the fact that you are a decisive effort. Make use of all available enablers: provincial reconstruction team subject matter experts, civilian government/development personnel, law enforcement professionals, intelligence resources, etc. Maintaining a team atmosphere open to cooperation with enablers — often "outsiders" to the team and sometimes to the military — is vital for getting the most from them. Be aware of cultural differences between the state department, government agencies, civilian, and other organizations. Focus on results, be patient with misunderstandings, and avoid ego contests.

Foster a Positive Relationship With Interpreters

Making life good for your interpreters will pay dividends. A positive relationship with your interpreters will:

1) Motivate them to function for you as informal cultural advisors and extra sets of eyes and ears, and

2) Help them to understand your style of speech and overall intent, allowing them to communicate this to your counterparts effectively, even when you are struggling to find the right words.

Sit down with them early on, pick their brains about your counterparts (interpreters have often worked in an area or with an

Afghan unit longer than any American on the ground), and use them as resources for AARs. Take time to get to know them, and ensure the SFAAT is supporting them adequately.

Focus on Outcomes

Identify the outcomes you want from your counterparts and don't be limited by the techniques/systems common in our Army. Since it's clear we want the Afghans to find their own solutions, we must give them space to develop these solutions and assist them in doing so by effectively and clearly communicating the end goal/purpose to which we want them to strive and which we want them to adopt as their own. This can be more difficult than it sounds. For example, there is little value added in hammering out the establishment of a battle rhythm for its own sake. Instead, focus on the outcome of an effective battle rhythm and work with counterparts to achieve this outcome in whatever way makes sense and is sustainable for them.

A kandak commander (6th Kandak, 3rd Brigade, 203rd Corps) discusses issues with Qarabagh District's governor (Ghazni Province) during a shura.

Focusing on the outcome conveys the "intent" for whatever task is being attempted, and like a commander's intent, it allows the individual or organization to apply initiative and creativity to get the job done. This approach tends to produce the sustainable solutions the SFAAT looks for and develops the sense of ownership and self-reliance in the counterpart that is vital for genuine improvement in the ANSF.

Be Creative in Finding Ways to Show Hospitality to Afghans

Hospitality is a well-known tenet of Afghan culture, and showing it to counterparts can be an effective way both to build your relationship and to get things done. Inviting counterparts for meals or tea/coffee can shift dynamics to your advantage, and shows that hospitality and respect will go both ways in your relationship. Not only is it a show of your good will, but it can also prompt a response in your counterpart to reciprocate and thus be more open to what you have to say or request.

Develop Synthesis of Intelligence and Operations Through Workable Intelligence and Planning Systems

ANSF units often have access to excellent raw intelligence through interaction with the populace and terrain. SFAATs can build significant capacity in most units by working to connect intelligence and operations staffs, and by refining sustainable systems within both shops. Encouraging intelligence sharing between ANSF units can be challenging (ultimately based on relationships), but it is vital for developing the integration and cooperation necessary for the layered security operations that are most needed for achieving and sustaining wide area security in an AO. In the process of sharing intelligence, the SFAAT should work to refine systems for recording intelligence, vetting sources, and ultimately submitting actionable intelligence to the operations section. Refinement of planning processes must be tied to the S2 shop, and operations should always include an intelligence-gathering function. After observation and analysis, consider encouraging an intelligence meeting which can set the conditions for a successful operations meeting or joint security shura focused on identifying and coordinating upcoming missions.

Understand the Process of the Shura

Shuras are a vital catalyst for the joint operations that are the bedrock for sustainable security. Focus on prepping your counterpart (subtly) for these meetings by asking him what results he wants from the meeting. This can prompt a thought process that can lead to forming a meeting agenda, which will help guide your counterpart and/or the group towards an effective meeting. Don't talk much at the meeting and limit U.S. presence: your time for coaching has past. Understand the power of a well-placed question when you feel something must be discussed or send your interpreter inconspicuously to whisper a suggestion to your counterpart. We found that seating CF along the outside wall (i.e. not at the main table) or in a corner helped stimulate a sense of ownership and control in Afghan counterparts. Have a plan for the "golden 30 minutes" after a meeting (when people stand around and talk), which is an excellent time to pull key people aside and ask them questions that can stimulate useful coordination and planning. In our experience, the S3 and company advisor made good progress by going to the map with counterparts to "get grids" and to ask attendees to explain their plan (with the explanation that they had simply missed it in translation). This often led to a map recon/terrain analysis, and prompted leaders to work out key details that may have been glossed over in the meeting. Our S2 typically followed up with attendees for confirmation of names/places and to get additional details that may not have been offered up to the group. The team leader generally engaged key leaders in conversation after the meeting, subtly working angles of influence or simply observing interactions that would determine our way forward in important areas. Once cross-ANSF and/or district-level shuras are solidified, periodic inter-district shuras can be useful for broadening cooperation in your region and addressing enemy networks that are not limited by borders of any kind. Lastly, identifying an individual or organization to take ownership of the shura can be effective for ensuring that the shura takes place (regularly, if that is the goal) and that someone

(or some group) has responsibility for making it a success.

Bottom line, any shura should be Afghan-led and Afghan-owned.

Find Ways to Generate Tangible Results As a Result of Your Advising Efforts

"Building capacity" is hard to do without results you can point to. Nothing embeds a new method or system in an organization better than positive, tangible results. Also, help your counterpart with things he cares about when you can (even if it's not your first priority) without giving too much or bypassing Afghan systems detrimental to the development of your counterpart's organization.

One Step at a Time... Be Patient

Prioritize the team's efforts and only focus on as many initiatives as your counterparts (and their staffs) can handle at once. Afghans are often initially very receptive to ideas and requests, which can tempt the team to get ahead of itself. See a few key initiatives through to success (or off to a solid start) and don't undertake other efforts that would distract from higher priorities. Use your judgment (and the advice of the team, interpreters, or other trusted people) to determine when it's right to let your counterparts work things out in their own time, or push them when they are stalling.

Don't Forget About COIN

The SFAAT is focused on developing overall capacity within the ANSF, which entails significant attention focused on systems that support conventional operations. It's important to remember, however, that the ANSF must include COIN in their approach to securing their AO. For this reason, the SFAAT must understand the concepts of COIN and non-lethal efforts. Detailed discussion of these concepts is outside the scope of this set of notes, but must be closely examined by the SFAAT. Information operations (IO) is a key non-lethal area that can be pursued with little risk and high reward. We have found that crafting IO messages for the ANSF is ineffective, and that encouraging original messages, talking points, or other initiatives yield better (and less stilted) results. Evaluate counterparts for ability in IO messaging and always look for opportunities for Afghan leaders to tell their side of the story.

Be Sincere

Afghan culture places a premium on relationships and face-to-face conversation. Americans are often more accustomed to email, texts, and phone calls. Afghans are extremely adept at personal forms of communication and are generally very skilled at reading the person with whom they are interacting. For this reason, it is important for the advisor to foster sincere feelings of solidarity, trust, and friendship for counterparts. Focus on those things you have in common with counterparts and those which help you appreciate their culture, customs, and perceptions. Ultimately, whatever you feel inside will show through and will be conveyed to your counterpart in some form, and it will either help or hurt your efforts.

Continue Learning and Promote Collaborative Thinking Through a Humble Approach

The SFAAT mission requires constant learning, creativity, and flexibility. No matter how much one prepares for the mission, there is always more to learn, and each situation and set of personalities is unique. Much of what the SFAAT is asked to accomplish is not specifically addressed in army publications or manuals. For this reason, humbly pursuing solutions as a team (as well as with the AOSC/AOC, SECFOR, and other enablers), brainstorming, and promoting creative, collaborative thinking is especially important.

1LT Andrei Doohovskoy is currently deployed to Afghanistan as the S3 for an SFAAT (Headquarters and Headquarters Company, 1st Battalion, 87th Infantry Regiment, 1st Brigade Combat Team, 10th Mountain Division). He has a bachelor's degree in Russian language from Georgetown University and a master's degree in Russian and Central Asian studies from Harvard University. His thesis topic was focused on the Soviet war in Afghanistan, and he also completed research and published an article on Russian military transformation and the Chechen conflict.

MAJ Loreto Borce is currently deployed to Afghanistan as team leader for an SFAAT (1-87th Infantry, 1st BCT, 10th Mountain Division). His previous assignments include serving as a military science instructor at the U.S. Military Academy at West Point, N.Y.; commander of Headquarters and Headquarters Battery and Bravo Battery, 3rd Battalion, 7th Field Artillery Regiment, 25th Infantry Division (Operation Iraqi Freedom 09-11); fire support officer for the 2nd Battalion, 27th Infantry Regiment; executive advisor for a military transition team deployed in support of OIF 5; fire support officer for the 25th Combat Aviation Brigade (deployed in support of Operation Enduring Freedom V); and fire support officer for Baker Company, 1st Battalion, 506th Infantry Regiment. MAJ Borce has a bachelor's degree in criminal justice from Chaminade University and a master's degree in management and operations from John Jay College.

A Soldier with the 1st Battalion, 87th Infantry Regiment, 10th Mountain Division, discusses security issues with a district chief of police in Ghazni Province, Afghanistan.

A Layered Approach for Training Battle Staffs Within Digital Tactical Operations Centers

GARY LAWRENCE

As the Army begins its transition from counterinsurgency (COIN) operations to unified land operations (ULO), combat training center (CTC) leaders and cadre have observed a lack of training proficiency in the application of basic doctrine to include mission command doctrine when conducting ULO. There are noted deficiencies in battalion through brigade-level staffs when planning, executing, and conducting mission command within digitally equipped command posts (CPs).

This article covers essential assets along with a layered approach for training battle staffs for ULO within a digital tactical operations center (TOC). The discussion includes:

- Integrating assets using a layered approach
- Home-station training
- Resources available
- Individual and collective training required for battle staff

Integrating Assets Using a Layered Approach: Techniques That Work

The following best practices are from commanders who regularly trained at home station by utilizing the Mission Command Training Centers (MCTCs) or taking advantage of field training exercises and gunneries to deploy and exercise their CPs and battle staffs using a layered approach with training, current doctrine, and the full suite of Army Battle Command Systems (ABCS). Below are techniques observed that can help enable a unit to begin using Command Post of the Future (CPOF) in conjunction with the other ABCS assets for operations within a time-constrained environment.

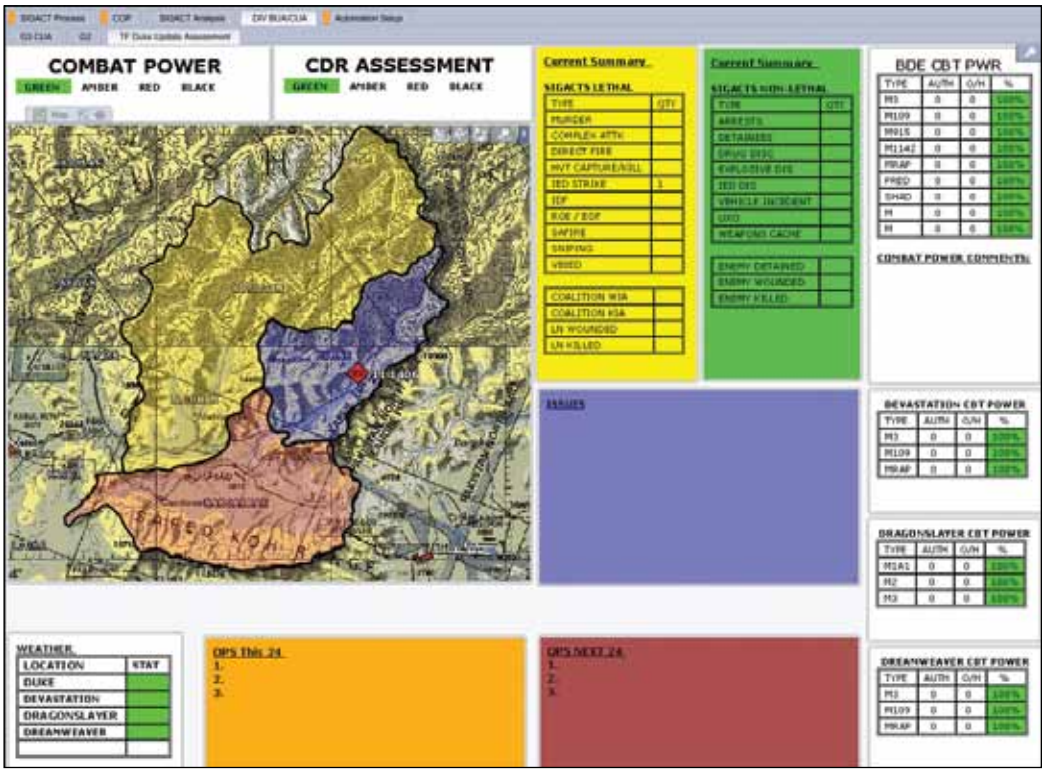
Having staff members immediately dive into data entry in their respective ABCS assets may not be the optimal approach to introducing staffs to digital systems. One simple technique is to require staff members to write their basic duty descriptions on five-by-eight-inch cards and then brief who they are and what they do as part of the CP team. This should cover:

* What products they produce
* What products they contribute to the common operating picture (COP)
* What information they provide to other staff members
* What information they need from other staff members

In this manner, staff members more readily comprehend what they do, what others do, and "how it all fits together" to accomplish the commander's intent and provide the COP.

Once staff members understand their duties and can identify by name "who needs to know," the practical application portion of training with ABCS assets can begin with the use of simple but effective ABCS products. Construction of ABCS products to enable mission command evolves and becomes more effective as staff knowledge increases and as the commander formulates and shares with his staff how best to provide him with the information that he needs (see Figure 1).

Figure 1 — Battle Captains Tracking Board
(One example of how commanders can tailor CPOF products to meet their information needs.)



Home-Station Training

Units are required to track tank commander/gunner combinations on combat vehicles utilizing battle rosters and have a requirement to report them on the monthly unit status report (USR). ABCS systems should be tracked and treated the same way by utilizing a digital battle roster; this will allow the leadership in the command post to assign the most qualified personnel to the right positions. The digital roster can track who is qualified on what system, who has completed the Battle Staff NCO Course, who has completed the digital master gunner (DMG) course for their respective systems, and also track projected losses and gains (Figure 2). The bottom line is that digital systems should be viewed as and treated as a weapons system, not merely a computer.

Title	Autho-rized	Staff Section	Battle Roster Number	Name	Rank	ASI	ABCS System	Digital Master Gunner	MCSI	Notes
S3	LTC	S3	M0001	Last, First	LTC		CPOF			
Deputy S3	MAJ	S4	M0002	Last, First	MAJ		CPOF			
CUOPS	MAJ	S5	M0003	Last, First	MAJ		CPOF			
FUOPS	MAJ	S6	M0004	Last, First	MAJ		CPOF			
S1	MAJ	S1	M0005	Last, First	MAJ		CPOF			
S2	MAJ	S2	M0006	Last, First	MAJ		DCGS-A/ CPOF			
S4	MAJ	S4	M0007	Last, First	MAJ		BCS3/ CPOF			
S5	MAJ	S5	M0008	Last, First	MAJ					
Fires	MAJ	Fires	M0009	Last, First	MAJ		AFATDS JADOCS			
Adam Cell	MAJ	Adam Cell	M0010	Last, First	MAJ		CPOF			
Battle	CPT	S3	M0011	Last, First	MAJ		CPOF			
Battle	CPT	S3	M0012	Last, First	MAJ		BCS-3			Medical Log officer
Battle	CPT	S3	M0013	Last, First	MAJ		AFATDS			
Asst S2	CPT	S2	M0014	Last, First	MAJ		DCGS-A			
Asst S4	CPT		M0015	Last, First	MAJ		BCS-3			PCSing 4/26/2013
KMO	MAJ	CMD GRP	M0016	Last, First	MAJ		CPOF/ JCR/JBC-P	CPOF DMG		Scheduled for MCSIC 11/15/2013
CHEMO	CPT	S3	M0017	Last, First	CPT		DCGS-A			
S6	CPT	S5	M0018	Last, First	CPT		CPOF			
Adam Cell	CPT	Adam Cell	M0019	Last, First	CPT		AMDWS/ TAIS			Gain 12/01/2013
Fires	CPT	Fires	M0020	Last, First	CPT		AFATDS			
Battle	CPT	S2	M0021	Last, First	CPT		CPOF			
S6	CW3	S6	M0022	Last, First	CW3			SIG DMG		

Figure 2 — Example of a Digital Battle Roster

ABCS skills are learned skills and as such are extremely perishable; primary and alternate operators require regular, individual, and collective sustainment training in garrison. Some units have taken the initiative and built their own garrison operations centers using ABCS assets in order to conduct proper 24/7 operations. These operations centers allow battle staff personnel optimal flexibility to train on their integrated systems while enabling mission command at home station (Installation as a Docking Station system). Not only does this practice build confidence in the ABCS systems, but it allows commanders to evolve their own information requirements regardless of the mission set, helps staffs in developing and maintaining individual and collective skill sets prior to deployment, and allows for the systems to be routinely maintained and patched. Something as simple as using CPOF to conduct commander update briefs in garrison can sustain CPOF skills.

Prior to a field exercise or operational deployment, units should plan for and rehearse movement of required ABCS assets from a previously established garrison-based operations center to the tactical field site. The skill sets learned in garrison will translate to the new environment because users will understand commander's intent, be practiced on providing that information, (military decision-making process), and be cognizant of who needs to know what and when based on their functions. In this way, use of ABCS in garrison enables units to achieve higher levels of proficiency, use, and understanding than when in a field environment.

When establishing field sites, the use of the Mission Command Systems Integration Training (MCSIT) CP Handbook provides an excellent way to systemically both "build the CP" and "track" how the CP comes together.

Resources Available to Build Successful Battle Staffs for Execution of ULO in a Digital World

The "basic essentials" required by commanders to man, equip, and train mission-ready battle staffs include doctrine and training in the Army's educational and training institutions. Details of each are described in the following paragraphs.

Doctrine

Listed below are a few of the latest doctrinal publications

available to help commanders frame training for their staffs and should be mandatory reading for all officers and NCOs:

• Army Doctrine Publication (ADP) 6-0, *Mission Command* — http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adp6_0_new.pdf (ADP 6-0 presents the Army's guidance on command, control, and the mission command warfighting function. This publication concisely describes how commanders, supported by their staffs, combine the art of command and the science of control to understand situations, make decisions, direct action, and accomplish missions. See Figure 3 for a graphical overview of the exercise of mission command.).

• ADP 3-0, *Unified Land Operations* — http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adp3_0.pdf

• ADP 3-90, *Offense and Defense* — http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adp3_90.pdf

• ADP 4-0, *Sustainment* — http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adp4_0.pdf

• ADP 5-0, *Operations Process* — http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adp5_0.pdf

• ADP 7-0, *Training Units and Developing Leaders* — http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adp7_0.pdf

Doctrine is used to help shape how we describe, conduct, and train for operations on the battlefield. Training (described next) combines both individual and collective tasks required to effectively execute battle staff operations.

Knowledge Management (KM)

KM is the process of enabling knowledge flow to enhance shared understanding, learning, and decision making. Knowledge flow refers to the ease of movement of knowledge within and among organizations. Knowledge must flow to be useful. The purpose of knowledge management is to create shared understanding through the alignment of people, processes, and tools within the organizational structure and culture in order to increase collaboration and interaction between leaders and subordinates. This results in better decisions and enables improved flexibility, adaptability, integration, and synchronization to achieve a position of relative advantage.

Utilizing a comprehensive SOP, a well-trained and experienced KM officer who adheres to and practices sound KM practices will:

• Enhance collaboration among personnel within the staff

• Ensure for rapid knowledge transfer between units and individuals

• Provide a reach-back capability to Army schools, centers of excellence, and other resources

• Improve leader and Soldier agility and adaptability during operations

• Assist in the development of doctrine

• Improve an organization's ability to capture lessons learned throughout each force pool of the Army Force Generation (ARFORGEN) cycle

The effective and efficient use of knowledge in conducting operations and supporting organizational learning is an essential function of KM.

Individual and Collective Training

Successful commanders take the time to plan, resource, and execute home-station training programs that encompass an integrated approach for individual and collective skill sets.

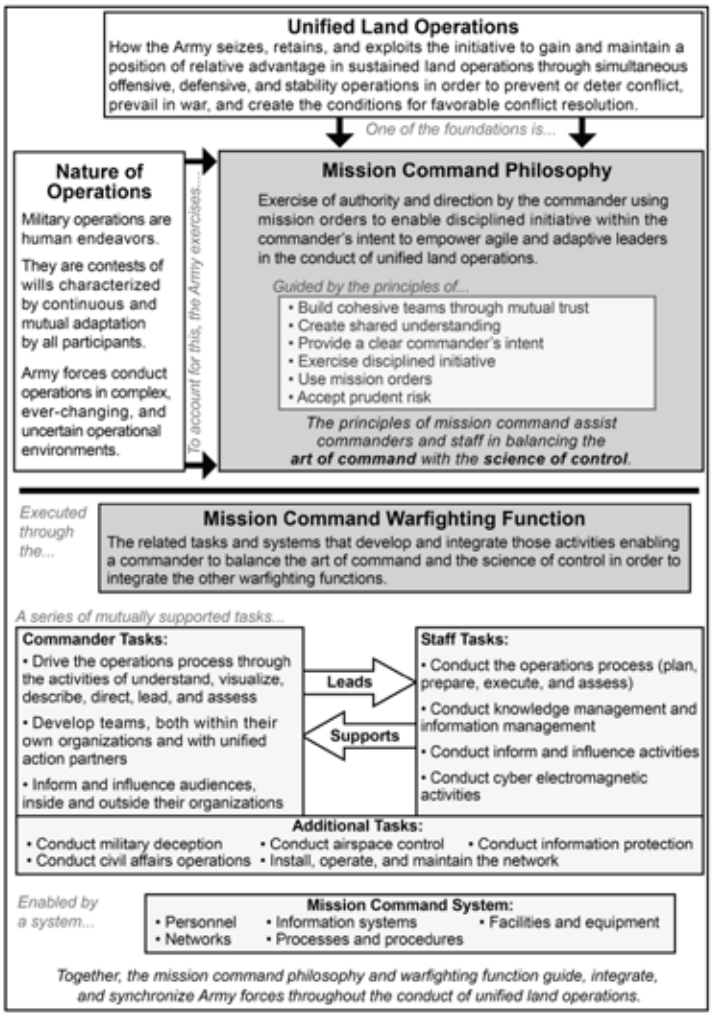


Figure 3 — The Exercise of Mission Command

One of the more important portions of this training involves planning and implementation of your program for the overall professional development of your NCOs and officers combined with available, established training programs that help build effective battle staff officers (BSOs) and NCOs.

NCO and Officer Professional Development Programs (NCOPD/OPDs)

NCOPDs and OPDs should focus on what information, doctrine, and tools are required by NCOs and officers to integrate the scope of their duties and responsibilities within the TOC.

Established training programs that help build effective battle staff officers and NCOs are described in the paragraphs below.

Battle Staff NCO Course (BSNCOC)

This course prepares staff sergeants through sergeants major for demanding staff positions. It provides the NCO with a course encompassing unified land and joint operations inherent in the day-to-day taskings of battalion- and brigade-level staffs. BSNCOC provides NCOs with an understanding of the processes of tactical planning and operations at the joint tactical level. The end result produces battle staff NCOs able to assist in accomplishing all facets of operations in a TOC.

This course is listed in the Army Training Requirements and

Resources System (ATRRS) — https://www.atrrs.army.mil.

Mission Command Digital Master Gunner Course (CPOF DMG)

This course provides train-the-trainer instruction to personnel operating within a unit CP on how to leverage the knowledge and skills of each member of the staff to give the commander a complete COP of the area of operation. Students will learn to integrate CP mission command equipment; establish the network; conduct CP operations; configure CPOF architecture; conduct CPOF three-dimensional mission planning; implement two-dimensional tools for CPOF; establish CPOF share product collaboration; implement CPOF combined information data network exchange; use the Tactical Ground Reporting System; and develop the COP using the CPOF. Graduates are the commander's subject matter experts (SMEs) regarding operation, maintenance, integration, and training on the CPOF and MCS in a unit's integrated system-of-systems command post. Upon completing and meeting all of the requirements of this course, the student will receive an additional skill identifier of 5C.

This course is listed in ATRRS under course code 9E-SI/ASI5C/920-ASI5C(CT).

Mission Command Staff Integrators Course (MCSIC)

The MCSIC is three weeks in length and will equip Soldiers with the knowledge, skills, and abilities to coordinate the connectivity and configuration of digital command and control (C2) systems in a TOC and to display information needed for the COP. Students in this course will learn the capabilities, limitations, and configuration of each battle command system within a brigade combat team (BCT) TOC. Periods of instruction cover: the responsibilities of the S6; the responsibilities of the battle command systems integrator; and the capabilities and functions of the Force XXI Battle Command Brigade and Below (FBCB2), the Global Command and Control System-Army (GCCS-A), the Command and Control Personal Computer (C2PC), the Common Ground System-Army, Battle Command System Publish and Subscribe Services (PASS), the Sustainment Support System, and the Advanced Field Artillery Tactical Data System (AFATDS), among others. Students will also conduct a digital communication exercise and assist with the development of battle drills and SOPs within a CP to enable individual DMGs and the BSO/NCO to orchestrate the contributions to and display of the COP. Upon completing and meeting all of the requirements of the MCSIC, the student will receive an additional skill identifier of 5E.

This course is listed in ATRRS under course code 9E-SI/ASI5E/920-ASI5E(CT).

Signal Digital Master Gunner (S-DMG) Course

S-DMG was designed to fill a training void with current, changing, and new emerging digital systems in the Army. The S-DMG is responsible for the configuration and installation of ABCS, battle command common services, digital TOC components, and the tactical local area network.

S-DMG students will gain a knowledge base that allows them to coordinate with the MCSIC Soldier in the TOC regarding network integration of ABCS systems that contribute to the digital display of the COP. The S-DMG is responsible for coordinating the installation, planning, and management of BCT/battalion signal communications.

Graduates of the S-DMG are the commander's SMEs on the signal flow, architecture, and operations of communications network systems integration, leading to the COP development and display in the digital TOC.

This course is listed in ATRRS under course code TSD-SDMG. Soldiers can also contact the course manager at (706) 791-3419 or the deputy course manager at (706) 791-3711.

Tactical Airspace Integration System Digital Master Gunner (TAIS-DMG)

This course was developed based on guidance from the Combined Arms Center – Training (CAC-T), Fort Leavenworth, Kan. It is an Aviation proponent functional system course that has an assigned military occupational speciality (MOS) or career management field (CMF) requirement to train 15P and 15Q enlisted Soldiers, 150A warrant officers, and Aviation officers. The TAIS-DMG course is also open to U.S. Army Reserve (USAR) and Army National Guard (ARNG) enlisted, warrant officers, and officers with duties as or assigned to an airspace C2 (AC2) staff position directly related to the use of the TAIS. Students attending this course will receive advanced level training on an AN/FSQ-211 TAIS. The training will focus on AC2 operations involving the data controller, workstation software applications training, internal/external setup, Collaboration (Net meeting), PASS/data distribution service (DDS) configuration functions, as well as communications and networking functions to include troubleshooting. Students will also be provided the necessary multi-echelon architectural training concerning the TAIS and its interoperability role with other ABCS systems. Graduates of the TAIS-DMG course will take away the importance of this training as the commander's TAIS SME armed with the abilities, skill set, and working technical knowledge to expertly employ, integrate, and aid in the configuration and interoperability of the TAIS Airspace Work Station into the TOC digital architecture.

This course is listed in ATRRS under course code 2G-F106/222-F1 (CT).

Sustainment Digital Master Gunner Course

To provide select personnel with the requisite training to perform as a sustainment DMG with scientific and technical expertise in all aspects of Battle Command Sustainment Support System (BCS3) operations to include various interfaces and inter-operations. By the end of the course, the Soldier will be able to manage BCS3 to optimize logistics capabilities and serve as a principal advisor to the sustainment commander for operability, training, maintaining, and reporting of BCS3 readiness capabilities. The training spearheads positions in support operations office and operation cells that directly interact with BCS3 at the battalion level and above. These positions have been identified as requiring functional understanding of BCS3 applications and the focus of the training prepares Soldiers for such positions. Soldiers will also receive training on the ABCS architecture, interoperability, data transmission/exchange, and the business systems generating and providing the source data (to include specific components of CPOF.)

This course is listed in ATRRS under course code 551-F31.

Maneuver Digital Master Gunners Course

This course is designed to train sergeants through sergeants first class on the science of battle command using FBCB2 and CPOF on staffs at battalion through corps levels. This course is designed to make the FBCB2 user a technical expert on the employment of the system. Students will master presenting, developing, and refining technical and tactical skills needed to effectively and efficiently use

the systems at battalion through corps levels.

This course is listed in ATRRS under course code 920-F22 (CT).

Other Training Support Assets

Many installations have MTCs (Mission Training Centers) with ABCS instructors and facilities available for units. Instructors at the MTCs can work with units to tailor ABCS instruction to meet the needs of the units by utilizing programs such as the Mission Command Staff Trainer (MCST). Units may also request ABCS instruction through their digital systems engineer (DSE). DSEs are located at brigade and higher level headquarters and assist in management of ABCS support. The following paragraphs describe training assets available to units upon request.

MTCs

This effort represents a fusion of the simulation and mission command training capabilities at major installations. Under the Army's "hub and spoke" strategy, mission command training capabilities are the centerpiece of an installation's digital training support strategy and are responsible for supporting all individual, staff, leader, and collective digital training within the installation and across all associated spokes. This support is provided to active and Reserve component forces as well as to other government agencies as required. Just as the active component of the Army has its MTCs, the ARNG has two MTCs (Fort Leavenworth and Fort Indiantown Gap, Pa.). USAR utilizes mobile MTCs. Lastly, both ARNG and USAR have the capability to utilize the Camp Dodge, Iowa, virtual MC training capability.

MCST

MCST is a tool used to train battle command staff officers in operations of the mission command system-of-systems in a pre-deployment environment.

MCST Capabilities:

• MCST stimulates ABCS warfighter mission area (WMA) systems with situation awareness data and tactical messages that add realism to staff training drills

• MCST supports multiple data exchange protocols

• MCST communicates with WMA systems through a unit's ABCS tactical network during staff training

• MCST is Microsoft Windows-based and runs on readily available commercial over-the-counter (COTS) computers

• MCST provides low overhead, garrison-based ABCS system-of-systems training without the need for large-scale simulation exercises

• MCST is fielded from battalion through division to deploying active, ARNG, and USAR units via unit set fielding (USF), as well as to regional MCTCs

• Units or training centers may use MCST to train, sustain, or rehearse collective battle staff or ABCS operator skills

MCST helps to:

• Train battle staffs (battalion through corps)

• Refresh and sustain operator skills

• Maintain proficiency of highly perishable ABCS skills (supports Battle Command as a Weapon System)

• Rehearse staff coordination

• Train for exercises and events

• Train for specific tasks and battle drills

• Establish ARNG and USAR battle rhythms

Mission Command Staff Integration Trainers (MCSITs)

The MCSIT supports the integration of the unit command post as a mission command system (personnel, networks, information systems, processes and procedures, facilities and equipment) to ensure the staff is confident establishing and employing the system to support the commander's decision making.

Key Tasks:

• Attend USF synchronization conferences (Phase I and unit equipping and reuse conferences) to conduct MCSI brief, schedule MCSI information brief, and schedule MCSI

• Provide MCSI information brief, review MCSI requirements and schedule MCSI in-progress reviews (IPRs)

• Execute MCSI via a holistic approach that introduces the art and sustains the science of mission command

• Support unit's culminating training event (i.e., mission rehearsal exercise [MRX] or CTC)

• Support the integration of emerging technologies and capabilities into the command post

Mission Command Training Program (MCTP)

MCTP (formerly Battle Command Training Program) conducts or supports combined arms training that replicates joint-interagency-intergovernmental-multinational operations in a full spectrum contemporary operational environment, at worldwide locations, in accordance with the ARFORGEN model for brigades, divisions, corps, Army Service Component Commands (ASCCs), joint force land component commander, and joint task forces (JTFs) in order to create training experiences that enable the Army's senior commanders to develop current, relevant, campaign-quality, joint, and expeditionary mission command instincts and skills.

MCTP Mission Tasks:

• Conduct brigade warfighter exercises and MRXs

• Conduct or support tactical or operation-level division/corps WFXs and MRXs

• Conduct embedded support unit warfighter exercises and staff mission rehearsals

• Conduct MC seminars for BCTs, divisions, corps, support brigades, and designated function/theater units

• Conduct COIN seminars for divisions/corps

• Support Joint Warfighting Center in conducting JTF exercises for divisions/corps

• Support Forces Command-designated ASCC exercises with observer trainers/AARs

Summary

Commanders who take the time to develop a well-defined and properly resourced training plan have laid the foundation for their battle staffs to successfully accomplish any assigned tasks and missions on today's battlefield.

Gary Lawrence, a retired command sergeant major, is currently serving as a military analyst with TRADOC Capability Manager-Mission Command at Fort Leavenworth. He previously served as an instructor with the Command and General Staff College. His active duty assignments included serving as command sergeant major for the 1st Battalion, 12th Cavalry, 1st Brigade Combat Team, 1st Cavalry Division, Fort Hood, Texas; Office of the Chief of Armor sergeant major at Fort Knox, Ky.; and operations sergeant major for the 2nd Battalion, 8th Cavalry, 1st Brigade Combat Team, 1st Cavalry Division, Fort Hood.

Stryker Gunnery:

A Programmed Approach to Building the Combined Arms Team

CPT KYLE A. STOCKWELL

A Stryker vehicle from the 3rd Cavalry Regiment maneuvers through Blackwell Multi-Use Range at Fort Hood, Texas, in preparation for a live-fire exercise on 28 June 2013.

Photos by 2LT Cameron Hufford

"A Stryker platoon's strength comes from the skill, courage, and discipline of the individual Soldier. Each Infantryman's capabilities are enhanced by teamwork and cohesion in squads, crews, teams, and platoons."

— Field Manual (FM) 3-22.3, *Stryker Gunnery*

Successfully employing a Stryker company requires the synchronized efforts of both mounted and dismounted elements. It is necessary that each of these elements receive the same quality of programmed, progressive, and quantitative training methodology that goes into certifying large formations. Every light Infantryman can agree on how to execute dismounted squad live-fire events that assess the overall effectiveness of that formation. Yet a similar degree of consensus about how to execute mounted live-fire events does not exist among Infantrymen. Nonetheless, there should be no difference in our approach to assessing the "other" squad within the formation — the mounted squad.

FM 3-22.3 espouses that the three fundamental requirements for a combat ready unit are physical fitness, rifle marksmanship, and precision gunnery skills. As such, gunnery is an integral step as commanders certify mission essential tasks prior to platoon or higher level culminating live-fire exercises (See Figure 1). This article describes how the 3rd Squadron, 3rd Cavalry Regiment (3/3 CR) addressed the challenges and opportunities associated with executing Gunnery Tables III-VI with a light Infantry dominated formation. It identifies the challenges facing Stryker organizations, the necessity of gunnery, a methodology for programming gunnery

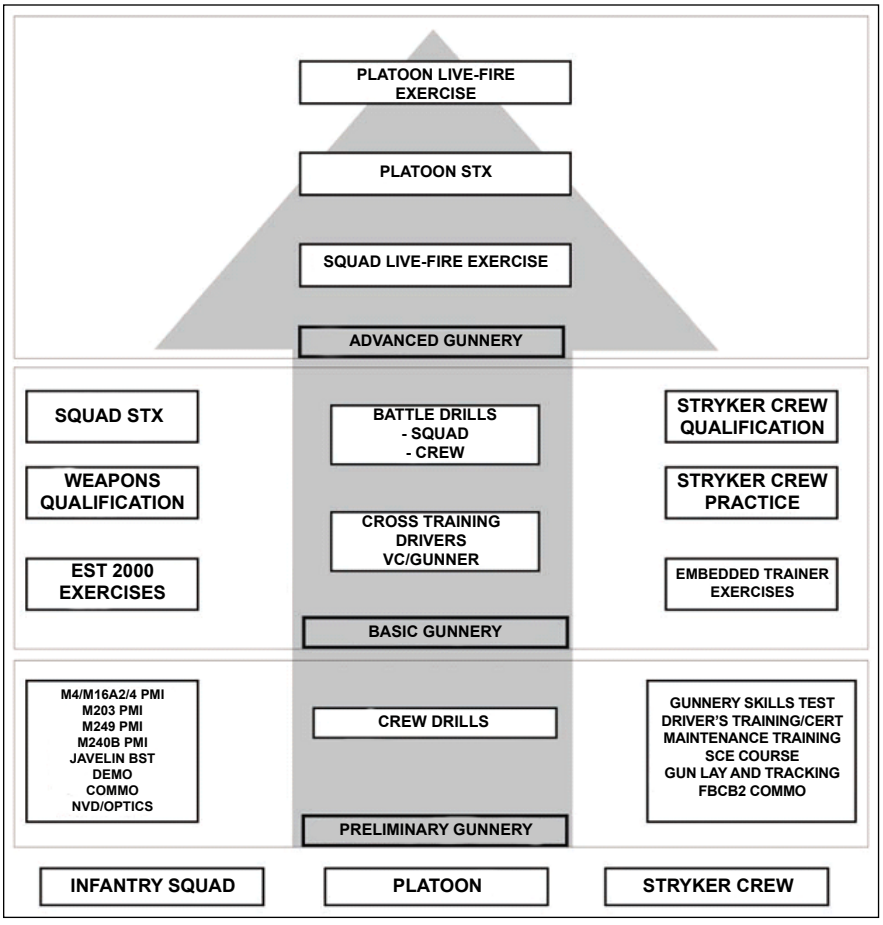
as a part of a comprehensive and holistic approach to building the combined arms team, and the lessons the squadron learned during recent gunnery operations.

Challenges Facing Stryker Organizations

Like most light Infantry company/troop commanders, my knowledge of mounted gunnery and its benefits was limited. There is a difference between gunnery executed by the mechanized/armor community and the Stryker community. The growing separation can have future implications if not remedied. To truly become a combined arms team, each combat arm must know how the other trains. Understanding how each branch approaches training gives a unique perspective that is fundamental in developing cohesion. If light Infantrymen lose the understanding of why gunnery exists or how it has arrived in its current state, then there is a potential to lose focus on how to employ the platform to its maximum potential in combat. Light Infantrymen are in a unique position to learn from their combined arms brothers, but leaders must make learning and collaboration a priority. "When faced with a development challenge, the leadership task should orchestrate a learning process through designed experimentation that cultivates the group's latent capabilities. To ensure the growth or even survival of the organization it must build new capabilities, and new competencies, practices, and processes must be developed."[1] As soon as gunnery planning began, 3/3 CR built a team committed to ensuring a successful gunnery. Comprised of a civilian, 19-series master gunners, 11-series NCOs, squadron staff, and support personnel, this team shared ideas, read pertinent manuals, referenced after action reviews (AARs), and fostered a climate of learning. It was precisely this process that made recent gunnery operations a success. The 3/3 CR understood the foundation of the combined arms team is built during planning — not just execution. In training, we must view the collaboration of the combined arms team during planning as important as the execution.

Is the 11A/B or the 19A/B better suited to design, resource, and execute live-fire training that is solely focused on employing vehicles? Being humble professionals, we need to assess the strengths of our combined arms brothers and employ them as the variables allow. A deliberate cross-training of our leadership in training will ensure that the organization is able to work faster, reuse best practices, and reduce costly re-work. The importance of this cross-training is that the organization strives to go outside its comfort zone, learn to adapt to another skill set, and grow combined arms leaders. This is another way to say that we should train as we fight — using the complementary effects of combined arms. As an organization, we must become innovative and adaptive in the face of a changing and complex battlefield of the future. The Joint Vision 2020 describes how such innovation can be executed. This Department of Defense "blueprint" states, "An effective innovation process requires continuous learning — a means of interaction and exchange that evaluates goals, operational lessons, exercises, experiments, and simulations — and that must include feedback mechanisms... We must be concerned with efficient use of time and resources and create a process that gives us confidence that our results will produce battlefield success." It is critical that as an organization we are able to take lessons learned and apply them to our future training paradigm.

Figure 1 — Gunnery Training Outline from FM 3-22.3



The Necessity of Gunnery

Gunnery is a necessary step in the progression of the combined arms team. Necessary and programmed gates from preliminary gunnery to basic gunnery maximize the use of non-live fire, virtual, and constructive training environments while providing necessary time for the crews to work together as a team. This virtual and constructive training environment provides the added benefit of codifying unit standard operating procedures (SOPs), rehearsing fire commands, and validating safety considerations. Gunnery provides the commander with the ability to quantifiably assess each crew across a pre-determined scoring matrix with impartial graders. An SBCT must embody the tenants of the HBCT gunnery and the reason why this type of training is being executed.

To defeat the enemy force in today's operational environment (OE) while avoiding fratricide and collateral damage, crews within heavy brigade combat teams (HBCTs) and armored cavalry

regiments (ACR) must have a thorough knowledge of the functional capabilities of their platform weapon systems, the techniques of combat identification (CID), and the effective use of all crew-served weapons. In addition, HBCT and ACR crews must develop and sustain tactical skills that will allow them to maneuver effectively and survive on the battlefield. This combination of crew gunnery and tactical skills is essential for total weapon system proficiency.[2]

The Stryker brigade combat team (SBCT), using the tenets of the HBCT gunnery model, must become more efficient at training. Training becomes most effective when it is well-planned, resourced, and rehearsed. What makes training truly powerful in a constrained fiscal environment is the ability of senior leadership to quantifiably and objectively measure the results allowing them to better plan and utilize their resources. If one assesses the majority of squad-level exercises that light Infantry units have historically conducted, they are entirely subjective and provide little for leaders to objectively analyze their formations' performance. Gunnery, however, is entirely objective. In fact, Stryker gunnery is perhaps the most efficient and effective crew/squad-level live-fire event that is available to the Stryker formation — essentially making it the most cost effective. The challenge to gunnery is how to design it to enhance training of the Infantry and build capabilities necessary to achieve mission-essential tasks. Nevertheless, gunnery is a critical and necessary step towards building a lethal combined arms team.

Figure 2 — Green-Amber-Red Time Management System

Green Period
— Training focus primarily on collective tasks with individual and leaders tasks integrated during multi-echelon unit training.
— Maximum Soldier attendance at prime-time, mission-essential training.
— Coincides with availability of major resources such as major training areas (MTAs), local training areas (LTAs), and key training facilities or devices.
— Administrative and support requirements that keep personnel from participating in training eliminated to the maximum extent possible.
— Leaves and passes limited to the minimum essential.

Amber Period
— Small unit, crew, and individual training emphasized.
— Provides time for Soldier attendance at education and training courses.
— Some suborganizations may be able to schedule collective training.
— Scheduling of periodic maintenance services.

Red Period
— Diverts the minimum essential number of personnel to perform administrative and support requirements.
— Suborganizations take advantage of all training opportunities to conduct individual, leader, and crew training.
— Support missions/details accomplished with unit integrity to exercise the chain of command and provide individual training opportunities for first-line supervisors as time permits. Unit taskings can be used to reduce the number of permanent special duty personnel within installations and communities.
— Leaves and passes maximized. When appropriate, block leave may be scheduled.
— Routine medical, dental, and administrative appointments coordinated and scheduled with installation support facilities.

Methodology for Programming Gunnery

This section discusses a recommended timeline that units can use as a guide to ensure a standard gunnery is conducted as an integral part to developing the combined arms team. The timeline begins six months from execution and extends through recovery. The 3/3 CR used this methodology in the recent gunnery that assisted in the validation of the draft version of the new gunnery training manual — Training Circular (TC) 3-20.1 *Direct Fire Gunnery*. Additional doctrine and Army publications used consisted of:

• FM 3-22.3, *Stryker Gunnery*, March 2006

• TC 7-21, *Stryker Drivers Training*, December 2006

• ST 3-20.13-2, *Stryker Mobile Gun System Gunnery*, January 2007

• FM 3-20.21, *HBCT Gunnery*, March 2009

• DA Pamphlet (PAM) 385-63, *Range Safety*, August 2009

• ST 3-20.21-2, *Vehicle Crew Evaluator Exportable Package (VCEEP)*, November 2009

• ST 3-20.21-1, *Individual and Crew Live-Fire Prerequisite Testing*, January 2010

• Army Tactics, Techniques, and Procedures (ATTP) 3-21.9 (FM 3-21.9), *SBCT Infantry Rifle Platoon and Squad*, December 2010

• DA PAM 350-38, *FY13 Standards in Training Commission* (STRAC)

• TC 3-20.1, *Direct Fire Gunnery,* draft: August 2012

Understanding the doctrine is an important first step. Once the resources have been collected, it is up to the unit to build a timeline that can encompass all the necessary tasks needed for a successful gunnery. The following is a comprehensive timeline that reflects 3/3 CR's road to gunnery.

D-180: Using the Gunnery Progression Table outlined in ST 3-20.12-2 (Chapter 13), TC 3-20.1 (Chapter 9 and 10), DA PAM 350-38 (see applicable platform chapters), and FM 25-100, the timeline for Stryker gunnery training can easily be identified. For all intents and purposes, gunnery prep should begin six to eight months prior to live-fire training exercises. This coincides with the green-amber-red cycle of unit progression prior to the advent of the Army Force Generation (ARFORGEN) cycle (See Figure 2). During red cycle, the unit should maximize all opportunities for individual- and crew-level training. At the battalion/squadron level, this time should be used to develop an initial concept of the operations, support requirements, ammunition projections, and other long-range planning requirements. Chapter 5 of

DA PAM 350-38 discusses the amounts and Department of Defense Identification Codes (DODICs) needed to certify one crew based on various tables with standard parameters. Initial scenario building begins during this phase with the master gunner developing the scenario based on commander's guidance and required performance measures (RPM) in TC 3-20.1. The master gunner has to understand the commander's intent to execute a successful gunnery. Additional conditions are set by subordinate commanders to ensure maximum training value and mission-essential tasks are achieved during gunnery. These RPMs and additional conditions can be leveraged to ensure training units are practiced for a decisive action training environment (DATE) or able to be employed doctrinally against a near-peer threat. Additional planning considerations are the dates and subject matter for the initial vehicle commander evaluator (VCE) certification, scoring matrices, and the date for the initial Stryker gunnery skills test (SGST). A D-180 conference is recommended to confirm resources (class III [B], V, IX) and support requirements (VCE, SGST). The battalion/squadron master gunner's interaction with key staff members and subordinate unit leaders cannot be stressed enough. His tireless work during this phase of the train up is paramount to conducting efficient and effective gunnery tables.

D-90: By this time, the unit will have entered amber cycle tasking. Units perform periodic maintenance, and emphasis is placed on squad, crew, and section training. Beginning this type of battle rhythm will allow organizations to continue parallel and de-centralized operations while allowing the unit to self-organize and identify weaknesses in the maintenance plan prior to gunnery. Using the amber cycle to ensure a critical look at maintenance system(s) will help to develop a service plan, class IX projection, and budget analysis that will drive Stryker gunnery. Although the focus will be on training fire teams and squads in the variety of dismounted tasks, special attention needs to be given to the mounted section within the formation. Low cost, virtual training can be conducted at either the local training support center (TSC) or through the remote weapon station (RWS) or mobile gun system (MGS) embedded trainer. The requisite skills which lead to a successful gunnery are formed mainly through crew-level virtual training. The battalion master gunner establishes in-process reviews (IPRs) which include elements of necessary staff, subordinate units, and outside units (if acting as VCEs). Ranges, ammunition, and orders are locked in and published as required. Units begin gathering the necessary support items for their support, and commanders track progress through individual and initial crew training.

D-30: Conduct the final stage of gunnery progression at the beginning of green cycle. This affords the unit maximum time to conduct culminating platoon-level exercises after completing gunnery while still within green cycle. The unit has to strive for maximum Soldier participation while eliminating administrative and support requirements to the greatest extent possible. According to the gunnery progression table, advanced gunnery must precede the culminating, combined arms exercises. The last 30 days will include a weekly IPR with the participants, operations and sustainment rock drill, final SGST, and the VCE certification. The master gunner confirms with range operations that the support requirements for range operations are verified and contacted as necessary. Units will begin troop leading procedures and pre-combat checks and inspections prior to deploying to the field. Units should strive to execute a 24-hour tactical operations center while in the field. Changes to crew rosters, support requirements, or ranges will be brought to the attention of the squadron staff immediately for action during this time.

Execution: Just like Infantry platoon-level training, units need to focus solely on completing their gunnery tasks. The chain of command must minimize outside distractions (details, staff duty, etc.) or remove them completely. Execute gunnery on three ranges over 10 days to ensure the execution phase runs smoothly. These ranges should be in close proximity to one another and increase in complexity to reflect the different tables being executed. The additional time in the schedule accounts for training stoppages. During gunnery, 3/3 CR experienced vehicle maintenance problems, range fires, weather stoppages, weapons malfunctions, and re-training, which all required time to fix. Having additional days built into the schedule ensured every crew was able to complete all training/re-training required and provided time for necessary maintenance operations between ranges. Moreover, successful gunnery execution rests with two individuals — the master gunner and the beach master. Master gunners work hand in hand with the beach master throughout the gunnery. The beach master must be aggressive and competent. It is his responsibility to ensure the next three or four crews and vehicles are staged and awaiting hot status. With communication checked and ammo uploaded, the crew and VCEs wait for the master gunner's call to move forward. The master gunner pushes the crews while on the range. He presents targets quickly, adjudicates re-fires or alibis in a timely fashion, and provides the range OIC with a projection of the number of crews to be fired that day. His host of supporting staff includes the timer, target operators, recorder, and scorer. The MGS master gunner is a combat multiplier. He should be located with the MGS platoons and provide on-site assistance during execution. It is recommended that a master gunner and beach master are on each range and provide a roll-up of the day's results to a single battalion/squadron point of contact. The conduct of the individual tables is important. It is imperative that commanders identify the RPM/additional conditions for each table which must include the conduct of crew drills, alternate VC firing at multiple targets, firing on the move, an NBC (nuclear, biological, chemical) engagement, and night engagements. These parameters will allow the senior commander an objective assessment as to his crews' capabilities. It is also recommended that commanders are on-site and executing training with their Soldiers. The commander's presence will ensure training is conduced to standard and give the light Infantry company/troop commander a better understanding and perspective of the capabilities of the mounted squad and how it can be employed. In addition to the immense planning requirements needed to ensure a successful gunnery, it is imperative the commander, beach master, and master gunner are also present. Following these steps will result in an efficient and effective execution of gunnery at the battalion/squadron level.

Recovery: Recovery must be comprehensive and systems-based. The 3/3 CR conducted a five-day recovery model that incorporated a detailed preventive maintenance checks and

services (PMCS) and inspection of Soldiers, weapons, and equipment from the individual Soldier to the vehicles themselves. During the five-day recovery period, leaders inspected not only the item but the system which tracked it. For example, a complete organizational clothing and individual equipment (OCIE) layout was conducted on members of the squad (individual); clothing records were taken from the supply room, and missing items were annotated as either field loss, statement of charges, or financial liability investigation of property loss (FLIPL) (system). Weapons were cleaned (individual), and 5988s and service schedules were updated (system). Infantry Carrier Vehicles (ICVs) were PMCS'd (individual), and service schedule, mileage, and man hours were updated (system). The five-day recovery concluded with an entire troop layout that was inspected by squadron leadership, which tested the validity of the tracking systems and quality of recovery.

Outcomes and Lessons Learned

First, commanders can scale gunnery training to meet the needs of their unit. By developing unique, METL-focused RPMs, commanders are able to employ doctrinal concepts of how an SBCT would fight in decisive action against a near-peer threat. The commander may choose any target for the scenarios, provided they can be destroyed by the weapon/ammunition resourced for the engagement. The commander (and master gunner) builds scenarios that test the fundamental skills, weapon system capabilities, vehicle performance requirements, and METL to meet the training objectives. The unit selects where the RPMs are placed — but the commander has flexibility to match the training to his environment. Second, gunnery instills confidence to the ground force commander that his mounted support by fire is able to maneuver and engage in support of his dismounted force, and it provides a deeper understanding for the crew as to the capabilities and limitations of the platform. Finally, cross-training during gunnery produces lasting effects among future leaders within the formation on the planning and execution of mechanized gunnery procedures.

In conclusion, 3/3 CR learned valuable lessons during the conduct of their gunnery. Using pertinent doctrine and a programmed and integrated training progression, 3/3 CR was able to execute an efficient and effective Stryker gunnery. The education the light Infantry received on the employment and capabilities of the platform and another branch's training methodologies was priceless. Opportunities exist to replicate this type of training across the entire formation, integrating all of the warfighting functions to achieve a collaborative combined arms team. It starts with understanding gunnery. Stryker formations need to recognize the importance of gunnery within the training cycle, how it can be leveraged to its greatest success, and its essential part in forming the combined arms team.

Notes

[1] Dean Williams, *Real Leadership, Helping People and Organizations Face Real Challenges* (San Francisco: Berrett-Koehler Publishers, 2005), 90.

[2] FM 3-20.21/MCWP 3-12.2 1-1.

CPT Kyle A. Stockwell is currently serving as the S3 plans officer for the 3rd Cavalry Regiment at Fort Hood, Texas. He previously served as a platoon leader and assistant S3 with the 4th Brigade Combat Team, 82nd Airborne Division, Fort Bragg, N.C. CPT Stockwell received a bachelor's degree in history from Truman State University.

A Soldier with Thunder Squadron, 3rd Cavalry Regiment loads ammunition into the Remote Weapons Station-mounted .50-caliber M-2 machine gun in preparation for a live-fire exercise.

New, Improved LOMAH Shot Location System

SFC (RETIRED) MATTHEW GOLDEN AND MAJ (RETIRED) DENNIS TERRY

Many Soldiers have never fired on a range that has a Location of Miss and Hit (LOMAH) system. The LOMAH system is an automated live-fire target system that provides immediate feedback of the location of each shot fired by each rifleman using a display screen at the firer's position and at the centralized computer system in the range tower. The LOMAH system detects hits and misses (up to two meters from the center of the target).

This is a much more efficient way of accomplishing the old "human method" of individual marking and scoring on known distance (KD) ranges. LOMAH enables the coach/trainer in recognizing and identifying shooting errors in order to assist in correcting those errors in a more defined and accurate methodology while reducing ammunition expenditure and time required for training exercises. The art of recognizing shooting errors cannot be taught by the LOMAH system, but it can enhance a knowledgeable trainer's ability to explain errors more effectively. The LOMAH system significantly reduces manpower requirements to conduct certain small arms training strategy tasks.

In the early 1980s, the U.S. Army Training and Doctrine Command (TRADOC) inquired about a system to improve the efficiency of conducting confirmation of zero at distance using an automated process versus manpower. This task was conducted on a KD range that was time and manpower intensive. A typical day consisted of conducting this task by assigning a detail platoon to raise and lower the large KD target lifter from behind a large earthen and concrete berm while shooters engaged the target from a distance of 100-300 meters. After the firing order fired their first three-round shot group, the target would be lowered and marked with pasters. The target would be raised to show the shooter and instructor the shot locations. An experienced guess (depending on the proficiency of the trainer) would be used to determine what sight corrections should be made in order to get the shooter's rounds to strike near the center in order to confirm the shooter's zero at distance. The targets were lowered and pasters were reapplied to make the target appear clean for the next shot group. Imagine a 240-Soldier Initial Entry Training (IET) company trying to complete this task from the 100-, 200-, and 300-meter firing lines with only 32 lanes. In some cases, it would take units two days to complete this very important basic rifle marksmanship (BRM) task, thus the reason for TRADOC looking for efficiencies.

This led to the LOMAH system being designed for Army IET units in the mid-to-late '90s. Between 2000-2004, LOMAH systems were installed on ranges at all IET locations such as Fort Jackson, S.C.; Fort Benning, Ga.; Fort Knox, Ky.; Fort Sill, Okla.; and Fort Leonard Wood, Mo.

The system was designed for the M16 series rifle and 5.56mm ammunition that were used at that time using a three-round shot group training strategy based off of iron-site engagements. These systems were installed on Army field fire ranges that had three rows of targets at set distances of 75 meters, 175 meters, and 300 meters. This range is also used to train other BRM tasks such as introduction to automated targets with single exposure (untimed) to multiple exposures (timed). The idea was to slowly increase the difficulty using a gated strategy in order to ultimately meet the qualification standards on a range with target bands from 50-300 meters.

In 2009, the TRADOC commander asked the Maneuver Center of Excellence (MCoE) to re-examine current BRM training strategies for both IET Soldiers and Basic Officer Leadership Courses (BOLC) students. This led to a new strategy that was implemented the 3rd Quarter of Fiscal Year (FY) 2010. This new strategy introduced many changes in both BRM and advanced rifle marksmanship (ARM). This also led the TRADOC Sustainable Range Program (SRP), TRADOC Capability Manager (TCM)-Live Range Development Team in TCM-Live Ranges, MCoE, and Project Manager (PM) Training Devices (TRADE) toward analyzing current ranges and target systems (including LOMAH) for compatibility to meet the new requirements. This system has proprietary software which required a new contract action to modify the software each time doctrine changed. During the analysis, it was determined that updating the old LOMAH system software would be too costly and in some cases impossible to meet the new requirements.

TCM-Live and PM TRADE proposed a plan to execute a new contract for a LOMAH system in order to bring it into the 21st century from a technological perspective. The older system was outdated and did not meet new Army target and Corps of Engineers infrastructure standards. TCM-Live, TRADOC SRP, and MCoE captured all requirements from the 2010 approved strategy and worked closely with PM TRADE, who ultimately wrote the specifications document that led to industry competing for the opportunity to provide the Army with a first class LOMAH system with government-owned software.

Having government-owned software will save the Army millions of dollars over time as software will need to updated periodically to reflect changes in training strategy, weapons, weapon sites, and ammunition. Writing the specifications to meet the current requirements and be flexible enough to make easy changes to the software in order to accommodate new equipment in the future was critical in this endeavor, and PM TRADE hit a home run with this newer generation LOMAH specification requirements document.

The old system provided iron site corrective data for one set zero distance. The newer system is using up-to-date software technology that allows the end user to make changes to scenarios on the range in just a few minutes. The newer system accommodates all M16 and M4 series weapons with every type of site configuration in the system (iron site, backup iron site [BUIS], close combat optic [CCO], and advanced combat optical gunsight [ACOG]). The newer system can easily change the number of rounds fired in a shot grouping. For example, IET Soldiers fire five-round shot groups whereas home-station Soldiers fire three-round shot groups. It provides instant feedback to the Soldier on an android-based tablet at the shooter's location to include site adjustments

based off the input data the Soldier provided initially (e.g. Soldier inputs M4 series weapon with CCO and 200-meter zero distance). The system will have the zeroing circles match the zeroing distance by off-setting the circle (the 200-meter or 300-meter zeroing circle would be in different locations on the 175-meter target) as necessary and provide site corrective data for the site and weapon entered. The shooter aims for center mass throughout the process of confirming zero at distance.

During the newer LOMAH development process, an instructor/leader station was also produced. This station is a wireless android tablet that allows instructors to see all lanes, a group of four lanes, or the ability to drill down into a single lane if necessary. The instructor/leader station also provides colored-coded backgrounds that indicate how well or how poorly a shooter is executing the tasks at hand. If the shooter is not shooting well and has little or no chance of meeting the required grouping size, the background for that lane will change to yellow or red. This shows instructors who needs immediate assistance. The newer LOMAH system has been installed on two modified record fire (MRF) ranges at Fort Benning and one automated field fire (AFF) range at Fort Leonard Wood. Fort Jackson should receive the newer LOMAH system in FY14. Fort Eustis, Va., and Fort Drum, N.Y., have recently acquired this new LOMAH capability as well.

Figure 1 — Example LOMAH screenshots

Fort Benning's LOMAH range is unique in that it was installed over a normal qualification range known as the automated record fire (ARF) range. When ARF and AFF ranges are combined (by adding the 75 meter and 175 meter targets), they become MRF ranges. This also provides a capability where home-station units based at Fort Benning could schedule the range and conduct three tasks on one range in a third of the time it normally takes. On the MRF range with the LOMAH system, units can skip the 25-meter zero range and KD range and meet both requirements because it provides the ability to zero at distance (zeroing and confirming zero at distance becomes one task). Once all Soldiers have confirmed zero at distance, you can run the qualification scenario on the same range because it has all the qualification targets as well. During the government acceptance test (GAT) conducted at Fort Benning, the 3rd Squadron, 1st Cavalry provided a home-station organic platoon to test the new range. During the GAT, they had 22 Soldiers who did not go to a zero range prior to testing. Soldiers used M4 series weapons with different sites (BUIS, CCO, and ACOG). Twenty of the 22 firers shot sharpshooter or expert during their practice qualification. Soldier feedback on the system included that "every qualification range should have this system." Soldiers were impressed that they could come to one range and meet three different tasks, which included qualification in such an effective and efficient manner. They were also impressed with the how simple the system was to operate and how each lane could be independently run during the zeroing process.

PM TRADE has ensured that the LOMAH system's operating infrastructure and software can be installed on old or new infrastructure ranges; it has also conducted research on potentially using the LOMAH bar as a standalone system that communicates directly to the student/shooter station without any range infrastructure. A range could literally be set up by installing the LOMAH bar at any distance with a small power source (battery) and capture shot location miss/hit data. Recently, the LOMAH system was set up on a range that had one half of the range with older installed infrastructure and the other half with newer infrastructure (including a KD berm at 500 meters with an E-type silhouette set on top of the berm with a LOMAH bar).

The Combined Arms Center-Training commander observed the different range infrastructure capabilities as well as the prototype stand-alone capabilities during a live-fire event. He was very impressed with how effective and efficient this system could make small arms training events. Providing shooter feedback of shot location on targets at distance is invaluable to the shooter and provides for more effective engagements overall.

The new system was also fired on by an automatic rifleman shooting a M249 at 500 meters. After the first engagement of a three-to-five-round burst, the gunner was able to see his cone of fire from the first to the fifth round due to the fact that the system numbers the shots as they are detected. The shooter had never observed his cone of fire on or near a target at distance. He immediately sharpened his fundamentals and re-engaged the target.

This system has the capability to provide shooters — from those using M16 and M4s to machine gunners and snipers — an ability to be more effective shooters at distance with instant feedback. Machine gunners could zero at distance versus shooting the 10-meter paper target. Leaders could also teach more effective traverse and search techniques at distance. Any Soldier who has been on a few qualification ranges can make the connection of how efficient and effective a system like this could make shooters and how much more effective shooters would be on collective training events or combat engagements.

SFC (Retired) Matthew Golden is the target development team chief with TCM-Live Range Modernization Branch at Fort Eustis, Va. His active duty assignments included serving with the 82nd Airborne Division and 101st Airborne Division (Air Assault) and drill sergeant duty with the U.S. Army Infantry School, Fort Benning, Ga..

MAJ (Retired) Dennis Terry served in every type of Infantry unit during his 26 years in the Army. He served in the enlisted ranks from E-1 to E-7 prior to attending Officer Candidate School. He is currently serving as a combat developer/senior training analyst in a support contractor position with TCM-Live Range Development at Fort Eustis.

Ramrod Trials

How to Plan, Resource, and Execute a Live, Virtual, Constructive Battalion FTX

LTC ERIC P. LOPEZ
1LT LESLIE D. TABLEMAN

Upon entering the train-ready phase of the Army Force Generation (ARFORGEN) model in the fall of 2012, leaders in the 2nd Battalion, 2nd Infantry Regiment, 3rd Brigade Combat Team, 1st Infantry Division, set out to plan and execute one of the most comprehensive and challenging field training exercises (FTX) in the unit's history. The purpose of the FTX was to prepare the unit for a combat training center (CTC) rotation and follow-on deployment while simultaneously testing the battalion staff and serving as the culminating training certification event for the unit's collective training. Ramrod Trials, as the event was named, was a multi-echelon training event that maximized limited training time by simultaneously training and assessing individual, crew, collective, staff, and leader tasks in a live, virtual, and constructive (LVC) environment. In order to maximize realism, we used near, real-time data from Afghanistan (30 days old) adjusted to the Fort Knox, Ky., training environment to build a scenario that drove the training event. Those lessons we learned during the planning, resourcing, and execution of Ramrod Trials are relevant for other units attempting to conduct similar home-station training events. The purpose of this article is to consolidate those lessons learned.

An Infantryman with the 2nd Battalion, 2nd Infantry Regiment shows another Soldier his sector of fire during an exercise at Fort Sill, Okla., in November 2012.
Photo by SGT Toby Cook

The Scenario is the Key

Ramrod Trials was based on an overarching tactical scenario influenced by injects from LVC environments. Injects from each of the environments served as events that command posts (CPs) at the battalion and company levels had to process and manage. For example, in one component of the training event, a platoon on the situational training exercise (STX) lane conducted a key leader engagement (KLE), received information on an improvised explosive device (IED) facilitator, and passed that information to its company intelligence support team (CoIST). The CoIST processed the significant activities (SIGACT) report and passed it

to the battalion S2. Simultaneously, a separate platoon fighting in the virtual environment received intelligence on a different IED facilitator and passed that information to its CoIST. The CoIST processed the SIGACT and passed it to the battalion S2. At this point, the battalion S2 should be able to check this intelligence in his database and see that both IED facilitators are from the same IED cell. A skilled S2 will make this observation and pass the information to the battalion S3 for action. Building a realistic scenario that fused injects from all three environments was very hard, but it served to produce a CTC-like atmosphere at our home station. It also allowed us to simultaneously train our squads, platoons, company CPs, and battalion tactical operations center (TOC).

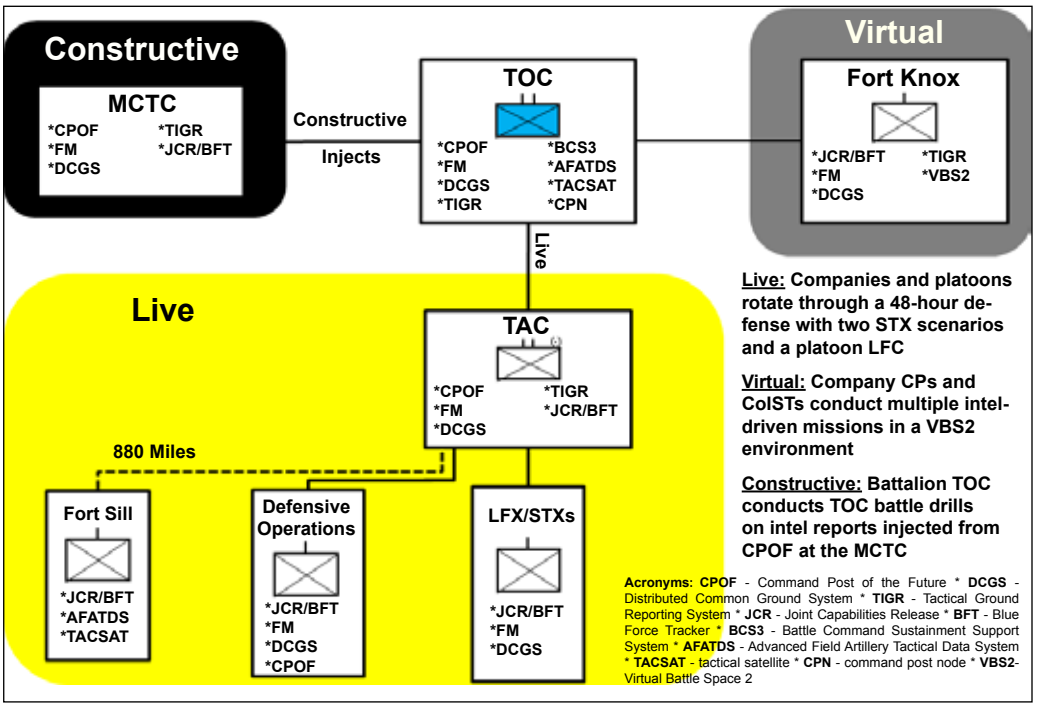


Figure 1— Mission Command

Planning and Resourcing (the Road to Ramrod Trials)

Planning was the key to ensure we met all the goals of Ramrod Trials. It involved months of coordinating with and leveraging as many enablers as possible to help reduce the cost of the training. Our battalion leveraged resources that were available on Fort Knox such as the Mission Command Training Center (MCTC), the Counter-IED Integration Cell (CI2C), range control, and the Special Troops Battalion (STB), while also reaching outside of Fort Knox to the Training Brain Operations Center (TBOC) and members of the Joint Expeditionary Team (JET) for support. Collaborating with local agencies was crucial to the success of the FTX because we needed space, equipment, and other resources to create the virtual and constructive components of the training. Additionally, this collaboration enabled us to incorporate IED simulators into the lanes and attach human intelligence (HUMINT) teams to platoons as they conducted key leader engagements. Additionally, utilizing outside resources allowed us to incorporate more real-world information within our training scenario. Ramrod Trials would not have been possible without the enablers.

Mission Command Training Center

The MCTC provided us with the ability to conduct virtual and constructive missions while also supporting our CoISTs as they performed their intelligence analysis. The MCTC facility reserved nearly half of its building for us to utilize over a two-week period, which included 24 hours of access to their secure building. Additionally, the MCTC offered a closed secret internet protocol router (SIPR) network for the battalion to work on. Without a closed SIPR network, the data that TBOC was able to pull from Paktika Province in Afghanistan and bent to Fort Knox would not have been utilized. It was crucial to our scenario that a closed SIPR network be created to execute the mission. The MCTC also provided the Joint Conflict and Tactical Simulation (JCATS) boxes that facilitated the scenario injects and allowed us to conduct puckster training to validate the battalion TOC.

Counter-IED Integration Cell

CI2C was a local resource that we connected with very early in the planning stages of the FTX. CI2C focuses on the IED threat that Soldiers face during deployment. CI2C provided IED simulators that were used in the live environment, and they were key contributors in training our CoISTs in the months prior to the battalion FTX.

Range Control

Fort Knox Range Control was probably the most crucial enabler to the FTX. Working in collaboration with members of range control, we were able to secure multiple pieces of land as well as move land during the exercise when unforeseeable issues arose. Additionally, range control took responsibility for creating the surface danger zones (SDZs) for our lanes once we had secured the land.

Special Troops Battalion

The STB provided the HUMINT teams that will be attached to our battalion during deployment. This allowed Soldiers who will be working together downrange to train together while in garrison and provided a foundation of trust for when the unit deploys. The HUMINT teams ran the STX lanes with our Infantry platoons and worked with the CoISTs to help them decipher intelligence reports and to create effective debriefing questions that maximize the amount of intelligence gained.

Training Brain Operations Center

TBOC, initially created as the Joint Training Counter-IED Operations Integration Center (JTCOIC) in 2008, works under the direction of the TRADOC G2 to provide quick and accurate replications of the current operational environment in LVC training events. We identified our most likely future deployment location in Afghanistan and utilized the TBOC resources to pull data from that location to create a training scenario. Because we believed that

Paktika would be our future area of operation (AO), TBOC spent weeks pulling recent SIGACTs and current network information to build a scenario with the same SIGACTs and names that our battalion would encounter in Paktika. TBOC also provided three of their own analysts to assist with the execution of the FTX to ensure the scenario evolved throughout the two week period.

Joint Expeditionary Team

JETs are part of the Joint Center of Excellence (JCOE) within the Joint IED Defeat Organization (JIEDDO). JIEDDO's mission is three-fold: defeat IEDs, attack IED networks, and train coalition forces. JETs help accomplish the training aspect of JIEDDO's mission by providing recently deployed teams to advise and mentor deploying units. Members of JET helped us retrain platoons after they completed their lanes. JET members walked the platoon lanes in order to provide feedback to the platoons. JET was brought in to give Soldiers a brief on the newest enemy TTPs coming out of Afghanistan and provide additional advice on counter-IED training based off of the most recent enemy TTPs.

Ramrod Trial Execution

Live Environment

Within the live training environment, platoons conducted a live-fire exercise (LFX), an STX, a deliberate defense, and a fire support coordination exercise (FSCX). While the majority of the battalion conducted this training at home station, Alpha Company deployed to Fort Sill, Okla., and participated in the 75th Fires Brigade FSCX. All the exercises were supported through intelligence reports that were provided through collaboration with the TBOC which bent the Afghanistan data to Fort Knox.

☐ LFX – Platoons conducted a mounted deliberate attack on multiple objectives on one of the multipurpose training ranges on Fort Knox. Platoons had to integrate 60mm and 120mm mortars along with AH-64 attack helicopters in their attack.

☐ STX – Units conducted two STX lanes

- Companies performed a deliberate defense to interdict enemy moving through the area in order to build trust with the village in which their platoons would later conduct KLEs.

- Platoons conducted a dismounted patrol to a village to conduct KLEs which varied from friendly to hostile based on intelligence reports and the platoon's approach to the KLE.

☐ 75th Fires Brigade FSCX – Alpha Company performed a deliberate defense and platoon attacks during which leaders coordinated fires from the Multiple Launch Rocket System (MLRS), 155mm artillery, 105mm artillery, 120mm mortars, 60mm mortars, and Kiowa scout weapons teams.

Virtual Environment (Gaming)

Company CPs and CoISTs were given a battalion operation order (OPORD). Company leaders then had to conduct troop leading procedures (TLPs), rehearsals, and then fight their mission using the Virtual Battle Space 2 (VBS2) gaming system. VBS2 was first fielded in 2009 with the intention of providing company level and below realistic training based on lessons learned from Iraq and Afghanistan. In VBS2, the companies conducted follow-on missions driven by intelligence. The virtual environment was a great tool to test company-level operations when reports came into the company CP, were analyzed by their CoIST and then disseminated to platoons. Platoons then conducted raids on high value individuals (HVIs) that were identified by their CoIST within the virtual environment. Additionally, intelligence gathered during the fight in VBS2 drove company operations later in the live environment.

Constructive Environment

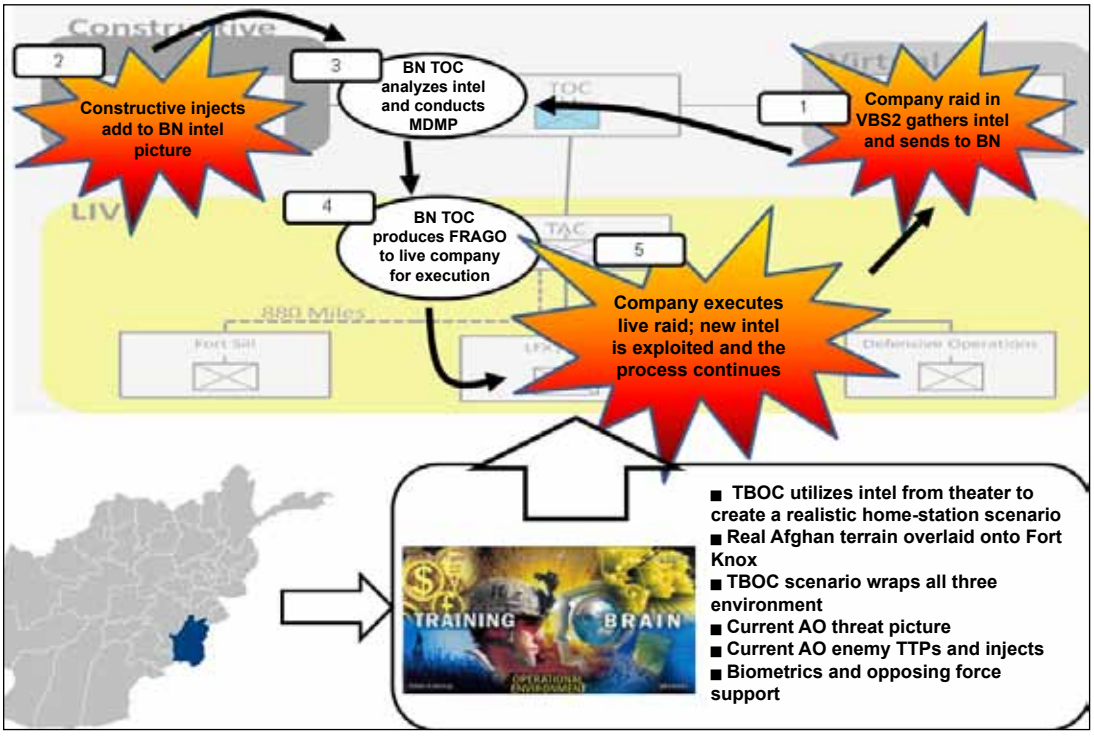
JCATS provided the constructive backbone for Ramrod Trials. JCATS is a multi-purpose tool designed to support force-on-force combat training. Each day, the company tasked with support provided a white cell who "pucked" events in JCATS to stimulate the battalion TOC. This allowed the TOC to validate battle drills, improve knowledge management, and refine the TOC standard operating procedures (SOP). The TOC had to process injects from all three environments and analyze the data to build an updated intelligence picture.

Lessons Learned

At the conclusion of Ramrod Trials, leaders in the unit identified three major areas that could have improved the exercise: scenario, FTX schedule, and risk mitigation.

Scenario – Enemy Situation

Figure 2 — Scenario-Driven Across the LVC Environments



Using current "real-world" intelligence to build the scenario for the FTX is not as important as building an unclassified scenario that is usable by all and can drive targeting for the CoISTs. Because the scenario built by TBOC was secret, it was almost unusable by the companies outside of the CoISTs. For example, the scenario had the names of actual enemy HVIs, and we could not release these names to our Soldiers. The right way to do it is to have an outside organization (like the brigade military intelligence company or the MCTC) build a fictional and unclassified scenario that spans all three environments and allows companies and battalion to truly conduct lethal and non-lethal targeting throughout the FTX. Ideally, this unclassified scenario would still be developed on Afghanistan terrain, enabling leaders throughout the organization to increase their familiarity with their most likely future AO.

Scenario – Higher Command

During Ramrod Trials, there was no higher command in the scenario. Therefore, we did not have to coordinate with or react to a higher headquarters (HQ). There should have been a higher HQ that provided injects to our battalion TOC (OPORDS, fragmentary orders, commander's update briefings, battle rhythm events, etc). There are two ways to simulate a higher command in an FTX. Either the MCTC can "play" the part of brigade or the brigade can provide a mission command cell for the exercise. If implemented correctly, the personnel serving as the higher command could also achieve their own training objectives during the conduct of the exercise.

FTX Schedule

As an internally-resource simulation training event, the Battalion staff was responsible for running the FTX and participating in the exercise. This turned out to be a monumental task and both the scenario and the support of the FTX suffered because it was too much for our staff. Structuring the FTX into three major components, outlined below, would have helped mitigate this challenge:

☐ First four days – Standing up the FTX. This allows the staff to concentrate on supporting all the training nodes and ensuring the FTX is running well before diving into the scenario.

☐ Second four days – Full LVC integration into the scenario. During this period, the staff is focused on fighting the battle like a CTC (battle rhythm, lethal/non-lethal targeting, military decision-making process, etc). The staff is truly fusing intelligence from all three environments.

☐ Last four days – Preparation for FTX closeout. Because we were fighting the tactical scenario until the last day of the FTX, we struggled closing ranges, turning in ammunition, and recovering our vehicles and equipment.

Risk Mitigation

Because Ramrod Trials was so decentralized, it was a high-risk event. Simultaneously, we had platoons conducting LFXs, STXs, and counter-IED training all across Fort Knox and Fort Sill. During the FTX, we had two serious incidents: a vehicle rollover and a mixing of live/blank ammo. To mitigate risk in a decentralized operation, leaders must place a high priority on risk mitigation and give very clear guidance on their expectations for the mitigation of risk at each location. Additionally, leaders must inspect each location to ensure that the proper risk mitigation is occurring. In other words, leaders must help station officers-in-charge (OICs) visualize what can go wrong and then advise them on how to prevent problems at their station. The station OICs (junior leaders) must take this guidance, build their composite risk management worksheets, and actively implement the controls they identified to mitigate risk at their stations. All of this work should culminate in a risk mitigation tactical exercise without troops (TEWT) prior to the training event, where the battalion commander inspects the risk mitigation plan of each site with the site OIC prior to the training event.

Conclusion

There are four reasons why the leaders in 2-2 IN would recommend an LVC FTX to other battalions. First, it is cost effective. As we face a future of diminishing fiscal assets in the Army, LVC training maximizes training dollars by leveraging assets from external organizations. Essentially, you are using "other people's money" to train your Soldiers. Second, the virtual and constructive environments allow you to train on mission command tasks (from the platoon to the battalion level) effectively and realistically with very low manpower requirements. Imagine the manpower and equipment requirements to train a platoon on reacting to the enemy and reporting to its company HQs in multiple different scenarios. Using VBS2 and JCATs, the platoon leader, company HQ, and CoISTs can go through multiple scenarios without any backside support required. Third, it allows leaders to produce a CTC-like environment at home station. Many battalions simply have their TOC track the number of iterations of LFXs during their FTXs. An LVC FTX forces your TOC to run the FTX and receive and process intelligence like they will have to do at a CTC. Lastly, an LVC FTX forces your battalion to operate in a distributed environment. It forces leaders to do things simultaneously versus sequentially. This is an excellent representation of combat, and it forces leaders to have disciplined initiative or the FTX will not run effectively.

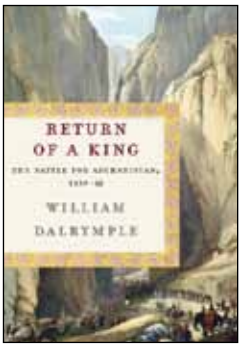
Ramrod Trials was a great training event, and we accomplished our mission to create an excellent home-station training event that would make our battalion better. We conducted scenario-based, multi-echelon training that maximized time and resources by using the virtual and constructive environments. We left Ramrod Trials better trained and ready for our CTC rotation and follow-on deployment.

LTC Eric Lopez is currently serving as the battalion commander of the 2nd Battalion, 2nd Infantry Regiment, 3rd Brigade Combat Team, 1st Infantry Division, Fort Knox, Ky. His battalion is currently deployed to Zabul Province, Afghanistan. LTC Lopez has completed six combat tours to Afghanistan and Iraq. His previous assignments include serving as a rifle platoon leader and scout platoon leader with the 3rd Battalion, 502nd Infantry, Fort Campbell, Ky.; rifle platoon leader and company executive officer with the 1st Battalion, 75th Ranger Regiment, Hunter Army Airfield, Ga.; assistant G3 training officer for the 10th Mountain Division, Fort Drum, N.Y.; rifle company commander of C Company, 1st Battalion 87th Infantry, Fort Drum N.Y.; liaison officer for the 75th Ranger Regiment, Fort Benning, Ga.; aide-de-camp for the commander of U.S. Army HRC, Alexandria, Va.; battalion S3 and brigade S3 in the 3rd Stryker Brigade Combat Team, Fort Lewis, Wash; and I Corps deputy G3 training, Fort Lewis.

1LT Leslie Tableman is currently serving as the executive officer for the Military Intelligence Company (MICO) of the Special Troops Battalion (STB), 3rd BCT, 1st ID, Fort Knox. Her company is currently deployed to Zabul Province, Afghanistan. This is 1LT Tableman's first combat tour to Afghanistan. Her previous assignments include serving as the assistant S2, 2nd Battalion, 2nd Infantry Regiment, and all-source analysts platoon leader, MICO, STB — both with the 3rd BCT, 1st ID.

Book Reviews

Return of a King: The Battle for Afghanistan, 1839-42



By William Dalrymple
NY: Alfred A. Knopf, 2013,
515 pages
Reviewed by LTC Dan Kirk and
LTC Mark Ivezaj

"You have brought an army into the country, but how do you propose to get it out?"

— Mehrab Khan, 1839, page 145

"That country drains us of a million a year or more — and we only, in truth, are certain of the allegiance of the people within range of our guns and cavalry... The whole thing will break down; we cannot afford the heavy yet increasing drain upon us in troops and money."

— Sir John Keane, British Commander in Chief, 1841, page 238

In *Return of a King*, William Dalrymple narrates the United Kingdom's ill-fated first (of four) foray into the region that was to become Afghanistan. Using an impressive array of sources, many not previously read in the west, he brings this brief period of history to life in an accessible and enjoyable style. Dalrymple spent four years in the region searching archives, libraries, and private collections preparing his interpretation of the events in this much told period. His extensive research enabled a narrative composed of a diverse cast of stakeholders with Afghan and British voices receiving equal billing. He masterfully describes the events and personalities that came together to have such a lasting impact on the country and region. The book is important for the military reader for both the history and historical lessons learned from this strategically significant region as well as the regional cultural insight and Afghan point of view that remain relevant.

The book begins with a brief, regional geopolitical overview circa 1800 and introduces the competing English and Russian national interests, which would result in the "Great Game" that gained its roots in the late 1830s. The British, having been out-played by a savvy young Russian agent in Kabul, were determined to replace the ruling Afghan Amir with a puppet. Conveniently, her Majesty's government had been funding an exiled Afghan king, Shah Shuja, for the previous 30 years. The campaign to reseat Shah Shuja is described in great detail from the difficulties the British experienced in the southern passes of Afghanistan through their victories in Kandahar, Ghazni, and finally Kabul. Period maps and artwork as well as biographical sketches help orient the reader throughout.

In 1840, when the British fail to consolidate their initial successes, the author allows his mostly suppressed bias to emerge. "Lord Auckland, like more recent invaders, took the premature view that the conquest was already complete and so, allowed himself to be distracted by launching another war of aggression in a different theatre." Poor leader decisions and actions across multiple lines of effort led to a rapid deterioration of the British position across the country. The varied reasons underpinning these events are instructional, and Dalrymple presents evidence of inflated personal ambition, senior leader incompetence, and institutional hubris. However, the collective results were aptly summed up by Lieutenant George Broadfoot, who upon return from a cross-country mission simply stated, "We fail from our own ignorance" (page 242).

A predicted, but poorly managed popular uprising in 1841 led to the death of two key British leaders and the disastrous retreat of the Kabul garrison to Jalalabad. An aptly named "Army of Retribution" was then formed and deployed into Afghanistan to try and recover both British prisoners and prestige. The book ends as the British return to India, with the official report of the time finding that after much loss of life and treasure, the British "had left Afghanistan much as they had found it" (page 419).

A military reader will readily recognize similarities between the challenges of the British army of 1840 and those our military forces in the region still face today. Three of these areas — language training, cultural awareness, and intelligence fusion — deserve robust professional discussion given their relevance to current and likely future involvement in the region.

First, the strategic impact of a very small number of culturally and linguistically literate officers was profound. The contributions of Claude Wade, Alexander Burnes, and Mohan Lal Kashmiri on the British side and Ivan Vitkevitch on the Russian cannot be understated. After a decade of war, the U.S. Army acknowledges the importance of cultural consideration and basic language training, but does not seem to be producing officers in any number with the linguistic depth and cultural faculty to have a strategic impact. In most cases, we tend to outsource this to our best interpreters. This brief period of history alone indicates the resources required to create a small cadre of cultural experts would have a worthwhile return on investment.

Second, the British displayed an alarming inability to see themselves as the Afghans did. This directly contributed to their strategic failure. For example, Dalrymple's ample use of Afghan sources details the crippling, strategic impact that British treatment of Afghan women had on the campaign. British interaction with Muslim women resulted in real injury to cultural pride and served as a gift to jihadists seeking a religious rationale for the eventual uprising.

Lastly and equally disturbing, for all the British miscalculations and blundering decisions made at senior levels, there existed within the headquarters the expertise and vetted intelligence reporting to have avoided the disaster that occurred. That this information was readily available to senior decision makers and yet went unheeded should force discussion among currently deployed forces.

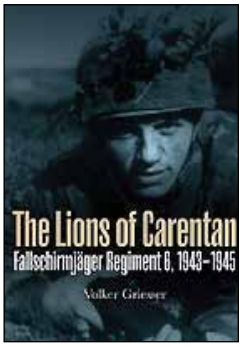
Practitioners of our trade have much to gain from this telling

of Afghanistan's early history. There is hardly a page without a direct link to ongoing lines of effort activities in the region as we see them today. The detail provided by the numerous firsthand accounts offers insights from the political and strategic to the tactical levels — the vast majority as relevant in 2013 as in 1842. Little has changed since 1842 with respect to the fundamental challenges facing a foreign force operating in Afghanistan today. One who has experienced or is about to experience combat in this region could leverage the lessons learned by the British army in the 1840s to identify and navigate away from similar situations that challenge our military as we begin to withdraw forces and assist an independent and self-sufficient Afghan army and government.

While readers with experience in Afghanistan may take offense at some of what the author sees as historical parallels to today's efforts, Dalrymple tells his story evenhandedly, saving most of his personal analysis for the brief author's note at the end of the book.

The Lions of Carentan - Fallschirmjäger Regiment 6, 1943-1945

By Volkert Griesser
(Translated by Mara Taylor)
Havertown, PA: Casemate, 2011, 272 pages
Reviewed by Chris Timmers



From its founding in February of 1943 to its surrender and dissolution in May 1945, no other regiment in the Wehrmacht fought more fiercely and in more diverse battlefields than Fallschirmjäger Regiment (FJR) 6.

Initially deployed to Italy in July of 1943 following the collapse of Mussolini's government, FJR 6 fought to secure Rome from Italian forces who were now fighting not as Germany's allies but as their foes. Indeed, it is almost a fateful foretelling of FJR 6's destiny as to its time of being formed and committed to battle: By July 1943, Stalingrad and the 6th Army had been lost to the Soviets; in the Pacific, the Battle of Midway had been won over Japanese naval and air forces a year earlier; and, also a year previous, Allied forces had landed in North Africa and by early 1943, Rommel's forces had begun to evacuate Northern Africa for Sicily.

Nonetheless, the regiment fought in Italy, Russia, Germany, France, Holland, and Belgium. Indeed, the regiment clashed with elements of both the U.S. Army's 82nd and 101st Airborne divisions in the campaign in Normandy. And the paratroopers of FJR 6 were not just fierce fighters but honorable men as well. During the campaign in Normandy, regimental commander Major von der Heydte ordered his men not to fire on medics and chaplains from Allied forces who were tending the wounded following an extended firefight in St Mere Eglise. A three-hour cease-fire was negotiated and prisoners were exchanged.

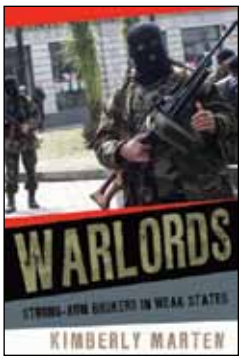
Three months later, FJR 6 men were being deployed back inside Germany via trains. At one point the trains stopped in Aachen to re-fuel. The paratroopers got off the train to stretch their legs and noticed another train at rest on a set of parallel tracks. As they approached this train, they noticed that its openings were blocked with reinforced steel mesh. Hands reached out from inside the railcar. It quickly became evident that this train was full of concentration camp prisoners: men, women, and children. The SS detachment guarding the train tried to keep the paras away, but the troopers surged forward. The gaunt, malnourished prisoners moved the troopers to open their bread bags and rations to outstretched arms. The SS guards threatened to open fire on the paratroopers but were soon surrounded and completely outnumbered by the paratroopers with raised and ready weapons. Ration distribution proceeded.

FJR 6 has since gone into history (May 1945), but not its legacy. Former members have been employees of the German government and worked as civil servants, engineers, and planners. They have served in large German consortiums and overseas as commercial and political ambassadors. These warriors of the last world war, for the most part, are gone now. But they were honorable men, worthy adversaries, and honored opponents.

With more than 220 photos, numerous maps, and a brisk narrative style, *The Lions of Carentan* is both informative and a pleasure to read. Look to this text to provide not just details on uniforms and weapons, but for insignia, battle credits, and awards. Griesser has done an excellent job in collecting both history and personal recollection and woven both into a compelling and moving narrative for one of Germany's most storied units.

Warlords: Strong-Arm Brokers in Weak States

By Kimberly Marten
Ithaca, NY: Cornell University Press, 2012, 262 pages
Reviewed by LTC (Retired) Kevin McMullen



The term "warlord" has gone out of fashion. Although warlords are not as independent as they once were, they still exist, and both a national government and an assisting power, such as the United States, must know how to cope with a warlord — especially when conducting a counterinsurgency campaign or attempting to assert the authority of the national government. Therefore, both to provide a foundation for future scholarship and to serve as reference for policy makers who will choose or will be forced to deal with a warlord, Professor Kimberly Marten has written *Warlords: Strong-Arm Brokers in Weak States*. Marten teaches political science at Barnard College of Columbia University, and she has published books both on imperialism and on the Soviet and Russian military establishments including *Engaging the Enemy: Organization Theory* and *Soviet Military Innovation*, which won the Marshall Shulman Prize. Marten opposes wars of choice, such as the U.S. invasion of Iraq in 2003, but recognizes that circumstances may induce a state to cooperate with a warlord against the state's long-term interest.

Marten's central thesis is that the nature of a warlord has changed: a warlord is no longer an independent ruler maintained

by his own strength. Instead, a current warlord is independent only by the sufferance of a state, i.e., the national government, and this sufferance may be the result either of the state's weakness or of the warlord's existence being convenient for the state. She supports her thesis by examining the case studies of Pakistan's Federally Administered Tribal Areas, Georgia, Chechnya, and Iraq, and she has organized the lessons from these case studies into observations about the origins, the stability, and the utility of warlords.

The first set of observations describes the origins of warlords. The principal observation is that specialists in violence always exist in a society but that such a specialist becomes a warlord, i.e., personally rules part of the national territory, only when the national government cannot control that territory at a cost which is unacceptable to the national government. (The government might be able to control that territory at an unacceptable cost.) In fact, the seemingly strong, e.g., empires often have created warlords by subverting traditional tribal authorities. Great Britain did that by imposing primogeniture on the tribal societies of Pakistan thereby creating "a hereditary class of armed local power brokers," the maliks, in what became the Federally Administered Tribal Areas. In Iraq, by contrast, Saddam Hussein was so weakened by the losses his state suffered during its eight years of war with Iran that he solved his need for total security by outsourcing some of his policing to Sunni militias based on tribes which were real or "made in Taiwan." These local warlords became insurgents after the U.S. invasion, and the United States attempted to reintegrate them into the state as the Sons of Iraq patrolling their own areas. In Chechnya, the Russian government appointed warlords (Kadyrov father and son) as a matter of convenience to suppress the insurgency, but in Georgia, Shevardnadze tolerated the warlords of two enclaves (Abashidze of Ajara and Kvitsiani of Upper Kodori), who had emerged out of the disorganization caused by the disintegration of the Soviet Union, as a temporary modus vivendi.

The second set of observations describes the tenuous stability of a warlord's regime. The warlord depends on patronage from a source outside his domain, and he redistributes that patronage to his supporters. The warlord may receive this patronage from the national government (as the maliks do in Pakistan and as Ramzan Kadyrov does in Chechnya) or from a foreign government (as Abashidze and Kvitsiani in Georgia received from Russia). Concomitantly, the warlord redistributes this patronage to his supporters in various forms, e.g., jobs or preferential contracts. As a consequence, a warlord operates either with the support or at the sufferance of a national government which lacks the immediate inclination to provide security itself. However, this arrangement may work to the benefit of a foreign government or of a criminal syndicate, and the arrangement will undermine the national government.

As a further consequence, therefore, the national government may seek to eliminate the warlord. Since the warlord retains his supporters by redistributing patronage, the national government should offer those supporters a more attractive alternative (as the United States has attempted to do in Iraq despite the obstruction of the national government), and to do so, the government will need specific information about those supporters. Meanwhile, of course, the warlord will attempt to stay in power by recruiting other patrons, as Ramzan Kadyrov has done by accommodating smugglers. The warlord also will attempt to forestall governmental action by acquiring legal control of all provisions of security in his territory, thereby depriving the national government of specific information about his networks of patronage. A democratic state can penetrate this network, but this can be done most readily by a populist leader without either strong political opposition or democratic oversight, as was done by President Saakashvili in Georgia after he succeeded Shevardnadze. Saakashvili utilized the surviving files and apparatus of the Soviet state to penetrate the networks of patronage in Ajara and upper Kodori, and then he suborned the respective warlords' supporters with offers of amnesty and official positions. In Pakistan, by contrast, the availability of lucrative jobs outside the country has produced remittances which are slowly undermining the power of the maliks.

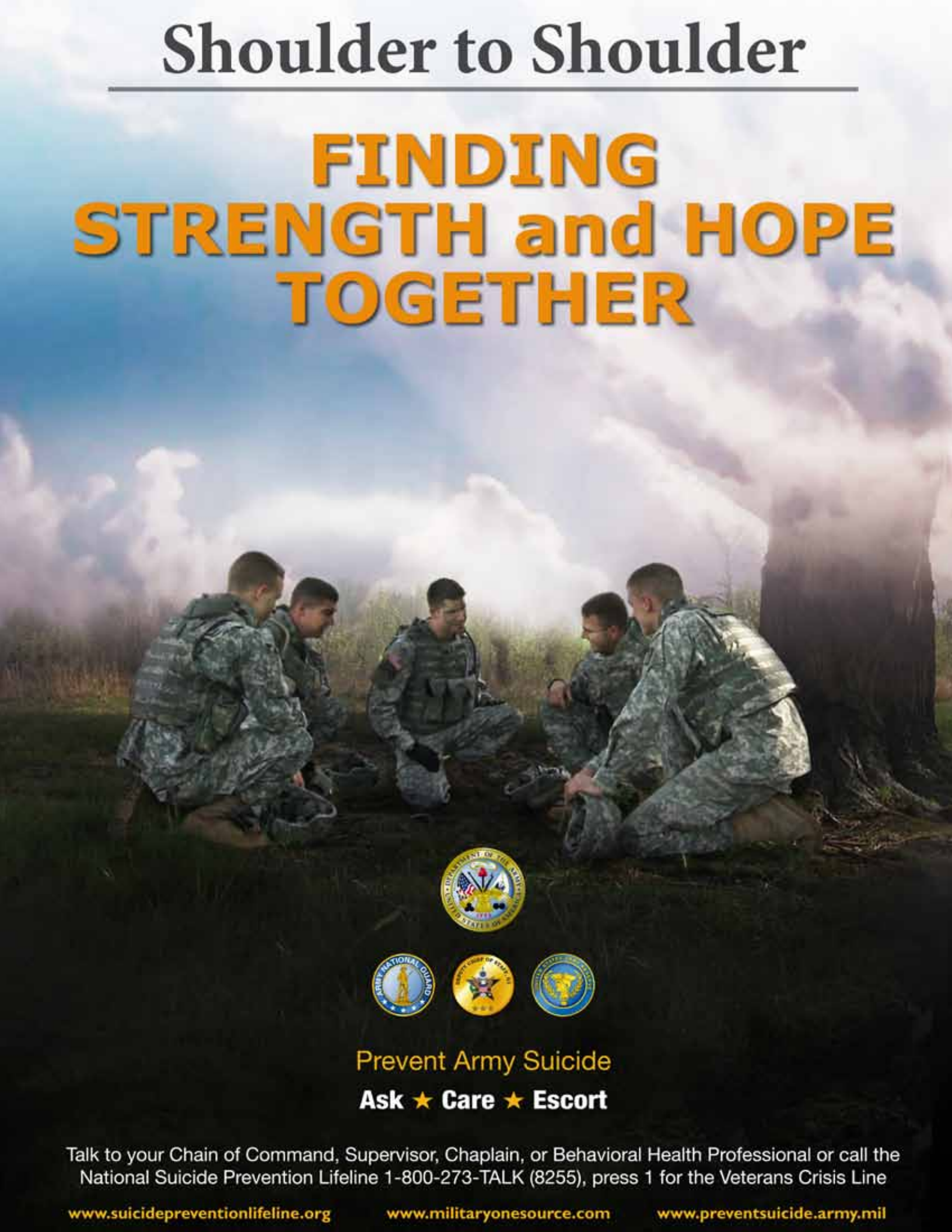
The third set of observations evaluates the utility of a warlord to the national government, and Marten concedes that a warlord can have some utility. Thus, a warlord can temporarily serve as a buffer, e.g., by maintaining stability in a border area (as in Chechnya or Georgia) or by allowing the national government to concentrate its resources on another front (Pakistan concentrating against India). Moreover, where ethnic or sectarian tensions are high, as in Iraq, a warlord may be hard to replace in an area populated by a national minority.

However, a warlord is unlikely to become a builder of the state because he creates resentment by impeding fair outcomes, i.e., by distributing benefits and justice as patronage rather than according to merit or economic efficiency. On this point, Marten's case studies are especially informative. Thus, in Pakistan, the Federally Administered Tribal Areas are rife with smuggling, radical Islamic militancy, and economic stagnation. Even international development assistance is distributed by the local warlords, so that such assistance does not build support for the state. When Georgia tolerated the enclaves of Ajara and Upper Kodori, their warlords allowed rampant criminality and bled the state's budget through the loss of customs revenue while securing no guarantee of cooperation from Russia. The latter state subsidizes a warlord in Chechnya despite the smuggling of arms and narcotics, the loss of customs revenue, and a poor record on human rights. In Iraq, real integration of the Sunni militias may be impossible because the distrust felt by each side is too intense: the Shiite government distrusts these militias, and the members of the militias fear individual assignment to government posts.

Although not an indispensable book, Marten's book is a useful and informative one. Her analysis is persuasive for the four cases she examines, and her observations are pertinent. Although warlordism is sometimes a necessary evil, a national government should eliminate the warlord as soon as possible. A warlord is dependent upon patronage, and therefore, he is vulnerable to having his network of supporters undermined. Ethnic or sectarian tension may make this more difficult, but a popular national leader operating without effective opposition is in a strong position to act. In any case, removing a warlord requires that the national government possess specific information about the network of patronage and be willing to suborn the important members of that network. Marten has presented a great deal of information and analysis in only 262 pages. I recommend her book unreservedly.

Shoulder to Shoulder

FINDING STRENGTH and HOPE TOGETHER



Prevent Army Suicide

Ask ★ Care ★ Escort

Talk to your Chain of Command, Supervisor, Chaplain, or Behavioral Health Professional or call the National Suicide Prevention Lifeline 1-800-273-TALK (8255), press 1 for the Veterans Crisis Line

www.suicidepreventionlifeline.org www.militaryonesource.com www.preventsuicide.army.mil

INFANTRY MAGAZINE
PO BOX 52005
FORT BENNING, GA 31995-2005

In the Next Issue:

*Communicating at Home: The Relevancy of Inform and Influence Activities in Garrison
* Hindsight: Broadening and the Importance of Managing Your Career

Headquarters, Department of the Army
Approved for public release; distribution is unlimited.

PIN: 103772-000