ARMOR

Mounted Maneuver Journal

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Enabling Operational Adaptability
through Reconnaissance

ARMOR

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LETTERS

Patton Tank in Vietnam

Dear **ARMOR**,

I am a fairly long-time and proud member of the U.S. Cavalry and Armor Association. I am always a little bit prouder, and I read with even more interest, whenever a knowledgeable author takes the time and makes the effort to write about the tank that we U.S. Marine "tread heads" fought inside during the Vietnam War. [Retired MSG Michael L.] Kelley did a good job in his write-up of the M-48 Patton tank ("The Patton Tank in Vietnam," September-October 2011 edition, **ARMOR**), but there are a few inconsistencies I feel need addressing.

I do not know exactly how the U.S. Army tank commanders deployed their crewmen, but I am not aware of one single Marine TC (ever) assigning his gunner to stand an anti-personnel position outside of the main fighting compartment, exposing him to enemy fire. We U.S. Marine tankers always relied on the dismounted infantry (grunts) to act as the "eyes and ears" of our tanks in the field.

U.S. Marine CPL Rene Cerda's incredible bravery earned him his Silver Star (not the Navy Cross) and the Purple Heart in the Khe Sahn area of northern I Corps (not in Hue City). The knocked-out tank mentioned in MSG Kelley's write-up was destroyed by North Vietnamese Army 57mm recoilless-rifle fire in Hue City, and its gunner, named Tuttle, was horribly wounded in action during that intense exchange of fire. (It is our understanding that after he was medevaced, Tuttle thankfully survived his wounds.)

There were just two M-48A3 medium gun tanks and two M-67A2 flame-thrower tanks involved in the initial fighting on the south side of the Perfume River in Hue City during the Tet Offensive of 1968. These four tanks, along with a platoon of Ontos (anti-tank vehicles), were assigned to 3rd Tank Battalion, and they bravely fought alongside the grunts of the 1st and 5th Marine Regiments for the first 14 days of the intense battle to free the old imperial capital city. On or about Feb. 15, a platoon of M-48s arrived via tank-carrying landing craft from 1st Tank Battalion in Da Nang. Those brave U.S. Marine tankers were tasked with clearing the north side

of the Perfume River, including the hard-fought and bloody Citadel.

Semper Fidelis!

JOHN WEAR
President, USMC Vietnam
Tankers Association

2nd Battalion, 34th Armor in Vietnam

Dear **ARMOR**,

I read with great interest and some measure of nostalgia the article by retired MSG Glenn Husted on the service rendered by the M48A3 Patton medium tank during the Vietnam War ("Tanker's Guide to Conventional Armored Fighting Vehicle Identification," September-October 2011 edition, **ARMOR**). I would like to point out that while MSG Husted cited some of the units, both Army and Marine Corps, that participated in significant battles of the war in which the tank played a key role, I think the story would be incomplete without mentioning the role played by 2nd Battalion, 34th Armor, 2nd Brigade, 25th Infantry Division.

This battalion and its M48A3s was the lead ground element early the morning of May 1, 1970, when President Richard M. Nixon ordered an incursion into the enemy's safe havens across the Cambodian border. The battalion, operating in the area known as Base 354, the Fishhook, conducted what could be described as a "classic" combined-arms attack (cross-attached with mechanized platoons of 9th Infantry Division) across the border in an attempt to destroy Communist supply lines and end the war. The unit came under anti-tank fire almost immediately after crossing the border and continued to engage in regular combat operations during its entire time in Cambodia. The battalion's official unit history reflects these actions and the fact that the battalion was awarded the Valorous Unit Award for this action.

Alpha, Bravo and Delta companies participated as part of Task Force Shoemaker, 1st Cavalry Division. Co. A was the first American ground unit into Cambodia.

This was a significant action in both our Vietnam experience and our Armor heritage, and both the unit and the Soldiers

who served should continue to be recognized for their bravery and sacrifice to the nation.

MARC A. KING
LTC, U.S. Army (retired)

'Mission Command' is Just New Buzzword

Dear **ARMOR**,

I read the proposed theme for **ARMOR**'s first writing competition, "Enabling Operational Adaptability through Reconnaissance," and I simply could not comprehend its meaning. Certainly we do not need yet another superfluous echelon of reconnaissance such as the divisional brigade reconnaissance troops. I've yet to read a coherent description of the new battlefield surveillance brigade. Certainly the recon squadron of the brigade combat team should be replaced by its predecessor armored cavalry squadron, but how many times must the obvious be stated? But then I read the November-December 2011 issue and all became clear. Forget all the old admonitions against "passive voice." The Army is now on a new standard, the "esoteric voice"!

Consider [the article] "Mission Command" by GEN Martin E. Dempsey. The **ARMOR** editor added that it provides "context" for the themes in previous **ARMOR** magazine issues. I read it and wondered, "What context?" It's just a change of new arcane buzzwords for previous arcane buzzwords: "mission command," "battle command" and "command and control." So what; the entire concept remains flawed because the focus remains backwards, aimed at the lower level up. The onus remains on subordinates to exercise "disciplined initiative" (there's a loaded term) when, in fact, that's what gets subordinates their butt-chewings, admonishments, reprimands, reliefs and courts martial. Everyone has likely heard a variation of "Better to seek forgiveness than ask permission!" – a pithy phrase often considered as positive when, in fact, it is a stinging rebuke against the superior who, if obeyed, would have caused mission failure!

"Mission command," as explained by GEN Dempsey, fails as guidance because it is utterly passive. GEN Dempsey concludes: "Yet these principles have not yet been made institutional in our doctrine and in our training. They do not pervade the force. Until they do – until they drive our leader development, our organizational design and our materiel acquisition – we cannot consider ourselves ready, and we should not consider ourselves sufficiently adaptable."

I guess it's all over, then. We are just waiting for "mission command" to pervade us. This illustrates the abject uselessness of "passive voice," which the institutional Army officially rails against while promulgating it further. Instead, the Army Chief of Staff needs to establish and articulate a clear directive whereby superiors will actively encourage and grant more autonomy to subordinates and accept the consequences of their good-faith actions. Get this part straight, and all the terminology changes of the past decades become moot. Fail this, and all the Training and Doctrine Command Pamphlet rewrites and revisions remain meaningless.

Actually, "meaningless" is too weak a term. "Corrosive" is more to the point. Consider "Commandant's Hatch – Mission Command and the Mounted Leader" by BG Thomas S. James Jr. Given the concept from above, BG James has admirably run with it. Starting with a caution against relying overmuch on technology, he then adds credence by melding it into the history of the mounted force with an example of its application during the trials and errors of the 7th Cavalry Brigade (Mechanized) back in 1933. He notes that liberal use of radios and, more importantly, discarding of mandatory encryption techniques led to the unsecure but rapid communications needed for the mounted-warfare capability that would evolve into the World War II armored force and continues through to today's modular brigade combat team.

Nice and interesting, but historically shallow and doctrinally vacuous. Completely lost is the fact that "mission command" was applicable long before mech-

anized and electronic technology existed. Horse cavalry (consider especially the mid-late 19th Century Plains Wars) literally lived and died by decentralized operations of small, isolated units led boldly and audaciously (or not). But no, the rich history of the mounted trooper is ignored. Instead, the take-away message is that seniors tend to be bureaucrats who do not understand changed conditions and whose directives are to be circumvented by whatever means, again "hoping for forgiveness." It's a much diluted message and a lost opportunity by the Armor School!

And how quickly this nonsense pervades the Army is frightful. Consider "The Commander's Role in Receipt of Mission: 'Frame the Problem' and 'Issue an Initial Proposed Problem Statement'" by LTC Harold Douglas Baker Jr. and retired LTC Kevin E. Brown. These two gentlemen, an instructor and assistant professor at Command and General Staff College, Fort Leavenworth, KS, do not even write in standard English, but I accept that they are simply using currently approved jargon.

First off, I never could figure out how a "mission analysis" morphed into a "problem statement." Second, I really cringed at the sentence: "A commander's choice to conduct design or not demonstrates that he or she has attempted to frame the problem and draft an initial proposed problem statement and, unable to do so coherently, elects to initiate design early in the MDMP."

But I am most enamored by the title's phrase, "Issue an initial proposed problem statement." OK, so what follows next, a "final proposed problem statement," or should there first be an "initial accepted problem statement" before the "final accepted problem statement"? What does the staff imagine when faced with such pontification? Perhaps they see yet another "bureaucrat" to be circumvented. After all, doesn't the "mission command" concept suggest that they consider just doing what's best "and then seek forgiveness"?

You can see where this nonsense is going, and it will not end well. Most of us have heard or even stated the historic warning to a Soldier upon arrival to his

new assignment: "Forget everything they taught you in training!" I suggest that CGSC is pulling to institutionalize such advice!

"Enabling Operational Adaptability through Reconnaissance"? What a question! While TRADOC revises meaningless esoteric concepts, the armored cavalry regiment is gone, replaced by just another brigade combat team. The separate armored brigade (along with its organic armored cavalry troop) is but a memory. Remaining tank battalions are "penny-packeted" out individually into heavy brigade combat teams. The Stryker Mobile Gun Platoon is organic to infantry companies; no Armor positions above platoon leader and platoon sergeant are required. Large armor formations are all but gone, a memory. But we've always got really cool communications gizmos in the pipeline. Too bad that's what 7th Cavalry Brigade (Mechanized) did not really need (the Chief of Armor told us so in his "Commandant's Hatch").

So what's Armor's focus?

Forge the Thunderbolt!

CHESTER A. KOJRO
LTC, U.S. Army (retired)

BG Thomas S. James Jr.
Commandant
U.S. Army Armor School

Enabling Operational Agility Through Reconnaissance

Happy New Year! Since becoming the 46th Chief of Armor our team here at the Armor School has achieved some amazing milestones; we co-hosted the extremely successful 2011 Maneuver Conference in early September, and later that month closed out our move to Fort Benning and the completion of the Armor School's portion of the BRAC. I can confidently report that the Armor School is training all Armor School Programs of Instruction here at Fort Benning in state of the art facilities and we are resourced and organized to continue to produce Soldiers and Leaders who are physically fit, lethal, confident, decisive, and mentally agile.

As we continue our vision of creating the world's premier academy of mounted warfare we want to remind our Armor and Cavalry team of our 2nd Annual Army Reconnaissance Summit here at Fort Benning (March 6-8) culminating with the Armor Ball on March 8 in downtown Columbus, GA. This year's summit theme is "Reconnaissance 2020: Enabling Operational Agility through Reconnaissance." Our objectives follow:

- Develop a common understanding of the Reconnaissance and Surveillance Brigade (formerly BFSB) employment concept and design to support operations at the Corps and Division level.
- Familiarize participants with the Army 2020 Strategic Narrative
- Review reconnaissance organizations and capabilities in the Reconnaissance and Surveillance Brigade; and Armor, Infantry and Stryker BCTs to identify potential DOTmLP adjustments.
- Identify initiatives to enable operational agility and flexibility in Reconnaissance Organizations and align to mitigate current Capability Gaps. (DOTmLP)

- Develop a common understanding of the current ARC and RSLC curriculum and determine requirements for a future Reconnaissance Course focused on the operating environment in 2020.
- Crosswalk capability gaps to *Army Operating Concept* requirements: gain situational understanding, tactical adaptability (developing the situation through action), transitioning between missions, and area security over wide areas
- Hope to see you at this critical event designed to determine reconnaissance recommendations for the way ahead as we review the lessons learned over the past 10 years of fighting and apply them to a detailed analysis of future threat environments.

We will also host the inaugural Sullivan Cup (a four-day, precision gunnery competition open to AC and ARNG tank crews) from May 7-10 here at Fort Benning. This challenging four-day tank crew competition is designed to reinvigorate precision gunnery and the use of simulations while simultaneously building Armor Branch esprit de corps, and recognizing the Army's "top tank crew."

Please add these dates to your calendar.

In today's world of persistent conflict we as mounted leaders are operating under conditions of uncertainty and complexity. TRADOC PAM 525-3-0, dated December 21, 2009, states that operational adaptability "requires a mindset based on flexibility of thought calling for leaders at all levels who are comfortable with collaborative planning and decentralized execution, have a tolerance for ambiguity and posses the ability and willingness to make rapid adjustments according to the situation."[1]

Being at the tip of the spear, our reconnaissance formations will help shape the battle by developing the situation and reporting

information to the commander that will enable mission command. The degree of understanding necessary for successful operations against adaptive enemy organizations in complex environments will require not only the employment of technology, but also the conduct of physical reconnaissance and the development of intelligence in close contact with the enemy and civilian populations. Enemies will use all means at their disposal to disrupt our communications, intelligence, and surveillance capabilities. Our future mounted leaders must be able to develop the situation and collect intelligence through physical reconnaissance and human intelligence. We as a mounted force will build and train forces capable of conducting effective combined arms, air-ground reconnaissance of the enemy, understanding cultural, as well as physical geography, and developing and sustaining human intelligence networks. Our mounted force will fight for information.

We must provide timely and accurate information. Fighting under conditions of uncertainty will require our organizations and command and control systems to synthesize and disseminate relevant intelligence in a timely manner to units in contact with the enemy and civilian populations. We must be able to fight and report simultaneously.

The Armor School has a huge stake in operational adaptability; we must generate leaders who can think critically about the implications of a continuously evolving operational environment and threats to national security. We at the Armor School must be able to continually assess and adapt at a pace faster than before. We must direct and align modernization readiness, and capability development processes and to ensure that the

GUNNER'S SEAT

CSM Ricky Young
Command Sergeant Major
U.S. Army Armor School

Final Transmission

As I pondered what to write as my final thoughts as Thunderbolt 7, it seemed only fitting to begin by saying thank you to all Armor and Cavalry warriors, past and present. I have been blessed to serve alongside the finest American warriors to ever walk this earth. Know that it gives me great pride to have stood in your ranks. Not only is this my last run downrange as Thunderbolt 7, it is also my final broadcast on the net as a Soldier. Thank you all, seniors, peers and subordinates alike, for your dedicated service to our nation, its Army and our Armor and Cavalry force.

Transition and change are constant in our profession. Today there is much discussion about what our Army and the Armor force will look like with the reduction and realignment of force structure. We do not have to look back far to realize that through every iteration of transition and transformation our Army has undergone, our Armor and Cavalry troopers have adapted and risen to the occasion, and this time will be no different. I have looked back over the nearly three decades of my career, and it amazes me how different our Army is now in regards to organization, equipment and troop strength.

Today we have half the number of divisions on the rolls as we did when my "Army Training and Evaluation Program" started. We have gone from jeeps to humvees, 113s to Bradleys and M60 tanks to M1A2 System Enhancement Program V2 tanks. Not to mention the introduction of tankers and scouts to the Stryker. How many remember five tank platoons, when the Delta Company was added to the tank battalions and, many years later, taken away? We have seen the birth and demise of the brigade reconnaissance troop, the addition of the armored reconnaissance squadron and the combined-arms battalion (which once again included a Delta tank company). If you really want to tug at the heart of the mounted warrior, bring up the fact that we have "repurposed" what was arguably the most lethal, agile and complete combat formations we had: the armored cavalry regiments. So you see that transition is nothing new, and Armor and Cavalry leaders and Soldiers have been seizing the initiative, exploiting the gaps and defeating the enemy with the same vigor throughout and, sometimes in spite of, the change. This is just a small look at the changes we have endured as a branch and as an Army, and there will be more in the future.

I would be remiss if I did not mention the fact that when I was appointed to this position, I was stationed at Fort Knox, KY, and am now sending my last round downrange from Fort Benning, GA. The resounding theme throughout the history of Armor and Cavalry has come across loud and clear to me. It is not about equipment, stationing, organization or mission. It is now, as it has always been, about the mounted warrior, that tanker and Cavalry trooper who continues to live the legacy built by those who went before him. It is about living up to the storied history of the organization in which we serve – whether on foot, on horseback, or hovercraft with Styrofoam armor. The combat arm of decision will continue to thrive in any environment. The spirit of Saint George will live on. We have never been about wringing our hands. We are instead about attacking with speed, agility, shock and brute force, and this mission will not change. Our tankers and troopers are proud of their heritage and wear their tanker boots, Stetsons and spurs with as much pride today as they ever have.

I am proud to have been called both a tanker and a Cavalryman, and each one of you shares that pride. Thanks again for your service, and farewell until we meet again on the objective or in Fiddler's Green.

Treat ' Em Rough, Thunderbolt 7 out.

The Adaptability of the Modern-Day Cavalry Trooper

by SFC David N. Harris

We must exercise critical thought and adaptive leadership. We must empower our junior leaders and foster environments for them to learn, grow and be successful leading our Soldiers in combat. We must visualize our current mission and the prospective battlefield, whether in garrison or forward-deployed, and develop adaptive, concurrent courses of action for maximizing our assets and combat power, meeting our commander's intent and ensuring the safety, security and morale of our men. We are not merely tankers or scouts; we are leaders of combat Soldiers, period.

We are still a nation and Army engaged on two fronts, known as 4th-Generation Warfare. The ability to maintain acceptable levels of success and relevance on a multi-dimensional, exceptionally irregular battlefield has proven to be complicated at times. Our success within the Armor force on the streets of Iraq and within the mountains of Afghanistan is largely due to our senior leaders' employment of mission command and the empowerment of junior leaders on the battlefield. However, it is also due to the unique ability of our strategic leaders to adapt, innovate, overcome and execute within a multitude of diversely complex environments, operations, platforms and leadership positions.

For some, the notion of transitioning from our conventional, traditional and even historic roles as Armor leaders to much more contemporary, non-Armor-centric roles during combat may seem a bit discouraging. On the other hand, there are likely several of our branch's contemporary leaders who view leading Soldiers to be, in essence, branch-immaterial. Either you can lead Soldiers in combat, or you cannot, regardless of military occupational specialty. Either you understand both your commander's intent and execute your full-spectrum mission successfully, or you do not.

How we as leaders personally execute our duties associated with leading Soldiers in combat may vary – based on individual dynamics such as education, experience, task organization and the desired strategic endstate of our mission – but our metrics for success

SFC David Harris examines the Aminkhan and Kundalan areas of Northern Kandahar Province from his overlook. *(Photo by SSG Karl Muller)*

**1st Squadron,
2nd Cavalry Regiment**

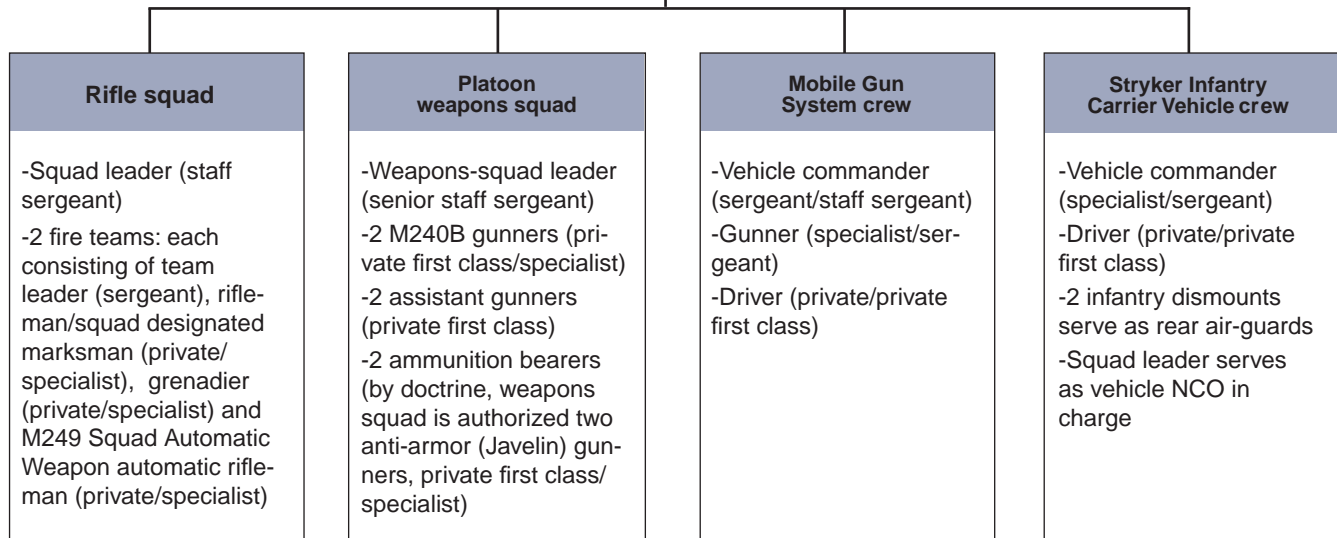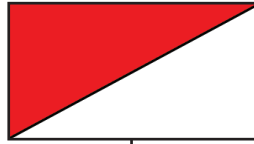| Rifle squad	Platoon weapons squad	Mobile Gun System crew	Stryker Infantry Carrier Vehicle crew
-Squad leader (staff sergeant) -2 fire teams: each consisting of team leader (sergeant), rifle-man/squad designated marksman (private/ specialist), grenadier (private/specialist) and M249 Squad Automatic Weapon automatic rifle-man (private/specialist)	-Weapons-squad leader (senior staff sergeant) -2 M240B gunners (pri-vate first class/specialist) -2 assistant gunners (private first class) -2 ammunition bearers (by doctrine, weapons squad is authorized two anti-armor (Javelin) gun-ners, private first class/ specialist)	-Vehicle commander (sergeant/staff sergeant) -Gunner (specialist/ser-geant) -Driver (private/private first class)	-Vehicle commander (specialist/sergeant) -Driver (private/private first class) -2 infantry dismounts serve as rear air-guards -Squad leader serves as vehicle NCO in charge

Figure 1. Concept and task organization of four maneuver companies, illustrated.

must be the same. Our adaptability as leaders and readiness to place aside personal reservations and step outside our organiza-tionally attained comfort zone is necessary to remain relevant and appropriately prepared for the modern-day battlefield.

Background

Early during February 2010, Comanche Company, 1st Squadron, 2nd Cavalry Regiment, was approaching the end of its compa-ny-, platoon- and squad-level training densities. It was also pre-paring for a regimental mission-rehearsal exercise at the Joint Multinational Readiness Center in Hohenfels, Germany.

Leadership decided that each company within 1st Squadron would form an additional rifle platoon during the MRE based on infor-mation from the unit that 2nd Cavalry would be replacing in Kan-dahar, Afghanistan: 1st Battalion, 17th Infantry, from Fort Lewis, WA, who had adopted the four-rifle-platoon concept during its deployment.

The intent of the four-platoon concept is to provide command-ers with another instrument to successfully accomplish their full-spectrum mission, especially within the austere, decentralized circumstances most units find themselves operating under. It's an extension and a means in maintaining more situational aware-ness, more interaction with locals, more security in your bat-tlespace and more enablers for your host-nation security force counterparts. Doctrinally, Stryker infantry companies are com-prised of three rifle platoons (infantry), one Mobile Gun System platoon (armor) and a headquarters platoon that includes a com-pany fire-support officer, forward observers, snipers, mortars and support personnel. The MGS platoon's principal function with-in the Stryker brigade combat team is to support the infantry pla-toons. In some Stryker infantry companies, the fourth "maneu-ver" platoon has been, and typically is, comprised of the MGS platoon and whatever vehicles and extraneous personnel they can acquire from the headquarters platoon.

Task organization and integration

By virtue of the decision to reorganize into four-maneuver-pla-toon companies, my platoon leader, CPT Walter Biner, and I went immediately from a 12-Soldier Stryker MGS platoon to leading two infantry rifle squads, a weapons squad, vehicle squad, two MGS crews, a radio-telephone operator, medics and an FO. The medics and FO stayed in close proximity to me, while the pla-toon RTO accompanied the platoon leader.

My platoon leader, an Armor officer, and I (a 19K by trade) ini-tially found leading a rifle platoon to be both foreign and frus-trating at times, even though we had been training with our in-fantry equivalents quite frequently throughout the previous year. The principal source of our frustration was a lack of time to prop-erly integrate our new platoon. While little can be done to accu-rately forecast and resource the requirements of an additional rifle platoon on short notice – particularly before deploying in support of the war on terrorism or other contingencies – the in-tegration of new and existing Soldiers needs to begin as soon as possible. It's not simply having enough time to become educat-ed and train on specific doctrine, but also about having adequate time to properly assimilate your new platoon. Becoming famil-iar with each individual Soldier's professional strengths, weak-nesses and motivations, as well as each Soldier *as an individu-al,* should play heavily on how you as a leader staff and assign Soldiers and noncommissioned officers within your formation.

Training and deployment preparation

To be fully prepared for a deployment supporting the Interna-tional Security Assistance Force and Operation Enduring Free-dom, CPT Biner and I felt that each Soldier in the platoon need-ed to be highly adept in all basic infantry battle drills and cross-trained in all relevant MOS-specific subject matter. We wanted the Soldiers of our platoon to be true cavalrymen: masters of all

trades, practiced and proficient with anything they put their hands on. In preparation, I began leading NCO professional-development-style forums with the entire platoon, essentially forcing them to interact and learn about each other while learning other basic Soldier- and leader-related tasks. Everything we trained emphasized combat application. Our priorities were:

- **Basic infantry battle drills.** All Soldiers and NCOs of all MOSs received training on how to execute basic infantry battle drills in accordance with Field Manual 3-21.8. My 19K NCOs were expected to be able to not only perform their MOS-related duties but also lead a rifle squad or fire team up a mountain to conduct a squad attack or emplace a support-by-fire if need be.
- **MOS cross-training.** All Soldiers and NCOs within the platoon were cross-trained on relevant Armor- and infantry-related tasks, including our RTOs, FOs and medics.
  - ➢ I learned the job of my weapons-squad leader, and he learned the duties and responsibilities associated with being a forward-deployed platoon sergeant.
  - ➢ CPT Biner, along with the infantry NCOs who had Ranger experience, instructed the platoon on more advanced patrolling fundamentals.
  - ➢ Each Soldier also learned reporting, the fundamentals of reconnaissance and their practical applications, with an emphasis on team leaders and squad leaders conducting multidimensional reconnaissance within the counterinsurgency environments of Afghanistan.
  - ➢ Infantry squad leaders received in-depth instruction on the M1128 MGS and, once we deployed, had the opportunity to personally fire a 105mm high-explosive plastic round from the commander's station.
  - ➢ All Soldiers received instruction on the M1128 MGS and M1126 Infantry Carrier Vehicle's gunner stations, also firing a 105mm HEP round from the MGS gunner's station.

This MOS cross-training allowed the Soldiers and leaders within the formation to fully recognize and appreciate their platoon's capabilities as well as prepare them in the event they may need to serve as a MGS commander or gunner, or ICV commander.

I also made it a point to keep dismounts on the ground during the 105mm shoots (with respect to the safety designated zone I had established) so they could experience first-hand what it's like to be in close proximity to a large caliber, direct-fire platform while it's supporting them in contact. All Soldiers within the platoon were trained on the duties and responsibilities associated with driving and maintaining both the ICV and MGS. Junior-enlisted Soldiers learned in detail the jobs of their contemporaries; MGS drivers served as M249 gunners and grenadiers in fire teams; riflemen obtained licensure on all Stryker variants within the platoon. Every Soldier became well-versed in vehicle maintenance and recovery. The platoon RTO trained everyone on our assigned communications equipment (with the exception of the PRC-117 Harris, which we would not receive until we arrived in theater), including Blue Force Tracker and the Simple Key Loader. The platoon medic certified every Soldier in the platoon on combat lifesaving, and the FSO and I gave detailed instruction on observed fire.

- **Physical training.** We did PT constantly. Both CPT Biner and I had the same philosophy: "When in doubt, do PT." For the deployment to Kandahar, I developed an eight-week PT program designed to prepare Soldiers for the mountainous environments of Afghanistan. We did our normal PT in the morning IAW FM 21-20 and conducted the supplementary PT program in the afternoon. We ran farther, ruckmarched farther and generally beat our bodies up daily. For our platoon of 36 Soldiers, our Army Physical Fitness Test average was more than 280 points and the Soldiers' level of fitness showed when it truly mattered in Afghanistan.
- **Marksmanship.** We conducted long-range, short-range and close-quarters marksmanship courses at the platoon level before deploying. All Soldiers fired the various weapons within the platoon in stress-shoot scenarios and continued to do so while in Afghanistan. When the operations tempo and Class V permitted, we fired our weapons as much as possible, and each Soldier became proficient with each of the platoon's stabilized and non-stabilized weapon systems.
- **Cultural training.** The platoon had three Soldiers attend a six-week Pashtun-language training session held by a military training team from the Defense Language Institute. The information and training they imparted to the rest of the platoon was excellent, to say the least. Soldiers learned Pashtun phrases and cultural information specific to the region of Afghanistan we would be operating in, and CPT Biner, together with the platoon linguists, put together written tests for the Soldiers. When the squadron commander became aware of this, he applied our program as the cultural-training standard for the rest of the squadron.
- **Counterinsurgency training.** We tied this in with our cultural and language training classes. I led a weekly COIN seminar at the platoon level; often times, members of other platoons attended. We focused on relating COIN doctrine (FM 3-24) and the ISAF commander's theater-specific COIN guidance to the junior Soldiers and leaders. The training was more interactive, as COIN for junior leaders should be, and it gave the young Soldiers and leaders the reasons *why* our processes, strategies and actions were important during COIN operations, as opposed to the specifics of executing them. Don't assume that young Soldiers and leaders will understand COIN or, more importantly, that they will understand their company commander's intent and operational design. It's certainly not that they are unintelligent; it's simply that COIN is fairly complex. Therefore, we needed to take better care to ensure our strategic leadership at squad level understood what exactly it was they were executing and, more importantly, why. I made them watch and take notes during movies such as "The Battle of Algiers," "Red Dawn," "The Beast" and "Breaker Morant." Once complete, we held long discussions on the parallels between what they just watched, what we would potentially be doing in Afghanistan, and what they felt were acceptable and unacceptable strategies, etc. This was a great tool for grasping the attention of a younger generation of Soldiers.
- **Leader development.** As with COIN training, I also conducted a weekly leadership-development huddle with the NCOs of the platoon. It rarely involved any instruction, but it would get the leaders within the platoon thinking adaptively and critically, and developing themselves personally through the use of vignettes and scenario-driven discussions. In doing so, we sharpened our abilities as leaders in responsibility, accountability and interpretations of what leadership truly meant to us.
- **Sustainment training.** Between the end of the MRE and the day prior to our redeployment from Afghanistan, we

trained. We performed sustainment training on all subjects to a relentless level. We constantly conducted relevant MOS cross-training. This training associates with our evolving full-spectrum mission and battle drills. It also assures Soldiers get training on new equipment when we receive it, daily training vignettes in support of the COMISAF's COIN guidance, PT (which usually consisted of whatever space and materials we could find out in-sector) and weekly NCOPDs with team leaders and above.

Deployment in support of OEF X-XI

As I stared at the mountains surrounding Kandahar and contemplated the dynamics of the Taliban insurgency, coupled with the intense tribal structure and historic partiality of the Pashtuns in this province, I began to feel very anxious. I immediately began contradicting myself with internal questions such as "did we train enough?" or "are my Soldiers and I honestly prepared for this?"

When we first began conducting patrols in the Shah Wali Kot District, we were operating within a company battlespace that was roughly 100 square kilometers. Through our relief in place/transfer of authority with 1-17 Infantry and our initial intelligence, surveillance and reconnaissance, it was evident that our focus early on would be to restore freedom of movement on Route Bear and within the adjacent villages. Over the course of the next 10 months, my platoon would consistently transition between mounted and dismounted operations in both urban and mountainous environments. The constant shift between mounted and dismounted operations necessitated a much more elaborate approach and execution of our troop-leading procedures. Although there was a considerable Taliban presence in the Shah Wali Kot District of Kandahar, the Taliban were not the foremost problem in our area of operations. As this isn't intended to be a professional dissertation on Afghan-governance development and COIN strategies at the company level, I will merely remark that joint patrols with our Afghan National Security Forces counterparts required the Soldiers of my platoon to serve as instructors/trainers daily out in-sector. It was incredibly frustrating at times for CPT Biner and myself, so you can imagine how our younger Soldiers felt.

Comanche Company relocated south of Kandahar March 29, 2011, to the town of Nakhonay in the Panjwai'i District, to relieve a company from 22nd Royal Canadian Battle Group. Although we had been conducting dismounted operations frequently in Shah Wali Kot, the immense size of our battlespace in that AOR typically required us to conduct a mounted movement to our area of dismounted debarkation and establish a patrol base. In Nakhonay, it was exclusively a light-infantry fight. We rarely used our Strykers, largely due in part to the dense urban configuration and the vast grape orchards of Nakhonay. We relied heavily on the use of individual electronic-control measures, such as the Vallon mine detector, Targeted High-Output Responder and Guardian ECM systems. Each Soldier's individual fighting load increased due to the nature of our operations. We were carrying more batteries, more water, more food, more lifesav-

CPT Walter Biner gives 1st Squad his intent for their patrol at the platoon's patrol base outside Baghtu Valley in Kandahar. *(Photo by SSG David N. Harris)*

ing equipment and, more importantly, more bullets. In fact, the only Soldiers in the platoon who gained any semblance of comfort, as irony would have it, were the Soldiers in the weapons squad. We quickly discovered that our M240B machineguns were ineffective while patrolling in town due to the urban layout and proximity of the populace, so the weapons squad began exclusively using the platoon's two M14 enhanced battle rifles, which worked exceptionally well within Nakhonay. The weapons-squad leader had been to Sniper School and was a former sniper section leader, while one of the machinegunners had served previously on a sniper team as well.

The overall transition required us to approach our TLP differently than we had while in Shah Wali Kot, and stressing mounted actions on contact, recovery, support and evacuation became secondary to a heavier emphasis on dismounted infantry battle drills, deliberate dismounted route-clearance techniques, evacuation and other dismounted preparatory checks and rehearsals IAW FM 3-21.8. We still trained and rehearsed mounted skill sets, but not in the same manner we had before. Mastering basic Soldier skills and battle drills will save your life in Afghanistan. Aside from the abundance of pressure-plate improvised explosive devices and homemade explosives, the nature of the enemy contact we encountered in Nakhonay was exceedingly similar to that of what I had experienced in the likes of Fallujah, Ramadi and Tal'Afar: ample amounts of sporadic firefights, typically designed to entice our patrols into defensive IED belts or larger ambushes. However, the human and cultural terrain was no different, and just as diverse and complex as our previous location, and joint patrols with our ANSF partners were equally as, if not more so, frustrating as our previous experience in Shah Wali Kot.

Conclusion

We departed Kandahar May 13, 2011, and all my Soldiers were alive and boarding a C-17 alongside me. As each man boarded, I touched his shoulder for what I knew in my professional heart would be my last physical headcount of those men. Once the 2nd Cavalry Regiment's reintegration was complete in August 2011, Comanche Company returned to its original authorized modified table of organization and equipment, and I too bid farewell to assume duties as the regimental master gunner.

Over the course of the past 18 months, I have referred to previous deployments in which I served as tank commander, section sergeant or platoon sergeant. The men I served with, along with my experiences during those periods in my career, were exceptional; however, the 19 series and 11 series cavalry troopers who comprised 4th Rifle Platoon, Comanche Company, 1st Squadron, 2nd Cavalry Regiment, are without question the most professional, disciplined, intelligent, fundamentally competent and proficient Soldiers I have ever had the good fortune to serve with and, more importantly, to personally serve. Leading a rifle platoon was such a positive experience for me that even now, I feel slightly ashamed for having been initially reluctant about it.

I believe we have a unique history within the Armor Branch for producing leaders who are adaptive, innovative, flexible and incredibly determined; more so than any other branch, in my experience. Unfortunately, I find too often that we allow ourselves to fall into particular stereotypes, which impart on our leaders a specific phobia of the unfamiliar and external. This is an Army that has evolved over the past 10 years out of necessity, and we as leaders must choose to evolve as well – not for our own personal benefit but for the benefit of those Soldiers and troopers we serve. I become extremely energized when I think about how much more technically and tactically proficient my platoon could have been with the appropriate amount of time to properly integrate and train prior to our deployment to Kandahar.

In closing, I would like to point out that this article's intended purpose is not to advocate that the SBCT company adopt the four-platoon combined-arms concept or to make unfair characterizations of the Armor Branch's more conventional leaders. It is for the purpose of information-sharing and allocating my specific training methods, strategies and experiences of leading a rifle platoon in Afghanistan. What I have shared is what I feel complemented our success as a platoon and company in one of the most complex environments in the world. These are not "keys to success as an Armor NCO leading infantrymen" but rather what I believe were the keys to my success as a leader, period. I decline to consider that we (Comanche Company) have been the only company-sized formation to attempt this method of combined-arms integration and achieve success. It's not outside the realm of possibility that our contemporary leaders will potentially find themselves in similar arrangements during the coming years.

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ACRONYM QUICK-SCAN

ACR – armored cavalry regiment
ANSF – Afghan National Security Forces
AOR – area of responsibility
COIN – counterinsurgency
COMISAF – commander, International Security Assistance Force
ECM – electronic-control measure
FM – field manual
FO – forward observer
HEP – high-explosive plastic
IAW – in accordance with
ICV – infantry carrier vehicle
IED – improvised explosive device
ISAF – International Security Assistance Force
MGS – Mobile Gun System
MOS – military occupational specialty
MRE – mission-rehearsal exercise
NCO – noncommissioned officer
NCOPD – noncommissioned officer professional development
OEF – Operation Enduring Freedom
PT – physical training
RTO – radio-telephone operator
SBCT – Stryker brigade combat team
TLP – troop-leading procedures

The Trained and Equipped Forward Observer

by CW4 Thomas Taccia

*(**Editor's note:** Although the fires-oriented forward observer, who holds military occupational specialty 13F, is not an Armor community member, there may be overlap in reconnaissance functions. If an FO is unavailable, for instance, it is feasible that Cavalry scout-obtained information could be used for fires targeting; operational adaptability is required.)*

The rapid advancement of precision-targeting technology during the last decade has been remarkable. The capabilities and tools available to forward observers and Joint-fires observers has evolved from compass and map to lightweight, handheld laser range finders and advanced pocket-sized handheld devices with precision imagery. Because of these advancements in technology, Soldier and leader training – as well as tactics, techniques and procedures for employment of this technology – also need to evolve. The most important aspect of this precision-targeting capability is providing the FO with enhanced ability to achieve the most difficult aspect of the five requirements for accurate predicted fire — accurate target location — thereby allowing the FO to achieve his primary mission: first-round fire for effect.

Precision fires are necessary in today's complex operating environment, where collateral-damage risks vs. military necessity must be addressed. With the strategic risk associated with unnecessary injury and death of noncombatants, precision fires must be employed effectively. The accurate employment of ballistic and precision munitions allows us to reduce risk of collateral damage while achieving desired effects. Our precision munitions for mortar, cannon and rocket systems offer tactical commanders the option of conducting lethal strikes while mitigating the risks to Soldiers, noncombatants and infrastructure. Precision munitions offer leaders on the battlefield a variety of choices on how to engage a target and a scalable capability to attack it.

As the Army continues to develop its coordinate-seeking munitions capability, consideration must be given to the requirements necessary to employ these munitions. One crucial aspect to the effective employment of coordinate-seeking munitions is target location. Accurately determining target location is required for effective employment of precision munitions and is achieved through a process called target-coordinate mensuration. The U.S. Army Fires Center of Excellence at Fort Sill, OK, as the Army-designated functional manager for TCM, has established a Joint recognized and accredited TCM training and certification program. The Fires Center has a clear understanding of the requirements associated with precision fires and has collaborated with the Joint Staff, other services, combatant commands and combat-support agencies to develop a comprehensive training program for TCM, weaponeering and collateral-damage estimation.

For the past two years, the Joint and Combined Integration Directorate at Fort Sill has been the Fires Center's lead agent for development of a precision-fires program. The PFP encompasses institutional training for TCM, weaponeering and CDE. Precision-fires training is designed for FOs, 131A (targeting technicians) warrant officers and 13A fire-support officers. Having trained operators enables tactical units conducting fire support to employ indirect fires accurately and effectively, achieving first-round target effects while mitigating collateral damage.

Another critical aspect of employing accurate indirect fires is the FO hardware requirements. Currently FOs have the capability to conduct mensuration using the pocket-sized forward-entry device with precision-fires image. FOs must understand that the PFED is not primarily a digital communication device; it's a computer that enables the FO to quickly determine a 10-digit grid and then mensurate that grid if circumstances permit. When combined with a handheld laser such as the Mark VII or Vector 21, the PFED is by far the fastest and most accurate means to determine an accurate target location. Once the accurate target location has been determined, the FO can send the call for fire voice or digital through the tactical radio. The PFED is standard issue for dismounted-platoon FOs.

Another FO system is the ruggedized handheld computer with FO system software and Precision Strike Suite-Special Operations Force mensuration software. The RHC is a system used at the platoon/company level for fire-support planning and execution that also facilitates digital calls for fire. With its embedded PSS-SOF capability, the trained and certified user can quickly mensurate coordinates. Both systems are highly effective and allow for timely and accurate calls for fire. However, these automated tools have not propagated to the fire-support community due to a lack of capability understanding. Senior-

A Soldier with 1st Battalion, 38th Infantry Regiment, writes down the location of a simulated enemy target while another uses a Mark VII laser range finder. The two FOs were completing training as part of fire-support team certification in February 2011. *(Photo by SPC Kimberly Hackbarth)*

leader education and command emphasis must occur to fully integrate these capabilities into fire-support operations. Once FOs are trained on proper use of the PFED and RHC, they hold a very powerful weapon system that enables them to effectively support their maneuver formations with timely and accurate fires.

Following are a few basic questions commanders should ask their fire-support officers and noncommissioned officers:

- Do we currently have certified operators for TCM so we can employ our coordinate-seeking and ballistic munitions accurately and effectively?
- Do we have the systems and software to conduct TCM?
- Are our JFOs and FOs current on their certification requirements?
- What proficiency or sustainment training do we currently conduct for our TCM-certified JFOs and FOs?
- Are our 13A lieutenants and captains trained and certified in the area of precision fires?
- Where can we get our FOs trained?

By asking these questions, commanders will be able to determine their unit's capability to employ fires effectively and make decisions accordingly. The PFP provides three venues for instruction:

- Primary military education: for 13F, Advanced Leader Course and Senior Leader Course; for 131A, basic and advanced courses; and for 13A, Basic Officer Leaders Course B and Field Artillery Captains Career Course.
- Functional course: open to 13F FOs and 131A targeting technicians who did not receive this training during PME. It is also open to other services, partner nations and individuals in targeting billets who require this training.
- Precision-fires mobile training team: supports Army Force Generation and unit-level training-program development, and supplements current COCOM training activities when requested. MTT support during Fiscal Year 2012 is provided at no charge to the unit.

All venues provide training to Joint standards and, in all cases except BOLC B and FACCC, will lead to certification for TCM, CDE, or both. There is no certification requirement for weaponeering at this time.

CW4 Thomas Taccia, a 131A targeting technician, is a targeting officer with the PFP at the Fires Center's JACI Directorate. He was assigned to JACI in 2009 and was a key architect, along with CW5 Robert Tisdale, JACI PFP program manager, in developing and implementing the current Joint PFP. He previously deployed as a fires-brigade targeting officer and division field-artillery intelligence officer in 2008-2009, as an FA brigade targeting officer in 2004-2005 and Q37 radar-section leader in 2003-2004. He served as 75th Fires Brigade targeting officer and developed a unit-level PFP consisting of TCM, weaponeering and CDE.

ACRONYM QUICK-SCAN

BOLC B – Basic Officer Leaders Course B
CDE – collateral-damage estimation
COCOM – combatant command
FA – field artillery
FACCC – Field Artillery Captains Career Course
FO – forward observer
JACI – Joint and Combined Integration Directorate
JFO – joint-fires observer
MTT – mobile training team
PFED – pocket-sized forward-entry device
PFP – precision-fires program
PSS-SOF – Precision Strike Suite-Special Operations Force
RHC – ruggedized handheld computer
TCM – target-coordinate mensuration

Geospatial-Intelligence in Tactical Operations and Planning

by Matthew Wilder

Geospatial intelligence proved invaluable to 1st Cavalry Division during combat operations as part of Operation Iraqi Freedom 2006-2008. GEOINT is an intelligence discipline that includes imagery, imagery analysis and advanced geospatial data.

Although many organizations consume GEOINT, the National Geospatial-Intelligence Agency is the lead agency for advocacy and analysis of both the intelligence community and the Department of Defense. For example, GEOINT was used during the planning and execution of operations in Sadr City, Iraq. At the time, Sadr City served as a safe haven for Shia extremists and offered almost unrestricted freedom of movement to them. GEOINT products provided knowledge of this complex urban area and greatly contributed to situational awareness. It also contributed in part to the subsequent 50-percent drop in significant-activity reports and casualties.

However, the time to take advantage of this intelligence is not after the battle has begun but long before – during the pre-deployment phase.

GEOINT in pre-deployment preparation

The proper use of GEOINT in pre-deployment preparation can pay dividends that will be realized throughout a combat tour. Training in the use of GEOINT can be scheduled through the S-2/G-2 or in the Army Training and Requirements Resource System. Much of the familiarization, overview and analysis training is conducted through the U.S. Army Intelligence Center and School at Fort Huachuca, AZ. However, GEOINT courses are also available through the NGA College and the Army Command and General Staff College.

Another aspect of the pre-deployment cycle is participation in mission rehearsal/warfighter exercises and rotations through the National Training Center at Fort Irwin, CA, and Joint Readiness Training Center at Fort Polk, LA. Often, these are the most realistic training scenarios used to incorporate the use of GEOINT in combined-arms and tactical operations. Leaders should make maximum use of the assets available to them by leveraging both internal and external sources for GEOINT products. If these products aren't readily available, units and leaders should specifically ask what GEOINT support is available to the unit and if NGA representatives are on hand to assist.

Some GEOINT best practices at this point include:

- Requesting and using imagery of NTC and JRTC training areas prior to the unit's rotation, particularly unclassified maps; and
- Using imagery in company/battalion tactical-operations centers for situational awareness.

From the NGA perspective, the agency supports unit pre-deployment planning in three ways. First, the Office of Military Support-Army interacts with each deploying unit at brigade level during counterinsurgency seminars held prior to deployment. Second, through the Military Readiness Directorate, NGA has an active exercise-support program and can be of assistance by:

- Conducting project management of exercises;
- Coordinating support with NGA and GEOINT support teams;
- Coordinating manning and collection requirements for GEOINT support; and
- Generating exercise products and collecting lessons learned.

Finally, units have access to NGA support teams that work with the supported units throughout the pre-deployment, deployment and reintegration phases to provide the full spectrum of GEOINT support. Once deployed, GEOINT can play a crucial role in mission planning at the company, battalion and brigade levels, especially when it's incorporated into the military decision-making process cycle and intelligence preparation of the battlefield.

GEOINT in MDMP and IPB

Although GEOINT can play a critical role in all phases of MDMP, it's extremely useful in the mission analysis and courses-of-action analysis (wargaming) phases, as well as in all phases of IPB. Most commonly, it's used in the TOCs to depict movement on the battlefield. At the individual tactical-unit level, GEOINT can:

- Augment road and topographical maps with imagery of key terrain and danger areas;
- Provide point positioning data and feature descriptions for targeting;
- Provide line-of-sight graphics and analysis to assist in threat assessments, route assessments and defensive analysis;
- Provide detailed elevation and slope data for identification of potential landing zones and drop zones; and

A geospatial analyst with Multi-National Corps-Iraq reviews a series of maps in his office. *(Photo by SSG Luke Koladish)*

- Depict urban areas with accuracy not possible by other intelligence methods. The ability to visualize streets, key buildings, urban choke points and key terrain is key during urban operations as well as civil-relief efforts.

Of all tactical scenarios and missions, COIN poses some of the greatest challenges to tactical operations as a whole and to IPB specifically. The use and understanding of GEOINT is critical to mission success.

GEOINT in COIN

Field Manual 3-24, *Counterinsurgency*, provides practical tactics, techniques and procedures for COIN operations and devotes several sections to GEOINT. The following excerpt from FM 3-24 provides an excellent overview of GEOINT from a COIN perspective and describes some of the most relevant TTPs for tactical units.

GEOINT is the exploitation and analysis of imagery and geospatial information to describe, assess and visually depict physical features and geographically referenced activities on the earth. GEOINT consists of imagery and geospatial information. GEOINT may have some benefit for identifying smuggling routes and safe havens. Imagery can be very beneficial to operations in urban areas as well. It can help identify structures of interest and aid urban terrain navigation. (Paragraph 3-149)

Geospatial information and services remains a core mission of the engineer branch and provides the foundation for GEOINT. Imagery intelligence remains a core mission of the military-intelligence branch and provides the intelligence layers and analytic fusion for GEOINT. The result is digitally integrated intelligence products that support all-source analysis, planning, decision-making and support to current operations. (Paragraph B-5, Appendix B)

Geospatial tools. Geospatial products (tools) that can be provided by the geospatial information and services team include the following:

- *Terrain databases*
- *Special terrain studies and products prepared by U.S. or [host nation] agencies, and special maps, charts and geodetic studies*
- *Current photography*
- *Real-time terrain reconnaissance*
- *Terrain factor matrices (Paragraph B-6, Appendix B)*

Imagery. Imagery products include both aerial photography and satellite imagery. In many cases, aerial reconnaissance platforms, such as unmanned aircraft systems, respond directly to commanders. This practice aids timely, focused data collection. Each (imagery) collection system has its own capabilities. (Paragraph B-7, Appendix B)

Intelligence staffs remain aware of the capabilities and limitations of these systems and the procedures for requesting this support. (Paragraph B-8, Appendix B)

These products have many applications. Presenting imagery in an oblique perspective by combining it with digital terrain elevation data provides a perspective view. ... Other uses include facility analysis, structural analysis, soil analysis and damage assessment. (Paragraph B-9, Appendix B)

Note that while FM 3-24 has some excellent examples of how to use GEOINT in COIN operations, it is not meant to be all-encompassing.

Obtaining GEOINT support

Army TTP 3-34.80, *Geospatial Engineering*, provides an excellent overview of GEOINT resources available to the warfighter that reside at both the national and the Army unit level.

The national system for geospatial-intelligence is the combination of technology, policies, capabilities, doctrine, activities, people, data and communities necessary to produce GEOINT in a variety of environments. NSG operates within policies and guidelines established by the director of national intelligence. The NSG community consists of members of the intelligence community, services, Joint staff, combatant commands and elements of the civil community. See [Joint Publication] 2-03 for more information. (Paragraph 2.2)

NGA, the primary source for GEOINT analysis and products at the national level, produces numerous analytical hard- and soft-copy products and provides standard digital products to include scanned digital maps, elevation data, imagery and feature data. Units obtain data through the Internet or directly from NGA. [The Defense Logistics Agency] distributes hard-copy maps to units. Geospatial engineers can request imagery that can be used for spatial and temporal reasoning or multispectral analysis products that are customized to meet particular operational requirements. Imagery is also used to enhance [three-dimensional] and fly-through perspectives. NGA provides an NGA support team in direct support to each combatant command's Joint intelligence operations center. NST has full connectivity with NGA to ensure reachback capability into NGA's total support effort. NGA geospatial analysts may also be attached to units, normally at division level and above, to supplement the organic geospatial engineers and staffs. JP 2-03 provides more information on other national- and Department of Defense-level capabilities. (Paragraph 2.3)

Geospatial engineering is provided to the Army based primarily on the echelon that is supported. Geospatial engineering is focused on geospatial data generation,

geospatial data analysis, geospatial data management, quality control and data dissemination at the numbered-Army and combatant-command level. At the corps and division levels, [most] of the workload is required to support geospatial database management, mission planning and the IPB process. Below division level, geospatial engineering is increasingly focused on current operations and updating the enterprise geospatial database (database management). (Paragraph 2.4)

Army geospatial-engineer units, supporting each echelon down to the brigade level, provide terrain analysis, terrain visualization, digitized terrain products, tailored map products, map production, geospatial data management and support to the integration of other [geospatial-intelligence] requirements within the supported force. The organic or augmenting geospatial-engineering units available to the commander operate within the command's GEOINT cell. … The key to a successful process is collaboration across functional areas within the headquarters and among the GEOINT cell, higher headquarters and the rest of the stakeholders. (Paragraph 2.5)

The Army has two service centers that support GEOINT: the National Ground Intelligence Center and the U.S. Army Corps of Engineers Army Geospatial Center. The first produces and disseminates all-source integrated intelligence on foreign ground forces and related military technologies. A major component of NGIC is 3rd Military Intelligence Center, the Army's only GEOINT battalion. They produce and disseminate [imagery intelligence], GEOINT, advanced GEOINT and [geospatial intelligence] products to the Army, Joint and multinational forces and national-level agencies in support of operational requirements. (Paragraph 2.6)

The AGC has the mission to provide the operational commander with superior knowledge of the physical environment and support the nation's civil and environmental initiatives through research, development and the application of expertise in the topographic and related sciences. They produce and disseminate standard and specialized geospatial products and provide technical support and advice to field units.

Since this Army TTP was published, GEOINT functions once performed by both engineer and military-intelligence branches have merged, and several structural changes have resulted. The Army recently redesignated the operational-imagery intelligence battalion from 3rd Military Intelligence Center and renamed it the Army GEOINT Battalion. With this change came the addition of military geospatial engineers to the existing intelligence-analyst manning structure. Other changes include standardizing how Army GEOINT cells are deployed and introducing opportunities for geospatial engineers and imagery analysts to train together at the U.S. Army Intelligence Center.

From a training and doctrine standpoint, the Army also published Training Circular 2-22.7, ***Geospatial Intelligence Handbook***, in February 2011. This handbook covers the merger of enlisted imagery analysts and common-ground-station operators into one military occupational specialty, and introduces integrated GEOINT cells at military-intelligence brigades around the world as well as at Army Space and Missile Defense Command and Army Forces Strategic Command.

In addition to the above, there are several other means for tactical leaders to obtain GEOINT support. Members of the NGA deployment team deploy around the world, bringing GEOINT directly to the warfighter and policymakers. Typically, these members serve on GEOINT support teams. These assets are typically found at the brigade-and-above levels but are available to support at all tactical levels. Even more resources can be found online at www.nga.mil, and unclassified/For Official Use Only products can be re-

A geospatial analyst with the 56th Stryker Brigade Combat Team shows Iraqi Ministry of Water and Ministry of Agriculture technicians features of a mapping program. *(Photo by SGT Doug Roles)*

quested and accessed through the NGA GEOINT On-line at https://geoint-online.nga.mil. This Website unifies existing NGA Web-based capabilities for on-line access of unclassified/FOUO GEOINT content and support. It requires registration and a military/government email account. Unclassified FalconView products can be found at www.falconview.org.

NGA products, maps and services can be ordered in mass quantities and in hard-copy format through the Defense Supply Center in Richmond, VA, at www.dscr.dla.mil/rmf. NGA is also developing future applications to push GEOINT to the lowest tactical levels and make it possible to access high-fidelity products in even the most austere environments. These will look very similar to applications developed for smartphones and will be user-friendly for all Soldiers.

Regardless of how GEOINT is accessed or how it is provided, the key takeaway is that GEOINT is relevant, useful and critical for all tactical leaders at all echelons on the battlefield. It is a significant asset for the tactical leader during pre-deployment, MDMP and all tactical operations, including counterinsurgency.

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A geospatial information and services officer with the Multi-National Division-Center in Baghdad surveys a map of the city. *(Photo by SPC Josh LeCappelain)*

ACRONYM QUICK-SCAN

AGC – Army Geospatial Center

COIN – counterinsurgency

FM – field manual

FOUO – For Official Use Only

GEOINT – geospatial intelligence

IDP – intelligence preparation of the battlefield

JP – Joint publication

JRTC – Joint Readiness Training Center

MDMP – military decision-making process

NGA – National Geospatial-Intelligence Agency

NGIC – National Ground Intelligence Center

NSG – national system for geospatial intelligence

NST – National Geospatial-Intelligence Agency support team

NTC – National Training Center

OIF – Operation Iraqi Freedom

TOC – tactical-operations center

TTP – tactics, techniques and procedures

Successful Population Engagement from a Platoon Leader's Perspective

by CPT Vincent Bernatis

The following thoughts, notes, recollections and advice are a culmination of five months' work in Shah Wali Kot District, Afghanistan. Naturally, the author does not pretend he practiced or implemented each one of the following bullets flawlessly or every single time he went on patrol. However, these guidelines are just that, guidelines. Take them, mull them over, then try them and see how they work in your particular area of operations. Learning from others' experiences helps flatten the learning curve. Transforming these ideas into action will help keep you and your platoon safe while defeating the enemy in your chunk of Afghanistan.

- **Do your homework.** Research the villages you are visiting prior to each patrol. If it is your first patrol to the area, know the basic human geography such as tribal breakdown, means of income, etc. Your patrol further develops this knowledge. Review the names and faces of people you plan on meeting. If you have already been to the village, the people will appreciate your effort to learn their names, and it shows you care about their well-being.

- **Train your Soldiers.** Depending on the size of the platoon, your Soldiers will interact with almost 10 times as many locals as you, especially during key-leader engagements when the platoon leader focuses on one or two of a village's most influential people. If you are unsure of where to start your training plan, start with the next bullet.

- **Learn the language.** Simply being able to say, "Hi, how are you?" and basic phrases like

"Thank you for the chai" builds rapport. It also helps in intelligence-gathering by ensuring local nationals understand what you are saying. Operations are also more efficient; Handheld Interagency Identity Detection Equipment enrollment goes much quicker when Soldiers can complete the process without the assistance of an interpreter. Knowing simple questions like "Where are you from?" and "Where are you going?" helps make the HIIDES process feel less like an interrogation. It gives Soldiers a chance to get to know the people who live and work in the AO.

- **Send messages with non-verbal cues.** Watch how your target audience interacts with each other, with people they trust and with people they respect, then adopt those gestures. Hug people you

Generating laughs as well as a positive impact, a Soldier with 1st Platoon, Troop D, 5th Cavalry, practices his basic yet effective knowledge of Pashtu during a biometric enrollment. *(Photo by SSG Michael J. Nicolaus)*

have established relationships with (no, they won't kiss you because they've learned something about our culture, too), don't show the soles of your feet, remove your gloves when shaking hands and take off your glasses when talking with anyone you want to have trust you. Determine how much of your personal protective equipment to downgrade to reinforce your key points. Wearing your combat helmet during a KLE can show your awareness of insurgent presence or that the village's inhabitants need to do more to keep the area safe.

- **Beware of the children.** Do not waste your time trying to win over their hearts with candy, pens or other trinkets. The kindness is a fleeting appeasement that creates an ongoing safety situation for Soldiers when the kids return your kindness with rocks or attempts to steal from you. Furthermore, the elders of the village do not expect you, as the "malikh" of your tribe of warriors, to spend time placating their children's changing needs; you'll lose respect if you do. Remember, you are there to talk about serious issues that need real solutions, and the children cannot assist you in that effort. Lastly, if you do plan to provide humanitarian aid for the children, distribute it through the elders instead of giving it to the children directly. This demonstrates your respect for their position in the village hierarchy. It removes you from having to determine who gets what and how much. Be polite to the kids but maintain your professional distance; it is better for them to respect your authority than to like you.

- **Even at their worst, local-national security forces can be your best assist.** Do your best to remember that the Afghan National Security Force is not always going to be a perfect reflection of the standards, discipline and training of your platoon. However, their cultural understanding and ability to engage the populace from a different perspective has many operational and intelligence benefits. One of the greatest advantages occurs when you can incorporate Afghan National Police leadership into KLEs. They can refute outlandish assertions from village leadership and provide a better assessment of who is trustworthy, who is out for self-enrichment and who is generally willing to make their slice of Afghanistan a safer place. Every joint patrol is an opportunity for mutual learning. What they learn from us about security operations and fire and maneuver are evident in their knowledge of the physical and human terrain.

- **If you give a mouse a cookie, it is probably going to ask for a glass of milk and a whole lot more.** If you offer a well to the village, they are going to want two of them. It is always best to say "no" first and say "no" often. Afterwards, take time to sit down and determine whether whatever the locals happen to be asking for will really help you achieve any lasting or worthwhile impact. Consequently, most KLEs eventually turn into a business negotiation concerning potential projects for a particular village. Quid pro quo is the key to the discussion; if you are giving them something, make them meet you more than halfway. The money is not the issue, but their participation in legitimate government institutions is; make it a condition of the project and stick to your guns.

- **Treat people (and their land) with dignity and respect.** We often forget this simple idea. When done correctly, it saves lives. As the tactical situation permits, watch where you park your vehicles, tread lightly in farmers' fields, minimize the amount of damage you cause and take responsibility for broken items, no matter how small. We once searched a house based on intelligence, surveillance and reconnaissance reports that witnessed individuals flee to the compound after allegedly emplacing an improvised explosive device. Finding nothing to support this claim during an extensive search, we provided the man and his family with some humanitarian aid and a message that insurgents would not give him the same courtesy if they were to search his house. Two weeks later, the man approached our patrol element and led us to an IED that, subsequently, was safe. Treating him and his family with dignity and respect throughout is what distinguishes us from the enemy; more importantly, it keeps Soldiers safe.

- **Find new metrics for success.** As a combat-arms platoon leader, it is natural to measure success in more classic terms of enemies killed or captured, caches discovered and IEDs found or cleared. While these are undoubtedly important, leaders in the "hold" and "build" phase of counterinsurgency operations will find very little of their time devoted directly to insurgent actions and have to adjust their goals accordingly. Numbers of villages with schools, percentages of projects *not* destroyed by insurgents and numbers of village leaders attending the district shura are all indicators to gauge how your platoon is affecting the battlespace. These successes are as

Village elders working with Delta Troop, 5ᵗʰ Cavalry, on a cash-for-work project distribute shovels to their fellow villagers as children watch from a distance. *(Photo by SSG Michael J. Nicolaus)*

important to brief to your Soldiers as any tactical defeat of the enemy. It is important for them to know that what they are doing is working and that it is working well.

- **Speak softly and carry the biggest stick around.** The Afghans need to believe that you have the capability and willpower to defeat the insurgents: patrolling, security operations and a frequent presence in more troubled areas will demonstrate that fact.

Acknowledgement. CPT Bernatis modeled this article after David Kilcullen's "Twenty Eight Articles: Fundamentals of Company-level Counterinsurgency." While many of the points in Kilcullen's work apply at varying lengths to the platoon-level fight, the thoughts presented in this article are specifically for platoon leaders, noncommissioned officers and Soldiers patrolling at the interface between doctrine and practice.

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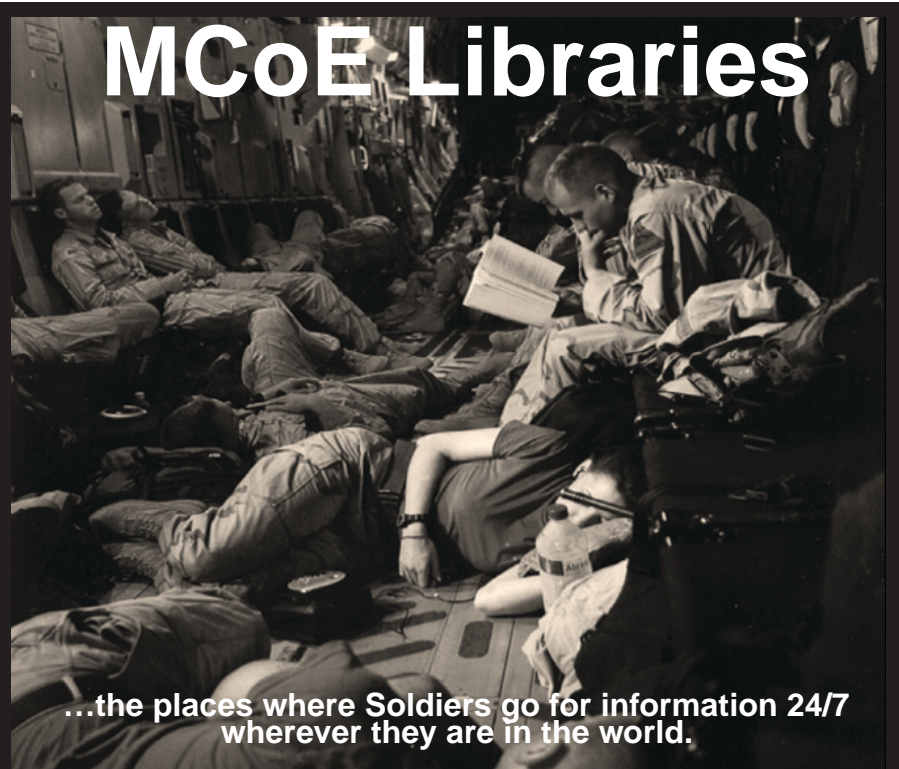
Notes
[1] TRADOC Pam 525-3-0, page i

Recently released

The U.S. Army Chief of Staff's Professional Reading List, accessible at http://army-live.dodlive.mil/index.php/2011/12/professional-reading-recommendations-from-the-chief/.

COIN Kinetic Targeting at Battalion Level

by MAJ Jeremiah Pray

Counterinsurgency environments are very complex and demanding for the Soldiers operating in them. As battalion task forces employ across their respective areas of operation, they each face unique struggles with equally unique ways to deal with them. However, there are some commonalities. This article entails those commonalities, providing observations and techniques to kinetically target the enemy that I developed over two years' experience as an intelligence officer in Iraq.

"Targeting" at the battalion TF level involves incorporating lethal and nonlethal resources and methods to destroy the enemy and influence the civilian populace, with the intended endstate of defeating enemy activities and denying sanctuary. The intelligence officer (S-2) plays a key role in targeting. He analyzes past enemy activities, identifies trends, determines enemy intent and makes recommendations to best target individuals or events. "Kinetic targeting," however, is primarily the TF S-2's responsibility. This process involves identifying individual targets, creating targeting packets on them, capturing them and detaining them.

To perform this process, you must understand who the enemy is, what motivates him, how his cell network is constructed, how to create a targeting packet, how to plan and coordinate the raid, and what the detention process is.

Enemy and motivation

Two categories define the enemy: leaders and active kinetic fighters. Active kinetic fighters represent most captured targets. Unemployed, uninformed, anti-American, recently released detainees and Islamic fundamentalists make up this group of men.

This group's major motivation for attacking coalition forces is their feeling that the current power or government is failing to provide them their essential needs: power, water, sewage and sanitation. Another motivation to join the insurgency is unemployment. The unemployment rates in Iraq and Afghanistan often exceed 50 percent (estimated). Many of these men did not seek employment because they always seemed to get by. However, as the free-market economy in their countries grows, so does their need to have money. Those who cannot afford to pay for essential needs and to support their families are potential recruits for enemy leadership to pay to conduct attacks on U.S. forces.

Islamic fundamentalists make up a small group of the active kinetic fighters in COIN. They are typically foreign fighters from "radical" countries confronting Americans in the name of Muslim jihad. These Islamic fundamentalists frequently assemble in places where they feel they have sanctuary.

An increase in attacks in non-active locations is the key indicator that foreign fighters are operating in the area. The number of attacks in the AO will suddenly increase and then suddenly stop. Typically, by the time you receive information that "outsiders" are conducting attacks in your area, they have often already left.

Cell-network construction

The insurgent cell is a group who works together to plan and conduct independent attacks and operations. Their plan is to destroy and undermine the current coalition-force-supported government.

A doctrinal template of an insurgent cell can logically be constructed because any insurgent cell of this nature has certain role requirements. The cell must have a leader (commonly referred to as the "organizer") and he is usually, but not always, the financier as well.

The leader meets with up to four individuals at a predetermined location. These meeting places can be the leader's house, business, other safe house, cafe/restaurant, mosque or by telephone. The leader may or may not meet with all these men at the same time. These men will be the only people who deal directly with the cell leader.

The four men/positions who directly report to the cell leader represent intelligence collection, operations, logistics and recruiting:

- The intelligence-collection representative is responsible for identifying the best locations and times to conduct attacks. He will have a group of observers – "scouts" (very low level) who may do nothing more than observe and report when coalition or local security forces pass by.
- The operations representative is responsible for planning the attacks and training the attackers. He will meet either directly with the intelligence-collection representative or with the cell leader and intelligence person at the same time.
- The logistics representative is responsible for providing the weapons and resources for the cell to conduct an attack. He will have access to multiple weapon caches and dealers. He will deal directly with the cell's financier to pay for these supplies.
- The recruiter will also deal directly with the financier to pay for financially motivated recruits.

The recruiter will target specific types of recruits in specific locations using various methods of recruitment. Types of recruits are:

- Islamic fundamentalists, recruited at religious gatherings and facilities like mosques – although often a religious leader such as an imam will be the recruiter in this case;
- The unemployed, recruited from low-income neighborhoods as they gather on city streets looking for employment;
- Former military, recruited through a network of their former military associates;
- Outsiders (foreign fighters), who will typically have pre-established lodging to use as a base of operations, possibly the recruiters' home; and
- Young members of the immediate family, the last source of recruiting for cell operatives but possibly the most common. In many Muslim cultures, family loyalty is their greatest security against cell mem-

bers providing information to co-alition and local security forces.

No matter the source of recruitment, all the operatives will have to meet at a predetermined location (safe house) to receive the mission and collect the necessary supplies. The operations representative and the recruiter are the only members of the cell required to be there with the operatives. From this point, the operatives are able to conduct the attack. The operations representative may or may not participate in the attack based on the attack's level of sophistication and the operatives' experience.

Cells are typically three- to six-man groups that are family-related in some way to one another. It is very important to note that one person may assume multiple roles in the cell. The leader may also be responsible for any of the intelligence, operations, logistics and recruiting duties – or all four duties.

Targeting packet

At battalion TF level, the S-2 creates most of the targeting packets. Occasionally a target comes from "higher," but these make up only about 10 percent of your total targets. This is because no one understands the area better than the TF that owns it; and more importantly, no one deals with an area's population more than that TF. The key to the targeting process is human-intelligence sources or tactical informants. Human information drives the overwhelming majority of all planned raids.

The human-intelligence collection team can be an incredibly useful resource at the battalion TF level. While not typically assigned directly to a battalion TF, tactical human-intelligence teams are most useful at battalion level. At battalion TF level, the HCT can participate in targeting meetings, and the maneuver companies can help move them throughout the sector to meet with sources. Often the reports the HCT generates are the only evidence the TF has on a targeted individual. Maneuver-company commanders know that it is through HCT reports that they receive information for future raids.

HUMINT sources primarily come from three places: "walk-ins," detainees and local security forces. Walk-in sources are those individuals who come to the gate of any forward operating base claiming they know something. The typical procedure is an intelligence representative will pick them up and question them. Reward typically motivates HUMINT sources. They know that if they provide useful information to coalition forces, either money or contracts will reward them. Occasionally, these sources will provide information that leads directly to a target. Mostly, however, these sources will have information on small munitions caches or potential "bad" individuals but tend to lack specifics on names, places and even offenses.

Detainees typically provide better information than "walk-in" sources, but to exploit these sources, the battalion TF must be very proactive. The targeting process does not end after pushing the detainee to the detention facility. The TF must work directly with the interrogators to help explain the captured individual's significance, the information leading to his capture and the additional information you are trying to gain from him. The THT can assist and "sit in" on the interrogations to help direct the line of questioning.

The best and most reliable sources come from the local security forces. With a good working relationship of information-sharing and providing needed resources, local security forces can provide excellent information for potential targets. Just as with any aspect of HUMINT, the right personality is the key to collecting information.

Although HUMINT is the primary method for collecting targeting information, it is not the only means of collection. Other collection assets such as signals intelligence offer excellent tools and resources.

Raid

Kinetically, the raid is one of the most effective TF-level operations. It serves the obvious purpose to capture suspected enemies but also serves the purpose to deny the enemy sanctuary through information operations. Even if the intended target isn't captured, the IO message that "if you are a bad guy, coalition forces will come and take you from your house in the middle of the night" is spread throughout the city.

Most raids we conduct are "cordons and knocks" for two reasons:

- The enemy threat level typically indicates that he will not resist; and
- The intelligence is not always exact and the targeted individual may be a few houses to the left or right.

If the wrong house is raided, but no "harm" is done and the occupants are treated with dignity and respect, they will often lead you to the right house.

Operationally, raids are the safest kinetic missions we do in the TF. Casualties sustained while conducting raids are typically far less than other combat missions, possibly due to U.S. dominance during limited visibility.

To conduct a raid you need two things: a target and a location. Typically, the targeting process gains the target. Key to that process is determining the best way to identify the target's location to the raiding element. The three most common ways to identify a target location provided by HUMINT (from least- to most-preferred) are:

- The source provides a hand-drawn map/map reconnaissance;
- The source obtains the grid with a Global Positioning System; and
- The source leads the raiding element on a recon or to the raid.

The problem with hand-drawn maps and source-map recons is that many in the populace do not often deal with maps and cannot exactly pinpoint the target location. Conceptualizing a city from above on a map is very unfamiliar to them.

The Falcon View imagery program can be used to help identify target locations

and when constructing operational plans. If the source is unwilling to do the recon with the raiding element, this may be the best information you will have, but be prepared to expand your search and cordon several houses/ blocks to the left and right.

The hand-held GPS is a valuable tool in the targeting process. If possible, the battalion TF should purchase several easy-to-use units for their sources to obtain grids. The only problem with this technique is the source needs to be trained in manipulating the GPS unit and understand that he needs to be as close to the target location as possible. He should also obtain a detailed description of the house to assist the raiding element in identifying the target location. By far, the best way to identify target locations is with a source-led recon. Obviously, the source's identity needs to be protected, so he is given a disguise (coalition uniform, neck gaiter to cover his face, sunglasses and helmet). If the source is willing to lead you to the target, there is a greater chance that his information is credible.

Detention process

Once captured, the target transports to the FOB for the detention processing. Once the detainee(s) is brought back to the FOB, the S-2 shop will surge on the paperwork for the detention packet. Detainees are pushed as soon as possible (typically within four hours from capture) to the detention facility. This allows the capturing unit to continue with its tactical missions. Any further questioning of the detainee can be done through coordination with the detention facility in a controlled environment.

After a raid (or series of raids) is conducted, it is important to gain an assessment of the effects on the insurgents and the community. Often a raid target is focused at a specific individual or enemy event (suspected June 21 rocket-propelled grenade shooter or suspected Aug. 15 improvised-explosive-device maker). If tactics, techniques and procedures for attacks stops completely, there is a good chance the perpetrator was captured, or someone close enough to the perpetrator was captured (same cell), which has the same effect of stopping that type of attack.

It is important to assess the community's reaction as well. If the raid target is innocent, the community's innocent members will feel that coalition forces indiscriminately target people and detain them for no reason, and the community will begin to look to the insurgency for security. To

circumvent this, engage the local community leader, who, after the target is detained, will often feel more comfortable talking about what or who he was involved with. Sometimes this leader will "vouch" for an individual who has been detained. If evidence on that detainee is weak, it may be more beneficial to release him to the local leader. The local leader will then be responsible for the target's actions.

COIN operations are fluid and constantly changing environments. The observations and techniques I developed worked well for me; however, they may not work in every COIN environment. The fundamentals of understanding who the enemy is and what motivates him, how his cell network is constructed, how to create a targeting packet, what is required for a raid, and how to detain a target once he is captured are what TF S-2s have to develop. What worked for me may not work well in other areas, but for TF S-2s preparing to deploy, these techniques are a good "starting point" for preparing for their mission.

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ACRONYM QUICK-SCAN

AO – area of operations
COIN – counterinsurgency
FOB – forward operating base
GPS – Global Positioning System
HCT – human-intelligence collection team
HUMINT – human intelligence
IO – information operations
TF – task force
THT – tactical human-intelligence team

Fighting an Uphill Battle – India Overcomes High-Intensity Skill Atrophy at Kargil

by MAJ E. Scott Walton

The Pakistani surprise incursion into the Kashmir region at Kargil in 1999 forced the Indian army to rapidly transition from a counterinsurgency posture to a more conventional approach. The Indian army eventually adapted under fire and exploited weaknesses in the Pakistani plan by applying massive firepower and isolating the enemy. The Indian army's initial setbacks, only two years before 9/11, provided an excellent example of where years of focusing on COIN operations caused degradation of conventional warfighting skills.

This is a lesson the United States should take to heart. In Iraq and Afghanistan, the U.S. military has mostly focused on securing populations rather than on large, synchronized operational maneuvers. When GEN Martin Dempsey was sworn in as the Army's 37th chief of staff in 2011, he expressed the desire to "rekindle our expertise in combined-arms maneuver" after having emphasized wide-area security operations over the last 10 years.[1] This shows that the U.S. military's focus has allowed many conventional skills sets to perish.

Let's look at lessons-learned as India stalemated in COIN operations for an extended period and was forced to rapidly transition to more high-intensity operations when the Pakistanis surprised them at Kargil.

Road to Kargil

Although an eventual strategic victory for India, its armed forces initially experienced setbacks due to ill-synched combined-arms maneuver, inadequate intelligence-collection capabilities, poor air and artillery coordination, deficiencies in training and poor acclimation to harsh terrain and climate. The Indian army's initial setback at Kargil stemmed from an almost-exclusive focus on COIN operations rather than a more holistic and full-spectrum approach throughout the 1990s.

The Indian army consumed the 10 years prior to Pakistan's incursion with COIN operations and was caught off-guard due to a degradation of conventional skills and capabilities.[2] Insurgencies have plagued this culturally diverse nation since its inde-

pendence in 1947 and have distracted its military's focus and resources. For example, the Maoist-inspired Naxalite insurgents have sought agrarian reform in nine Indian states since the 1950s.[3] The Sikhs' bids for partition also led to a violent insurgency that resulted in the deaths of more than 21,000 people in the Punjab region in the 1980s.[4] In addition, the Indian army committed considerable attention and resources to neighboring Sri Lanka, and its government has extended the fight against the Tamil Tigers.[5] Finally, the mujahedeen (freedom fighters) in Kashmir were emboldened by the Taliban victory in Afghanistan in the early 1990s and since have spread their insurgency east into the contested region.[6]

While these insurgent groups had a plethora of motives, the Indian government only used military force rather than working long-term political solutions to rebel groups' dissent. Several of these political groups have stymied the Indian army into area-security missions and have distracted focus from defending against conventional threats.[7] Pakistan recognized India's atrophy in high-intensity warfighting skills and sought to quickly seize the initiative and exploit those weaknesses. Therefore India's previous focus on COIN operations was both an underlying justification for Pakistan's attack and a reason for its initial tactical success.

After the battle, India's Kargil Committee Report concluded, "The heavy involvement of the army in counterinsurgency cannot but affect its preparedness for its primary role, which is to defend the country against external aggression." Pakistan contributed to the dilemma by supporting proxy insurgencies in Kashmir and further weakened India's ability to fight conventionally. For several reasons, the Indian government did not provide necessary oversight and long-term defense strategies to neutralize insurgencies and became too confident and complacent in its conventional capabilities.[8]

The strategic objective of Pakistan's limited invasion of Kargil in 1999 was to escalate the Kashmir regional dispute globally and drive political concession.[9] By seizing the initiative and quickly securing terrain across the line of control,[10] Pakistan be-

lieved it could compel the United States to negotiate a ceasefire agreement advantageous to Pakistan.[11] In addition, Pakistan's self-image of martial superiority and Prime Minister Nawaz Sharif's desire to consolidate domestic popularity fueled the country to attack its main adversary.[12]

Pakistan believed that nuclear parity restrained India's political leaders, making them weak and indecisive, which then created an opportune time to exploit the political climate. India's perceived nuclear restraint and Pakistan's nuclear capabilities prevented a major conventional response by India. Nuclear parity thereby negated India's superior conventional force and leveled the playing field. Therefore, Pakistan had nothing to lose from a surprise attack. In addition, Pakistan was willing to accept risks in its tactical plan since it believed that the United States would immediately intervene and negotiate a ceasefire due to the potential implications of a nuclear exchange.

Pakistani incursion

Operationally, Pakistan's objective was to deny India use of the 134-kilometer-long Srinagar-Leh National Highway. Cutting this line of communication would isolate Kargil from the Indian mainland and reduce resupplies and reinforcements. Subsequently, Pakistan sought to secure a foothold in Kargil to provide further infiltration routes into the Kashmir.[13] Publicly GEN Pervez Musharraf claimed the operation was defensive in nature and continued to protect the border from Indian attack.[14] However, Pakistan's plan was logistically not feasible and destined to fail over time due to its heavy reliance on an expeditious foreign intervention to broker a ceasefire.

In late Winter 1999, 1,700 Pakistani soldiers and local guerrillas infiltrated an 80-kilometer unobserved gap in the LOC by foot and helicopter. The Pakistanis seized the high ground, built supply caches in the area and acclimated to the environment before initiating a fight with the Indian army at the end of May.[15]

Most of the fighters were the paramilitary Northern Light Infantry, accustomed to the area and the local conditions. They deployed in small groups but with substantial firepower in the form of light cannons, mortars and surface-to-air missiles.[16] The NLI carried artillery pieces up hilltops with mules and assembled them in position. They expertly used dispersion and concealment of their SAMs' positions.

By the end of the winter, the NLI and Pakistani soldiers occupied 130 guardposts in the LOC, with a frontage of 150 kilometers and a depth of only four to eight kilometers.[17]

Although there were fierce artillery exchanges prior to the conflict, the infiltration was a surprise to the Indians since they underestimated Pakistan's ability to attack in the restrictive and harsh terrain.[18] Shepherds, hired by the Indian army as scouts, did not detect the invaders until May 3. By May 11, India's 15th Corps reported 160 to 240 intruders in eight locations.[19]

Initial counterattack

Despite being unready, the Indian army sought a rapid and decisive response to the infiltration. By the end of May, India had amassed 19 infantry battalions and several artillery regiments prepared to attack. Labeled Operation Vijay (Victory), India's goals were to isolate intruders to prevent reinforcements; force a withdrawal of all intruders back across the LOC; and occupy key terrain along the LOC to prevent further infiltration.

Although a counterattack into Pakistan was successful during the 1971 war, India decided not to continue across the LOC to avoid further escalation and nuclear retaliation.[20] Despite overwhelming combat power in the region, India's initial counterattack failed due to weak intelligence, insufficient synchronization, lack of training of forces in harsh climate and terrain, and inadequate air and fire support.

Weak intelligence. Mediocre Indian intelligence collection, analysis and dissemination led to ineffective initial ground operations during the Indian counterattack. Almost all Indian intelligence assets were in one organization, the Research and Analysis Wing. The RAW, lacking staff and technology, failed to identify the warnings of increased shelling in certain areas and NLI emplacement of caches since the previous autumn. In addition, Winter Air Survival Operations personnel only conducted surveillance of the valleys, therefore strictly focusing on large mechanized avenues of approach and neglecting other, smaller mobility corridors.[21] Likewise, ground scout patrols only followed open paths along dried riverbeds.[22] By neglecting the ridges, Indian collection assets missed the proper location for NLI infiltration and provided inaccurate and irrelevant intelligence.

Lack of acclimation training. When the initial Indian troops deployed, they lacked enough equipment and training and were not acclimated to wage combat operations at high altitude. Poor training in mountain operations forced the Indian infantry to move along open terrain, thus becoming easy targets to indirect fire.[23] In fact, more than half the Indian casualties were from artillery.[24] The Pakistani ability to control the LOC and interdict Indian resupply along the Srinagar-Leh Highway made it difficult to move artillery within range to cover Indian maneuver. Infantry battalions, with no indirect-fires support, attacked uphill against a fortified enemy with superior firepower.[25] Initially this daunting task proved futile.

Inadequate air and fire support. Insufficient air support compounded issues on the ground. The Indian air chief was reluctant to use air power to avoid the possibility of a Pakistani nuclear response. Therefore, there was no air support until May 26, almost 23 days after first reports of the intrusion. Once committed to the conflict, Indian air power had limited impact on the outcome of initial battles.[26] Pakistani SAMs and the mountainous terrain negated the superior Indian air force. After NLI forces downed several Indian planes, the air force instituted ceiling restrictions and prevented low flights from supporting ground commanders' assaults.[27]

Transitioning to high-intensity ops

Despite initially having an advantage, Pakistan's flawed and inflexible tactical plan was doomed from the start. Pakistan's plan eventually faulted since its forces lacked resupply capabilities and didn't plan for enough manpower to sustain its defensive positions over an extended period. But primarily, the Pakistani tactical plan eventually failed because the United States did not intervene immediately to broker a ceasefire – the United States refused to alienate a democratic and economically important India and did not want to set precedence by allowing aggression to change the global status quo.[28] Pakistan wasn't prepared to sustain the fight over the long haul after no immediate U.S. intervention.[29] As time went on and the United States had not negotiated a ceasefire, the Indian army was able to adapt and ultimately seize the initiative.

In addition to subscribing to false strategic assumptions, Pakistan's army and the NLI didn't have a concerted defensive scheme. Instead, they had isolated outposts of about 30 men fighting independently.

The effects of terrain, climate and the inability to reinforce battle losses ceded the initiative to the Indians.[30] Because of the steep cliffs, the Indian army required a 9-to-1 force ratio for a frontal attack uphill, as opposed to the normal 3-to-1 ratio re-

quired. Therefore, Indian units eventually determined the best way to defeat Pakistani positions was to surround them, overwhelm them with massive artillery prepping and attrite them over time.[31] This tactic was far more successful than an all-out frontal assault.

The perfect example of this change in tactics and turning point of this war was the Battle for Tololing (Point 5140) May 22. With little flexibility and no resupply, several 30-man Pakistani outposts fought to the death in place. While they had been hard to detect, these small outposts were not large enough for a sustained defense. At Tololing, the Indians exposed Pakistan's logistical failures, labor shortcomings and a lack of depth in their defensive perimeter.[32]

Ceasefire, casualties

U.S. President Bill Clinton negotiated a ceasefire July 4, 1999, restoring the pre-conflict conditions and LOC. Indian forces, both air force and army, had 474 killed and 1,109 wounded, whereas Pakistan suffered about 700 deaths in 74 days of fighting.[33] In addition, the fighting displaced about 20,000 civilians from local villages in the Kargil region.[34] Internationally, the world was less stable since the Kargil conflict directly contradicted two of the most widely acknowledged political-science theories: the democratic peace theory and nuclear peace theory. Both theories attempted to provide hope for long-term security and stability.[35]

Although Sharif claimed victory for Pakistan, the Kashmir conflict was an international issue and his nation's aggression further isolated Pakistan globally. Even China was afraid to support Pakistan since its support could bring scrutiny to its oppression of Tibet.[36] However, the defeat's most important ramification was how it led to Musharraf's replacement of Sharif via coup the following October. A decisive reason for the leadership split was the prime minister's blame on the military for the attack and its ultimate failure.[37] On the other hand, although Sharif denied specific knowledge of the plan's details, the Kargil Committee Report claimed that he was completely aware.[38]

Many of mujahedeen and NLI continued fighting because they did not perceive the ceasefire as legitimate.

Aftermath

Musharraf argued that the Indians made a strategic mistake by committing almost all military resources to Kashmir, thereby allowing Pakistan to attack with little resistance in other parts of the country. Despite Musharraf's claim, the conflict worked to India's favor because Pakistan lost credibility with the United States. India became closer to the United States after the Kargil incursion despite performing nuclear testing the previous year that the United States opposed.[39] India, with combat deaths dispersed across most of the country, also experienced a surge in patriotism and solidarity.[40] However, this patriotism often led to revenge and excessive use of force on other groups with political dissent.[41]

On defense issues, India has firmly resisted change over the past 52 years.[42] Few changes have taken place in India's defense apparatus despite the 1962 defeat to the Chinese, the 1965 stalemate with Pakistan, the 1971 victory over Pakistan and inability to make progress in several insurgencies and political unrests. Although militaries tend to stagnate after their last victory, defeat usually breeds innovation. However, the Indians failed to adapt after their 1962 loss to the Chinese, and they made many of the same mistakes again at Kargil in 1999 in similar terrain and conditions.

Indian Prime Minister Jawaharlal Nehru's desire to develop an apolitical officer corps at India's independence had long-term implications for the country's defense-policy formulation. For example, at Kargil, the Indian service chiefs were both the operational commanders in the field and strategic staff proponents. Since they tended to focus on their first duty or on the war at hand, they often neglected important long-term issues and reform in their other duty as service chief.[43] Despite becoming a nuclear power, the Indian army remained vulnerable in the 1990s to conventional military threats due to its failure to develop a comprehensive defense strategy and its inability to alleviate the impact of multiple insurgencies.

Lessons-learned

Today the American armed forces have likewise fought 10 years of mostly COIN operations in Afghanistan and Iraq. In looking at future wars, former Secretary of Defense Robert Gates said in 2010 that "[t]here was a concern that our force is too focused on [COIN] and has lost its edge for complex, conventional operations involving multiple brigades or divisions."[44] In obtaining balance, the United States might learn from the Indian army's initial setbacks at Kargil only two years before 9/11.

Indian initial weakness in high-intensity skills at Kargil in 1999 led to poor battlefield coordination and initially negated India's conventional superiority. Soldiers were unprepared for the harsh Himalaya conditions. Had it not been for Pakistani false strategic assumptions and lack of resourcing, the Kargil conflict could have been more detrimental to India. The Indian army eventually adapted under fire and exploited weaknesses in the Pakistani plan by isolating the enemy through massive firepower.

India's lack of focus on high-intensity skills was mostly due to significant COIN operations throughout the country, partly fueled by Pakistan in the Kashmir. The Indian army found itself "fighting an uphill battle" at the beginning of the Kargil conflict since area-security missions had distracted its focus from conventional capabilities. Adaption solely based on COIN led to defeat for the Indian army, and re-adaption to high-intensity conflict led to victory. Therefore, the key to military preparedness is balance.

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ACRONYM QUICK-SCAN
COIN – counterinsurgency
LOC – line of control
NLI – Northern Light Infantry
RAW – Research and Analysis Wing
SAMS – surface-to-air missiles

9 as 1:
Building Teams and Strengthening Soldier Resilience and Unit Performance

by MG Robert B. Brown

Second of a three-part series

> *"An army is a team. It lives, sleeps, eats and fights as a team." – GEN George S. Patton*

The last 10 years of war have reiterated the age-old adage that war is the most rigorous and demanding of all human endeavors. The greatest asset of the U.S. Army is the American Soldier. The Army's, and subsequently our nation's, success hinges on the ability of our leaders to build effective teams and on the resiliency of our Soldiers. The human dimension is critical as we strengthen our Army "because of the importance of the squad's effectiveness to overall mission success and the thin margin for loss, careful consideration must be given to the human dimension. Trust and understanding among Soldiers and leaders, learning and adapting to the environment and physical and cognitive load-sharing are essential for successful performance in training and operations."[1]

The operational tempo over the last 10 years, short dwell times and turbulent manning across units have combined to create a challenge for units to effectively build teams. Exacerbated by the combat losses units face in Afghanistan and Iraq, it is all the more important to make time to build the strength and foundation of the unit as a team prior to deploying. It is a false assumption that since we are part of the Army and a unit, there will be an effortless melding of a team before deployment. Although training together is part of the team-building process, research has shown there are benefits to using a team-building process to solidify a unit as a team, empower subordinates and truly get to mission command through team building. In an effort to emphasize team building and the need to enhance resilience, this article lays the groundwork for education and a way to build your team and resilient Soldiers.

Building and maintaining cohesive teams

It is intuitive for most that focusing on building the team and cohesion leads to a more successful group dynamic. "We know that service members in deeply stressful situations can often make it through successfully, as long as they belong to socially cohesive groups and as long as those with authority over them (who are supposed to be "on their side") do not betray them," said Dr. Ian Coulter, CPT Paul Lester and LTC Jeffrey Yarvis in the August 2010 supplement to *Military Medicine*. Due to the high-risk nature of Army combat-unit missions, it is especially imperative that leaders focus on building strong foundations of trust, cohesion, empowerment and mission command. The highly decentralized nature of modern warfare, the modern fog of war and the inundation of information require an environment of highly trained and cohesive teams.

Cohesion is a "dynamic process that is reflected in the tendency of a group to stick together and remain united in the pursuit of its instrumental objectives and/or for the satisfaction of member needs," according to Carron, Brawley and Widmeyer. According to MacCoun, there are two distinguishable aspects of cohesion: social cohesion and task cohesion. "Social cohesion refers to the nature and quality of the emotional bonds of friendship, liking, caring and closeness among group members," said Mac-

Figure 1. The CSF-PREP skills of building confidence, goal setting, attention control, energy management and integrating imagery help give warriors the tools to achieve mental strength.

Coun. "Task cohesion refers to the shared commitment among members to achieving a goal that requires the collective efforts of the group."[2]

These are critical aspects for leaders to consider when building a military team. Simple concepts of mutual trust, a shared vision and a team identity are the foundations of a team. Coach Mike Krzyzewski amplifies this in his simple, but powerful, statement: "People want to be on a team. They want to be part of something bigger than themselves."[3]

The team-building process assists units and groups to further develop and maintain cohesion, and to create an atmosphere that capitalizes on each member's unique talents and abilities.[4] According to Yukelson, there are seven characteristics of great teams: "shared vision and unity of purpose; pride in organization and team identity; meaningful and inspiring mission; complementary roles and synergistic teamwork; individual and mutual accountability; internal leadership and peer/social support; and open, honest and ongoing communication."[5]

Fort Benning's new Comprehensive Soldier Fitness-Performance Resiliency Enhancement Program offers a team-building exercise used throughout the Army and extensively in industry as a method for laying the groundwork for building teams. It is founded on the concept of creating a shared vision through a collaborative 360-degree process with input from across all levels of the organization. This process is achievable at any level from squad, platoon, company, battalion and brigade, etc.

The team builder is known as the "Great Teams Exercise."[6] Regardless of level, the leaders need to pull subordinate leaders together for a half-day exercise. Involving the entire leadership allows the commander to establish immediate buy-in; it also allow a holistic development of the vision for the team and supports empowerment and mission command from the beginning, as opposed to dictating top-down vision.

The task/purpose of the exercise, conducted in two phases, is to develop a team philosophy and purpose to enhance cohesion and organizational performance. Phase 1 consists of five steps: (1) Discuss each individual subordinate member's "great team"

"The purpose of fighting is to win. There is no possible victory in defense. The sword is more important than the shield and skill is more important than either. The final weapon is the brain. … All else is supplemental." – John Steinbeck

story and the defining characteristic that made that team so special. (2) As a group, identify and vote on three to five traits from Step 1 that apply to your unit/team. (3) As small groups, identify several appropriate behavioral indicators and attitude/belief statements for each "great team" characteristic. (4) Build a team creed with picture and motto and present to the group for approval. (5) Establish each individual's commitment within the group to the newly established organizational creed/vision.

Phase 2 consists of the sixth and final step. Print the team-creed posters and personal copies for each section; distribute the posters and cards throughout the unit; and post them in dining facilities, motor pools, barracks, command posts and headquarters. Greet Soldiers throughout the unit's deployment process into

theater, throughout the movement to Kuwait and into country with the creed posted around for all to see and reinforced by the chain of command throughout the deployment.

After building the team, maintain it through continued empowerment of junior leaders within the organization. This empowerment leads to buy-in from team members and fosters a climate of initiative. Leaders lead by example and maintain a positive "glass is half-full" attitude, which further enables Soldiers to truly enjoy their jobs and have fun. The entire team is accountable for their actions as individuals but also as teammates; all Soldiers can truly understand the second- and third-order effects of their actions on the team as a whole. The unit creed serves as a living document very much similar to the powerful

"Chance favors a prepared mind." – Louis Pasteur

effect of the Soldiers, Noncommissioned Officer or Ranger Creed. The team's confidence grows, the unity within the team grows, and Soldiers become more agile and adaptive as they mature within the team. The unit is further empowered and able to manage the multiple transitions that happen repeatedly on the modern, contemporary battlefield.

Cognitive-skills development through CSF-PREP

Achieving overmatch will also require a paradigm shift in embracing key aspects within the human dimension focused on training squad members' cognitive development, specifically leveraging capabilities to enhance psychological fitness. Psychological fitness, recently defined in *Military Medicine*, is the "integration and optimization of mental, emotional and behavioral abilities and capacities to optimize performance and strengthen the resilience of warfighters."[7] To advance the 9-as-1 concept, and to create squads into high-performing "Olympic-caliber teams" that can operate comfortably in a volatile and uncertain environment, may require leveraging the emerging and promising non-material capabilities of the CSF-PREP.

In recent years, elite professionals, Olympic and professional sports teams and coaches have turned to, and sought after, an advantage in beating the odds of a "fair fight" on the playing fields through deliberate training efforts to achieve their team's mental "edge." These mental-edge programs have now become common protocols of practice in multiple professions and are permanent capabilities at Olympic training centers. Existing evidenced-based research on mental-skills training also confirms small, but significant, positive effects, which is congruent with the concept of gaining an edge. So too should our squads of "tactical athletes" be collectively trained to achieve this important X-factor, especially when the stakes are strategic and the consequences are often permanent.

The fields of neuroscience, sports and performance psychology, and health psychology all show that psychological fitness underlies and significantly influences every facet of human performance – from the execution of simple motor tasks to complex decision-making skills. In addition, the critical attributes of leader development, which include confidence, composure, focus/attention control, resilience and, most importantly, the warrior ethos are similar psychological constructs that can also best describe a high-performing squad.

CSF-PREP provides an explicit mental-strength education and training program that assists Soldiers and leaders in learning how to use their minds most effectively – e.g., "how to think"
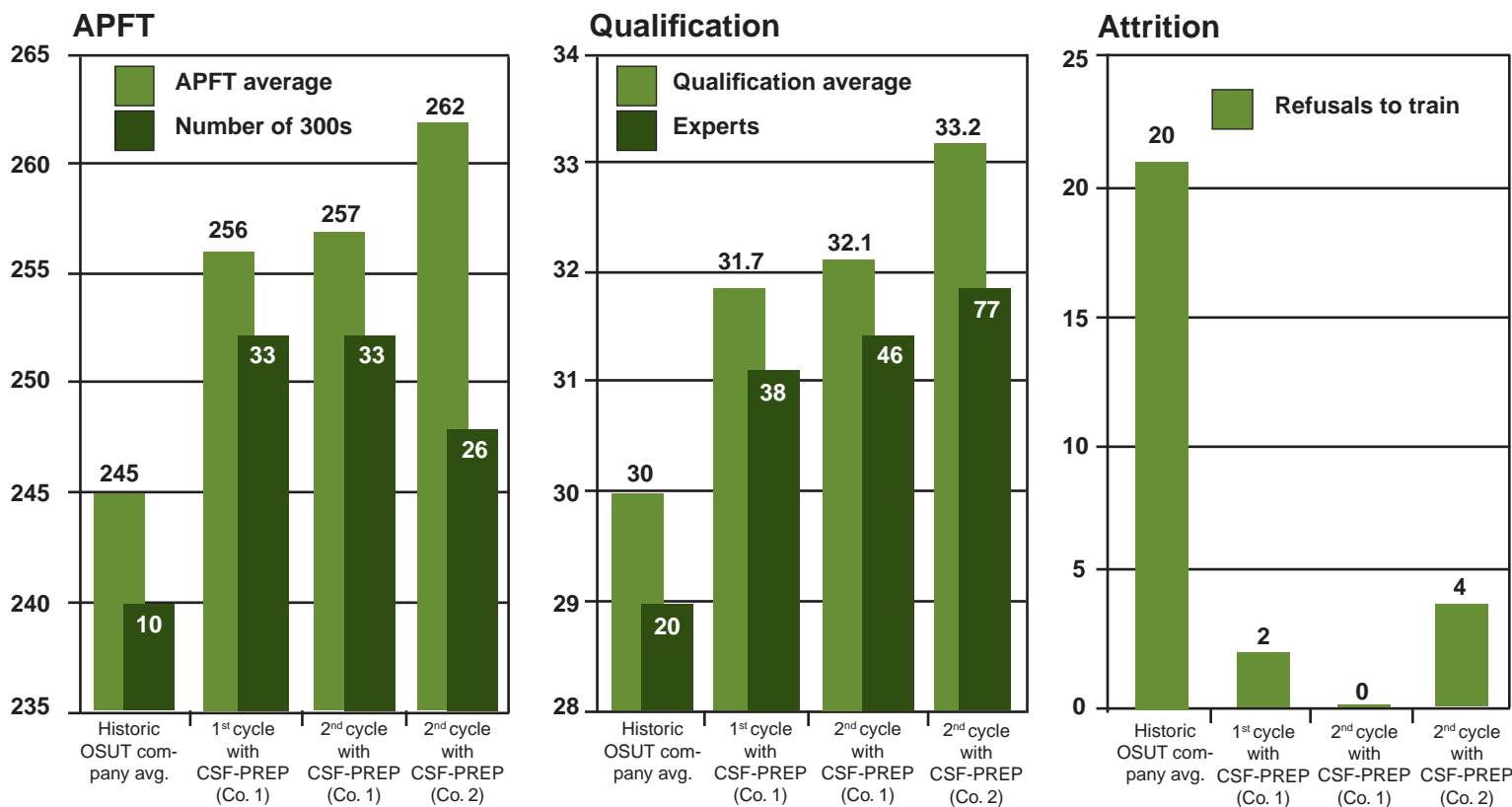
Figure 2. *These graphs represent data from CSF-PREP implementation of mental-skills training in 198th Infantry Training Brigade, specifically 2-19 Infantry. The unit supplied historic One-Station Unit Training company averages (assuming a unit size of 200 Soldiers) and compared performance on tasks that were of focus for mental-skills training conducted. Important to note is that both companies represented in the graph performed at this historic OSUT company average before implementing CSF-PREP.*

vs. "what to think." CSF-PREP mental-skills training helps close the leader-development gap of the "how" in accelerating and operationalizing these essential attributes, which are critical for a squad to collectively perform to its upper range of potential.

Proof of principle: 198th Infantry Training Brigade case study

The first-cycle mobile training team session, conducted in August 2010, was part of a MTT comprised of two performance-enhancement specialists/trainers who applied a train-the-trainer approach to mental-skills development. Over two days of training, company leadership and staff (primarily drill sergeants) were supplied in-depth training on the performance-enhancement model and the personal performance plan applied to OSUT tasks.

The PREP trainers worked with staff to create seven mental-skill lessons for trainees and ways to reinforce and generalize mental skills across tasks and training in the field. The performance increases in qualification and the Army Physical Fitness Test were attributed to the unit's mental-strength development, learning during lesson plans and drill sergeants' continuous reinforcement.

The unit considered the attrition-rate decrease to be a positive by-product of mental-toughness training that improved motivation and confidence, leading to a decrease in voluntary withdrawals (refusal to train). A highlight not reflected in the graph was the company's breaking of the battalion record on number of 300s on the APFT (highest-point-value achievable), previously held at 17 and nearly doubled with 33.

The second-cycle MTT in January 2011 provided more in-depth training and focused on the same company as Cycle 1 to replicate data, but also added a second company to avoid generalization of the results. CSF-PREP trainers and the company commander adjusted the lessons and approach based on lessons-learned. For Company 1, drill sergeants took on most of the teaching and reinforcing, with support by leadership. Trainees and the teaching approach of drill sergeants, as one of mentorship and coaching, attributed these positive results to the personalization of mental skills. Company 1 duplicated their APFT record of 33 300s and slightly improved their average. They also improved their average in qualification and the attrition rate, showing not only a replication but also an improvement of their extraordinary results. Company 2 showed a substantial increase in APFT average and number of 300s, surpassing the old battalion record of 17, and a huge increase in qualification average and number of experts. Their retention rate was also a highlight and showed that continued by-product of CSF-PREP training.

Conclusion

Raising the bar of performance across the squad, while closing the gap in the performance differences between each squad member's capabilities, will require a more collectively elite mindset than the thought that "the squad is only as good as our weakest Soldier." Beyond the necessary requirements for team-building and resilience training, CSF-PREP offers an education, acquisition and application model of training using evidenced-based best practices in teaching mental skills for harnessing the warrior mindset. The training model includes a foundation of understanding the psychological aspects of elite performance, building confidence, attention control, energy

> *"It profits an army nothing to build the body of a Soldier to a gladiatorial physique if he continues to think with the brain of a malingerer." – Samuel Lyman Atwood Marshal*

management, visualization/imagery and, most importantly, goal setting. With application, these mental-skill techniques, tactics and procedures are interrelated and designed to enhance Soldiers' physical and cognitive performance, self-awareness and self-regulation, which are key ingredients for empowerment and initiative. Educating and training squads collectively in a tailored, relevant mental-skills package may have the synergistic effect of creating a more mature, elite and cohesive squad mindset – an essential combat enabler for achieving excellence and winning tip-of-the-spear, lethal and nonlethal actions of the 21st Century.

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ACRONYM QUICK-SCAN

APFT – Army Physical Fitness Test
CSF-PREP – Comprehensive Soldier Fitness-Performance Resiliency Enhancement Program
OSUT – One-Station Unit Training
MTT – mobile training team

ARMOR Closer to Transition to Web-based Publication

by Lisa Alley

We've been talking in the pages of *ARMOR* about our transition from print media to Web-based publication. To familiarize the Armor community with more about what we plan, we'll provide more details about e*ARMOR* in this article.

As many Armor community members know, in Summer 2011 the Chief of Armor decided that the Armor School would divest printing *ARMOR* and transition to Web-based operations (only) via an enhanced Website called the e*ARMOR* portal. The Chief of Armor also decided to print *ARMOR* and operate e*ARMOR* concurrently for about a year to develop and mature e*ARMOR*. Armor School leadership set e*ARMOR*'s initial operational capability at 3rd Quarter Fiscal Year 12, with full operational capability by Sept. 30, 2012. At this time, print operations will cease as of Feb. 28, 2013, when the printing contract ends, or at the change of FY the autumn before this, depending on funding.

The bottom line up front is that, once *ARMOR* ceases printing, the Armor School will continue to provide professional-development information via the e*ARMOR* portal; the e*ARMOR* portal will include an electronic professional-bulletin section (also called e*ARMOR*) that will replace the print edition of *ARMOR* and will assume *ARMOR's* mission and content roles. In effect, e*ARMOR* picks up where *ARMOR* leaves off. There is only a change in delivery mechanism of the information.

Until IOC, we'll be working behind the scenes to develop the current *ARMOR* Website (https://www.benning.army.mil/armor/ArmorMagazine/index.htm) into the e*ARMOR* portal containing the on-line-only version of the magazine (also called e*ARMOR*), as well as other features. In other words, you won't see much change in the Website until April or so. And, for a time after FOC, there will be several entities:

- *ARMOR* as a printed magazine;
- *ARMOR* pages placed on the Web in paginated Portable Document Format;
- e*ARMOR*, which will be 1) a smaller selection of articles than *ARMOR*, 2) not contained within *ARMOR* and 3) published/updated more frequently than *ARMOR* is; and
- The e*ARMOR* portal, which we will develop as the Armor School's point-of-presence on the Internet.

The overlap is to not only ease the transition, but for e*ARMOR* to seamlessly assume *ARMOR*'s content and mission as stipulated by Army Regulation 25-30, the authority under which *ARMOR* publishes. Per AR 25-30, the Chief of Armor is responsible for providing a forum to explain, or for Soldiers under his proponency to digest or debate Army doctrine, policy or other definitive information; and to provide mission-related professional dialogue between the Armor School and Armor Branch soldiers – *ARMOR* magazine has traditionally been this forum. After *ARMOR* ceases to appear in print, however, *ARMOR*'s mission will continue and perhaps even broaden, as the e*ARMOR* Website will include the public domain. E*ARMOR* will provide information, which can be discussed on social media such as a Chief of Armor blog, and the e*ARMOR* portal will also link to the blog – creating a synergy of centrally located, easily found information sources.

Some things won't change in the transition from *ARMOR* to e*ARMOR*. In addition to providing a means of mission-related dialogue, e*ARMOR* will continue to focus on Armor and Cavalry Soldiers up to battalion and brigade level as well as on Army-wide concerns and issues that affect Armor and Cavalry Soldiers, and e*ARMOR* will continue to discuss training, equipping, employing and leading mounted Soldiers.

Portal features

However, e*ARMOR* will be more than just a few articles not printed in *ARMOR*. Further beyond the plans discussed above is our intent that the e*ARMOR* portal eventually become a one-stop point for "all things Armor" on behalf of the Chief of Armor – the school's point-of-presence, as mentioned:

- Reorganizing the current *ARMOR* Website to a portal will enhance content and improve the Website's look and feel. *ARMOR* archives will still be available and perhaps even easier to find.
- Posting Armor-specific news and announcements as they are released and e*ARMOR* articles biweekly will make information more timely and will locate Armor-related news in a centrally accessible place.
- Making popular things easy to find, such as the Distinctive Unit Insignia currently on the inside back cover of the print edition, will help reinforce branch esprit de corps.
- Exploiting the wealth of historical knowledge *ARMOR* readers seem to have by establishing a "historical series" (featuring notable Armor leaders as well as Armor-related battles, battlefields and equipment, for instance) should increase a sense of "ownership" in our readers.
- Providing a central location for links to Armor School social-media presences will enable the Armor community to better navigate the Internet for Armor-specific information.
- Launching Armor-centric multimedia products such as videos and slide presentations will give visually oriented people information in the format they prefer.

As the e*ARMOR* Website design will be done in content "modules" (see artist's concept, Figure 1), featured content will be easy to find and no more than a click or two down from the portal homepage. Some of the features planned are:

- The e*ARMOR* module will launch both the archived print edition and the electronic-only edition of the PB, plus some "housekeeping" stuff (e.g., operations-security form and biographical worksheet, submissions guidance). Published *ARMOR* magazines will be posted to the Web from the earliest available edition through current editions. It is important to our readers to be able to access and search our archived editions, so our archives are priority for e*ARMOR*. Right now, although some archives are available electronically, they are behind a firewall, so we'll work to get articles/editions posted "in the clear." We'll also work with the Maneuver Center of Excellence's Donovan Research Library to link to articles and papers the library has in its collections. Professional

Figure 1. *Artists concept of the eARMOR portal design.*

ments, etc. Again, the intent is a "one-stop" venue for our readers' convenience, assisting with their professional development.

● The "Armor Mobile" module will offer links to Armor School social-media presences such as Facebook, Wikipedia, video-sharing sites and a blog, which will enable the Chief of Armor to host/conduct a professional dialogue. As we move to Phase II and beyond, we may have e*ARMOR* available for Kindle and other mobile-device features for Armor professionals on the go.

● The "Armor Images" module will contain photo collections and videos generated at the Armor School, plus links to photo collections posted on photo-sharing sites such as Flickr, links to videos posted on video-sharing sites like YouTube and Vimeo, or links to presentations posted on a site such as Slideshare. We'll offer the Armor community Armor-centric visuals in addition to the text-focused information the e*ARMOR* module will feature.

● The intent of the "ArmorCasts" module is to offer audio transcripts and possibly podcasts of leader speeches and other broadcasts/audio casts.

● The "Armor Heritage" module will not only link to the Armor School historian's and museum's efforts as part of the "one-stop" spirit of the portal, but will also add interactivity in the historical series unique to the e*ARMOR* portal. We plan the historical series to have both training utility as well as to engage our audience. For example, maps may be able to both expand in view and contract to focus on a geographic area, or topography may turn to a different perspective to enable the viewer to visualize a battlefield. Content may include features on famous Armor battles, which would contain interactive maps; basic Armor and Cavalry history set up on an interactive timeline; or a virtual tour of the Armor and Cavalry museum (or links to such a virtual tour if the museum itself develops this). The "Armor Heritage" module will also feature include Armor and Cav DUI, set up like color posters and downloadable.

● The "Armor Links" module will begin with links to the Armor School homepage, Office Chief of Armor and to the Websites managed by the brigades that are part of the Armor School (192nd Infantry Brigade, 194th Armor Brigade and 316th Cavalry Brigade). In Phase II of this transition, it's likely other links will be added, such as to professional reading lists, etc.

● The "Armor Feedback" module may contain vote/like functions (i.e., "like" ratings similar to Facebook) for individual stories. Also in this module, readers may vote for their favorite article of each e*ARMOR* edition and their selection of best writer of the year – this includes both print and e*ARMOR* writers. This module will also include a Web-based feedback form.

development is still our focus – this won't change from *ARMOR*'s mission.

● The "Armor in Action" module will contain Armor Branch-specific announcements and Armor-related news stories, posted as needed. We'll gather these from various sources, such as Army News Service, and provide them in this "one-stop" venue. As we develop this module, we'll make it available via Really Simple Syndication subscription ability, if possible, so that the Armor community will receive immediate alerts when new information is available in this module.

● Closely related and therefore positioned next to the "Armor in Action" module is the "Army Tracks" module, which will link Army-wide stories of general interest, such as leadership changes, promotions, careers, deploy-

Article clearance

As we work toward total Web-based publication, authors submitting manuscripts for publication in 2012 may opt to be published in *ARMOR* or e*ARMOR*. However, whether submitting for *ARMOR* or e*ARMOR*, we must have a completed OPSEC certification form – which includes Public Affairs' certification of the security, accuracy, policy and propriety review in accordance with AR 360-1. Per AR 360-1 and supported by AR 530-1 (the OPSEC regulation), authors are responsible for getting their own work reviewed and cleared for public release to practice "security at the source." *ARMOR* and e*ARMOR* are/will be distributed worldwide in the public domain and therefore must not include any sensitive, For Official Use Only or classified information – thus the clearance requirements.

To assist with this, among the "housekeeping stuff" on the e*AR-MOR* portal, we'll provide a blank OPSEC certification form, which includes a place for Public Affairs to sign off, and a blank biographical worksheet for author bio notes. Or, contact *AR-MOR*/e*ARMOR*'s editorial assistant, Jenny Forte, for the forms by emailing jenny.forte@us.army.mil.

Important: Whether submitting for *ARMOR* or e*ARMOR*, your article may not be copyrighted or include copyrighted items. Before including photos captured from the Internet with your article, please check the copyright terms on sites such as Flickr. Your best bet is to retrieve photos from Army News Service or the Defense Video and Imagery Distribution System sites.

In summary, we envision that e*ARMOR* will reach beyond the Armor School classroom and provide food for thought across the globe as Armor Soldiers and leaders dialogue about topics presented in the schoolhouse and in our PB articles. *ARMOR*, the Army's oldest PB, has always led the way, and hopefully we will establish a paradigm for other PBs who face the same transition.

*Lisa Alley is **ARMOR**'s editor in chief. The Keith L. Ware award-winning editor has spent most of her 29-year uniformed and civil-service career as an editor and staff member of military newspapers and magazines. She also has 15 years' experience in Army Web publishing and policy. Before joining the Army, she served as editor of the **Rose Hill Reporter,** Rose Hill, KS; and correspondent for both **Elgin Courier-News**, Elgin, IL, and **St. Charles Chronicle**, St. Charles, IL. Ms. Alley holds a bachelor's of arts degree in journalism and mass communication from Judson College in Elgin, IL. She has been a Keith L. Ware (Army journalism awards) judge at Army level and for the Installation Management Agency Northeast Region in the print and Web-publishing categories.*

ACRONYM QUICK-SCAN

AR – Army regulation
DUI – Distinctive Unit Insignia
FOC – full operational capability
FY – fiscal year
IOC – initial operational capability
PB – professional bulletin
PDF – Portable Document Format
OPSEC – operational security

Manuscript deadlines 2012

Edition	Suspense for manuscripts
April-May-June 2012	Feb. 6
July-August 2012	May 4
September-October 2012	July 2
November-December 2012	Sept. 7
January-February 2013 (last *ARMOR* print edition)	Oct. 25
ARMOR's editorial staff thanks you for your continued support of the Armor Branch's professional bulletin during our time of transition to Web-based operations.	

Armor School to host
2012 Reconnaissance Summit

The 2012 Reconnaissance Summit is slated March 6-8 at Fort Benning, GA, hosted by the Maneuver Center of Excellence and U.S. Army Armor School.

The theme is "Reconnaissance 2020: Defining Organizational Adaptability." The summit is a multi-day seminar that will focus on exchanging information and working-group action to determine a reconnaissance "way ahead" for the MCoE.

Registration information will be available linked off the MCoE's homepage at https://www.benning.army.mil/armor/reconsummit/.

Among events slated March 6 are a "maneuver advisers" meeting for senior Armor and Infantry retired general officers; the commanding general's update on the MCoE and Army 2020; and a chance to observe MCoE training and both the Armor and Infantry schools.

March 7 will move the summit into full swing, with the U.S. Army Training and Doctrine Command G-2 threat update; special topics "Strategic Narrative for the Army of 2020" and "Reconnaissance and Operational Adaptability"; the division mission overview on wide-area security; and video and workgroup discussions.

The summit will close March 8 with the Combined Arms Center commanding general's briefing on corps and division WAS; the Armor commandant's backbrief on the heavy brigade combat team and battlefield surveillance brigade; and the Infantry commandant's backbrief on infantry and Stryker BCTs. The TRADOC commander will attend the afternoon session to close out the summit.

For more information concerning the Army Reconnaissance Summit, contact the 316th Cavalry Brigade coordinator via email at cedric.j.pettiway.mil@mail.mil, commercial (706) 626-8164.

Frederick M. Franks Award

The Armor School is seeking nominees from Army commands for the 16th Annual Frederick M. Franks Award, to be presented at the 2012 Army Recon Summit. The Franks Award is presented to a mounted active-duty or reserve officer, noncommissioned officer or Department of the Army civilian who has demonstrated a long-time contribution to the Army's ground-fighting and warfighting capabilities. Consideration will be given to the nominee's contributions toward the transformation of the mounted force to fight and win in full-spectrum operations.

Also, this individual should possess two or more of the following characteristics:

- Offered a vision for the future of the mounted warfighting force that significantly improved survivability, lethality, maneuverability or mobility;
- Developed an innovation in equipment, materiel or doctrine that significantly enhanced the effectiveness of the mounted element of combat arms;
- Exemplified professional excellence in demeanor, correspondence and leadership on issues relevant to mounted warfare; or
- Displayed a zeal for Soldiering though leadership skills, recognition of the sacrifice and achievements of subordinates, and attention to the Chief of Armor.

Each unit must develop a process that allows recommendations from the lowest level to participate. Packets must contain, at minimum, the Officer Record Brief/Enlisted Record Brief with a photo of the Soldier, a letter of recommendation stating why the nominee meets the preceding criteria and letters of endorsement from brigade and division/post level. More information regarding the quality of the nominee is highly recommended.

Nominations must be submitted to the Office of the Chief of Armor, ATTN: ATZK-AR/Franks Award, Fort Benning, GA, no later than Feb. 16, 2012. Alternate submittal is encouraged via email to david.winczewski@us.army.mil. Packets will be evaluated in a competitive board process, with the recommendation forwarded to the Chief of Armor for review and final approval. The winner will be presented the award during the 2012 Army Reconnaissance Summit; the Armor School will fund the award recipient's travel expenses.

For more information concerning the Franks Award, contact the Office of the Chief of Armor coordinator via email at david.winczewski@us.army.mil, commercial (706) 545-0577 or DSN 835-0577.

Harnessing Social Media to Build Cohesion at Brigade and Below

by MAJ Kevin Bradley

Young adults increasingly turn to the Internet and social media as their primary source of information and communication. Facebook surpassed Google in 2010 as the most visited Website in the United States, accounting for 8.93 percent of all Internet visits.[1] Recognizing this trend, the Army embraced social media as a means to communicate with a force where about 50 percent of its Soldiers are under age 24.[2]

The importance the Army places on using these platforms for strategic communication is evident by the official presence of the Army Chief of Staff and Sergeant Major of the Army on Facebook. The statistics and leader presence alone indicate the debate is no longer "if" Army units should be on these sites, but "how" they should use them most effectively.

For organizations with limited Public Affairs staff at the brigade level and below, the nine strategic-communication principles in the ***Commander's Handbook for Strategic Communication and Communication Strategy*** (Version 3.0) provide a solid framework for developing an on-line presence.[3] All nine principles apply. Army units should use the principles of being responsive, fostering dialogue and maintaining unity of effort to concentrate their outreach on building unit cohesion. Using these principles, Army units can focus on promoting a two-way conversation with Soldiers and families, and minimizing the labor burden of these on-line endeavors.

(***Editor's note:*** *While it is true that brigades and below have limited PA staff, there is often a supporting Public Affairs Office that has overall responsibility for Web-based content. For example, the Maneuver Center of Excellence PAO is charged by the MCoE commanding general with oversight of all Websites coming under the jurisdiction of the MCoE – including units that are part of the Infantry and Armor schools. ARMOR's recommendation is not to assume that you are responsible for your own PA work if the size of your unit is brigade and below, as there are often policy and regulatory constraints, but to ask about your supporting PAO.*)

Being responsive

To begin, the principle of being responsive promotes using platforms such as Facebook and Flickr as a tool to build unit cohesion. The ***Commander's Handbook*** defines the principle of being responsive as reaching the right audience, with a customized message, in a timely manner and at the right place.[4] The natural audience for a brigade's on-line activities is individuals in the unit and members of the family-readiness group. Soldiers and families who are already invested in the organization are most likely to seek out news and information about it. The key is posting unique and interesting content like photos, videoclips and brief updates that both inform and entertain. By focusing on-line content on unit activities, training events and personal-interest stories, organizations can reconnect with families weary from multiple deployments. These social-media connections not only increase unit cohesion but also improve information dissemination throughout the command.

Also, the principle of responsiveness implies focusing your energy and efforts on doing a few sites well as opposed to multiple platforms poorly. Since there are countless social-media platforms and communicating effectively on all of them is not feasible, Facebook and Flickr provide a good starting point. Based on the age demographics of the Army alone, units will find a large portion of their internal audience already using these currently popular sites, representing the "right place." For example, Facebook currently has more than 500 million users and the official Army Facebook page has 740,000 fans.[5] Similarly, Flickr allows the unit to upload photos from events, training and daily activities for Soldiers and families to easily view and download.[6] Photos on the official Army site receive thousands of views and link easily with Facebook for sharing photo content.

It's said that a picture is worth a thousand words, and photos generally are the most viewed content on any Internet site. The combination of Facebook and Flickr provide a unit with the ability to produce personal, customized messages for its internal audience in a place where its members are already spending a good portion of their free time. To get started, the Army's ***2011 Social Media Handbook*** provides more considerations for properly creating, registering and managing a unit's on-line presence.[7]

Fostering dialogue

The second principle of fostering dialogue centers on using the platforms mentioned above to generate a two-way conversation

that promotes understanding and leads to increased trust with Soldiers and families.[8] By its nature, social media encourages conversations between users and demands a certain level of on-line interaction. If a unit follows the principle of being responsive and provides timely, customized content on Facebook and Flickr, the comments, questions and conversations will begin. The difficult part is responding to these questions in a way that fosters conversation vs. stifling it.

Establishing basic ground rules for appropriate language and comments is a good place to start. Making commanders, sergeant majors and other key leaders available to answer questions on the site represents another effective technique. Leader involvement and timely responses to valid concerns from Soldiers and families generate trust in the unit and ultimately build cohesion.

All too often, family members express a lack of communication with their service member's unit as a major source of frustration and dissatisfaction with the military. Using these platforms to conduct virtual FRG meetings, explain upcoming events and reach out to incoming Soldiers are all ways to mitigate these frustrations. Actively listening to the questions and concerns posted on the unit's social media sites also informs leaders about misperceptions and potential problems they need to address. Ultimately, the dialogue created among the unit, Soldiers and their families should generate cohesion and foster mutual understanding between the leadership and the rest of the command.

Maintaining unity of effort

Finally, by focusing on unity of effort, an organization can repurpose existing unit and Army products to minimize the amount of labor necessary to run its social-media outreach programs. The *Commander's Handbook* defines unity of effort as integrated vertically from the strategic down to the tactical level and coordinated horizontally across stakeholders. Unity of effort is important because social-media platforms reside on the public domain. It requires leaders to ensure they understand the Army position on certain topics and to speak with one voice on contentious issues that impact more than just their command. Similarly, exercising unity of effort by reposting stories, videos and photos produced on other Army entities reduces the burden of creating new content.

Adapting holiday messages from commanders, safety bulletins, FRG newsletters and videotaping award ceremonies represent a few ways of coordinating across the organization to use existing processes and products. When embarking on a social-media outreach plan, the goal should be to minimize the labor requirements of building and maintaining the sites to a level that is sustainable for the future. As with any endeavor, the amount of resources available limits a unit's ability to execute this mission effectively. By exercising unity of effort, leaders can effectively limit the manpower requirements of engaging in social media while providing responsive platforms that promote dialogue.

Army organizations at the brigade level and below can harness social media to build cohesion and generate healthy conversations without creating unsustainable workloads by adhering to the strategic-communication principles of being responsive, fostering dialogue and maintaining unity of effort. While the popularity of specific social-media platforms will change with time, their application remains the same as any other type of media. Each of the nine principles of strategic communication provides insight as a unit develops an on-line presence, but the three principles outlined here help focus units with limited

manpower resources. Leveraged correctly, social-media platforms are ultimately another set of tools for commanders to forge stronger units and more resilient families.

MAJ Kevin Bradley serves as executive officer for 1-38 Infantry, 4-2 Stryker Brigade Combat Team, Joint Base Lewis McChord, WA. His previous assignments include congressional liaison to the House of Representatives, Office of the Chief Legislative Liaison, Washington, DC; joint staff intern in the Office of Public Affairs, Washington, DC; commander, Troop C, 6-9 Cavalry, 3rd Heavy Brigade Combat Team, 1st Cavalry Division, Muqdadiya, Iraq, and Fort Hood, TX; 302nd Iraqi Army military training team chief, 3rd HBCT, 1st Cav Division, Baghdad, Iraq; and tank platoon leader, Company C, 1-63 Armor, 3rd HBCT, 1st Infantry Division, Vilseck, Germany. His military schooling includes Intermediate Level Education, Fort Belvoir, VA; Ranger School, Fort Benning, GA; Combined Arms and Services Staff School, Fort Leavenworth, KS; Infantry Career Captain's Course, Fort Benning; Armor Officer Basic Course, Fort Knox, KY; and Airborne School, Fort Benning. He holds a bachelor's of science degree from the U.S. Military Academy in civil engineering and a master's of arts degree from Georgetown University in public-policy management.

Notes

[1] Experian Hitwise Website, "Facebook was the top search term in 2010 for second straight year" (Hitwise Pty. Ltd, 2011), on-line at http://www.hitwise.com/us/press-center/press-releases/facebook-was-the-top-search-term-in-2010-for-sec, accessed May 21, 2011.

[2] Deputy Chief of Staff, Army G-1, **Army Profile FY05** (Washington, DC: Government Printing Office, September 2005), Page 4.

[3] Joint Forces Command, **Commander's Handbook for Strategic Communication and Communication Strategy** (Suffolk, VA: Joint Warfighting Center, June 2010), Page A-1.

[4] Ibid. Page A-3.

[5] U.S. Army's official page on Facebook, on-line at http://www.facebook.com/USarmy, accessed on May 20, 2011.

[6] U.S. Army's photostream on Flickr, on-line at http://www.flickr.com/people/soldiersmediacenter/, accessed May 21, 2011.

[7] U.S. Army Slideshare Site, **Army Social Media Handbook 2011**, on-line at http://www.slideshare.net/USArmySocialMedia/army-social-media-handbook-2011, accessed May 18, 2011.

[8] **Commander's Handbook for Strategic Communication and Communication Strategy**, Page A-2.

ACRONYM QUICK-SCAN
HBCT – heavy brigade combat team

Targeting: A Process for Wizards or Methodology for Patriarchs?

by CW3 Thomas S. Green

Utter the word "targeting" in military circles, then ask someone to define it. You will get as many definitions as you have people in the target audience, no pun intended. While some may get close to the mark with their proffered definitions, most will be wrong; their particular function and the perspective it offers them will influence all. Unfortunately, an inability to define targeting affects its usefulness and acceptance by the same audience. To compound the problem, shifting from a military that historically focuses primarily on high-intensity conflicts to a more adaptable force that must achieve multiple operational endstates continues to overcomplicate the meaning of targeting.

Our operations today certainly exacerbate this confusion. New generations of military officers and noncommissioned officers, as valuable and experienced as they are, have developed a vision of targeting and planning that is entirely counterinsurgency-focused. This proves to be problematic at every staff level with the inevitable shift of our focus back to major combat operations. Furthermore, the current planning skillset is inadequate at best. For field artillerymen in particular, 10-year groups of officers have never planned, rehearsed or executed "echelonment of fires," which leads to my next point that some believe targeting is "old school," the stuff patriarchs like to talk about in revered tones, and therefore of little application in today's environment and contemporary planning methodology.

Some believe targeting is a process unto itself, one that is best divided between meat-eaters (lethal) and leaf-eaters (nonlethal) practitioners. Again, everyone is partially correct; all are equally wrong, but the sum of all the parts is rarely balanced. Targeting remains central to our planning, coordination and synchronization of military operations, regardless of type. The Joint Readiness Training Center's Operations Group, Fire Support Division, maintains that basic targeting skills remain valid and relevant in current and future operations. Moreover, targeting is neither a realm solely for wizards peering into crystal balls nor for patriarchs longing for the comfort of a linear battlefield. Targeting is for you, the military officer and NCO, who must identify a problem, make a decision and then apply a solution; in essence, targeting is a doctrinal "problem-solving process," one that is complicated and three-dimensional.

Targeting and MDMP

Are the terms *targeting* and *military decision-making process* synonymous or different? In the easiest of explanations, targeting is an extension of MDMP, not a separate or diametrically opposing process. If I throw a ball in the air, an opposing force – gravity – works to pull it back to earth. This is not the case with MDMP and targeting, which work in unison (reciprocating the efforts of each) to achieve effects on the battlefield, much like the camshaft and crankshaft work together in sequence to produce power in an engine (synchronous).

Senior-leader confusion about that fact at battalion and brigade has muddied the waters when it comes to the targeting process. Some see targeting as a purely kinetic means of attacking enemy high-value targets. Others, given their recent experiences, are in the manhunt mode: targeting to capture or kill high-value individuals.

To look at it from a nonlethal perspective, an example may be identifying key leaders who must be engaged to collectively or individually influence or compel them to support the central or provincial government. Yet others, especially artillerymen, offer a more doctrinal answer like "the targeting methodology is time-tested and is based on the *decide*, *detect*, *deliver and assess* function performed by the commander and staff in planning and executing targeting."

As I said in my opening, all are partially correct and, in sum, very wrong unless viewed as a systematic approach to problem-solving by combining lethal and nonlethal efforts against each target.

It is important to understand that there are only targets, all of which have lethal and nonlethal concerns; they must be at the forefront of our critical-thinking process to ensure we are achieving the desired effects.

No wizards, no patriarch

Targeting applies the decisions arrived at during continuous MDMP. Offering definitions like those above implies that targeting is a separate, distinct and a quasi-mystical experience attended by a limited number of magically talented wizards with the necessary "vision" to see the future. Hardly.

If MDMP is continuous, so is targeting in one form or another. Targeting and the targeting process help:

- Support the commander's decisions;
- Determine which targets to acquire and attack;
- Determine lethal or nonlethal options;
- Determine what assets to use and when;
- Identify information requirements; and
- Determine results in combat assessment requirements.

These points apply in COIN as well as major combat operations, especially the former, which requires immense assessments and the application of cerebral energy to determine success or failure. They are not, therefore, the sole purview of patriarchs or wizards. Targeting had the same role before 9/11 as it does today and, in all likelihood, it will have the same role in 2020.

Regardless of the acronym of choice (D3A; *find, fix, exploit, analyze, disseminate*, or F3EAD*; find, fix, track, target, engage, assess*, or F2T2EA), the variables (inputs/outputs) are different, but the process remains the same; the paradigm rests in the execution, not the process – the result being a network-based approach using center-of-gravity analysis to determine how, when and where to apply the appropriate level of combat power and influence.

Modularity made changes

So, if targeting hasn't changed in its function, what has changed to increase the challenges of targeting effectively? Look no further than modularity, as in the days of the "patriarchs," the brigade combat

team attached to its parent division by a logistical, intelligence and operational umbilical cord. Even in linear conventional or force-on-force operations, the pre-modular BCT needed significant enhancements from the divisional pool of assets to make it combat ready. When it actually received those assets, using and integrating them effectively was challenging for the pre-modular BCT staff.

Modularity answered some of the problems even as it created a new set. The umbilical cord has in some cases been shortened or eliminated, but the planning challenges remain. A modular BCT has within its permanent structure an amazing array of enablers, allowing it to function as a pocket division. Theoretically, the modular BCT can use those fully integrated capabilities to synchronize joint operations across the operational environment.

The addition of these enablers within the brigade means the staff must determine how to best use their capabilities to achieve their operational endstate. Doing so meant increasing the size and complexity of the BCT staff and adding more command-and-control capabilities inherent in an organic fires battalion, an organic brigade-support battalion and a brigade special-troops battalion.

4 'mores' of modularity

More assets, more staff and more command-and-control do not necessarily mean better; most of the friction lies within synchronizing all these enablers. Targeting and planning allows the staff to visualize, allocate and synchronize these assets to affect operations and provide the assessments and feedback needed for future target development. The need for more communications to tie it all together is implied in those newfound capabilities. More, better, encore!

JRTC recently conducted the first full-spectrum operations rotation in eight years. It was, therefore, the very first FSO rotation for a modular BCT. This was the first time a modular BCT staff had to control, coordinate and synchronize a moving fight against a hybrid enemy capable of challenging the BCT in a stand-up fight, as well as having influence on the government, local population, etc. It was also the first time the modular BCT used the integrated Army Battle Command System. These systems were just emerging at the time of 9/11 and then adapted to the fights in Iraq and Afghanistan in a more mobile role.

The commander and the staff plan for the fight, and if they plan well, they will use that plan to frame the fight against the en-

emy. Modularity and its four "mores" (more assets, more staff, more C2 and more communications) made the BCT's ability to conduct sustained operations problematic. In particular, the last "more" was too much. The integrated ABCS architecture, so successful for low-intensity operations, proved less advantageous in an FSO fight. More communications became its own control issue for commanders and staffs already challenged to control more assets, more staff and more C2.

In the end, more does not automatically translate to enhanced unity of command or unity of effort. Determining which ABCS to integrate in the early stages of the operation required intense planning to ensure units could collaborate effectively and continue the fight. This was especially true in transitions between high-intensity operations to stability operations.

We found lack of planning in this critical realm disrupted the BCT's operations, particularly its ability to sustain the targeting effort from brigade to battalions within the ABCS structure. In other words, vertical collaboration became the "Achilles heel" in efforts to synchronize operations and forced the staffs to become crafty to create a common operating picture across all echelons.

More to do, less time to do it

If the BCT had more to do, it had less time to do it in. Even as units struggled to bridge ABCS gaps with other units, the BCT as a whole never managed to get a suitable 24-hour targeting cycle in play to facilitate planning and operations. Units were accustomed to operating in a one- or two-week targeting cycle in use in both current theaters of operations. Frankly, as trainer/mentors, we struggled with the same issue as we tried to assist the units in cementing an effective 24-hour cycle.

There were many lessons in this rotation, and targeting was at the forefront. It was not a clear-cut case of shifting from COIN and steady-state operations in a mature theater to full combat operations against a peer enemy; FSO meant operations against a hybrid threat. In essence, targeting an enemy that was disrupting operations, while maintaining COIN overtones to gain populace support and to help build a legitimate government within a shorter timeframe, was a daunting task that will take time to evaluate and comprise intelligible solutions to navigate this myriad of obstacles. What we found was this is not an easy task for anyone, especially

since most of the recent operations are planned in cycles extending as far as two weeks. This type of concept, not yet executed in today's Army, was a learning point for everyone. The lessons-learned will be invaluable stepping stones for future FSO rotations and will provide valuable training mechanisms for operations of the future.

Filling the gaps

Our take-away as trainers/mentors in all of this was that the targeting methodology remains valid. The FSO rotation identified multiple gaps; the methodology will need modification – just like any process or plan – as necessary to meet such challenges. We continue to coach a standard model for staffs to use that will help facilitate their planning, and we rely primarily on a four-meeting model to establish the necessary vehicles for target development, refinement and execution.

Within this concept we focus on the assessment working group as part of mission analysis, pretargeting meeting in course-of-action development, targeting meeting as part of wargaming and the commander's decision brief. Our concept is just a way to get, identify and resource problem sets. Most units develop their

own model and that's OK — as long as they are prepared to modify it in meeting operational needs.

We are omnivores

Some tactics, techniques and procedures are less satisfactory. Remember my reference to meat-eaters and leaf-eaters? Most units separate lethal and nonlethal targeting, and the division is both artificial and self-limiting. Lethal targeting is not just for carnivores, and nonlethal is not just for herbivores. The successful commander is an "omnivore" who takes advantage of all opportunities, lethal or nonlethal, to achieve his desired endstate. Separation of a staff into lethal and nonlethal working groups creates gaps within their operational framework and degrades their ability to synchronize their efforts. It essentially kills the staff's ability to fuse efforts across all warfighting functions and wastes their time by duplicating processes. As targets migrate through the process through the various meetings and working groups, if we separate our staff too much, they lose visibility of how they are providing mutual support for each target.

"It only takes one bullet for a nonlethal event to become lethal," said MAJ Jason C. Foote of JRTC's Operations Group, Fire Support Division. "So what have we done to prepare for this situation?" This concept is difficult for inexperienced staff members; separation is seductively attractive yet unfulfilling. Ultimately it's dangerous, as it de-synchs the unit's operations. If the BCT identifies a high-value individual who must be targeted to enforce security or eliminate a threat, the typical staff response is "this is a lethal target; give it to the carnivores." Such a response completely ignores the nonlethal aspects of the same target and does nothing to foster the network approach to targeting. How do you shape the target via nonlethal means, or how do you exploit the success after the mission?

Fusion of lethal and nonlethal applies in FSO as well. Whether the mission calls for an attack or a defense, how do you address nonlethal concerns before, during and after the mission is complete? The unit that does not fuse lethal and nonlethal planning in FSO is doomed to spend much time reacting to consequences rather than capitalizing on them.

Ask not who targets but whom is targeted and why

The answer to the question "is the targeting process for wizards or a methodology for patriarchs?" is a simple "yes." As stated in the introduction, targeting is for everyone; it is as natural as problem-solving. The real questions that need to be asked flow from mission analysis: "What is the mission? What are we targeting, and why?" Transformation aside, targeting remains nested within the framework of the command decision and planning cycle.

Field Manual 5-0 outlines planning as "the process by which commanders (and the staff, if available) translate the commander's visualization into a specific course of action for preparation and execution, focusing on the expected results (FM 3-0). Put another way, planning is the art and science of understanding a situation, envisioning a desired future and laying out an operational approach to achieve that future. Based on this understanding and operational approach, planning continues with the development of a fully synchronized operation plan or order that arranges potential actions in time, space and purpose to guide the force during execution. Planning is both a continuous and a cyclical activity of the operations process. While planning may start an iteration of the operations process, planning does not stop with production of an order. During preparation and execution, the plan is continuously refined as situational understanding improves. Subordinates and others provide feedback as to what is working, what is not working and how the force can do things better. Planning may be highly structured involving commanders, staff, subordinate commanders and others to develop a fully synchronized plan."

Regardless of whether our Army finds itself storming the shores of Normandy, seizing an airfield in Panama, pushing an invading Iraq out of Kuwait or taking on the challenge of rebuilding a government from ruins, the problem-solving process we have used for each of these dynamically different scenarios is a version of the decision-making and targeting process. The results are functions that are not mutually exclusive, but are complementary and support the ability of the commander to make determinations throughout his decision cycle.

The JRTC Fire Support Division approach to targeting is as a process that "is nothing more than a way to focus limited resources at the right time and place." This statement simplifies the definition of targeting and embraces the idea that decision cycles must embed to act on issues within a continuous planning cycle while identifying key steps within any given network in which the application of force or influence is necessary. The problem-solving process is straightforward and requires identifying how, when and where we want to affect change within our operational environment, and how to achieve effects that cause change across the full spectrum of operations.

The difficulties lay in determining if the effects of our decision-making have helped or hurt us in achieving our endstate. Doctrine, per Joint Publication 3-0, states, "Targeting is the process of selecting and prioritizing targets and matching the appropriate response to them, considering operational requirements and capabilities." That definition essentially stops at the point of execution, offering nothing about assessing the effects of the action taken, whether lethal, nonlethal or a combination thereof.

Assessments, not assumptions. Although the current model of D3A incorporates assessments, Joint Publication 3-0's definition doesn't necessarily lead us to the same result. That shortfall is critical; the old saying, "The job's not complete until the paperwork is done," applies. Targeting has many challenges, including locating, identifying and engaging the selected target. No commander, however, has unlimited assets, not even in our modular BCTs. Post-strike/engagement assessments are critical in two aspects: the first is assessing effects to determine if the desired results were achieved; the second is to husband or mass resources as necessary based on the assessment.

Detailed guidance and planning, to include violent, surgical execution, helps prevent many of these complications and make the most of our combat power. To further define the current targeting model, the JRTC Fire Support Division uses the assessment working group to identify our problem sets and conduct a formal, mission analysis for a specified time. Once we have identified our problem sets and where critical vulnerabilities lay within a given network, the next steps are to develop CoAs to allocate resources and wargame them in time and space against other competing targets, as well as enduring operations, which affect the same execution cycle.

According to the patriarchs, this was conducted over a 24-hour period in a conventional fight. COIN allows a longer cycle of one to two weeks, depending on unit, mission and theater. FSO against a hybrid enemy may allow us to lengthen our planning timeline to 72 hours to two weeks, depending again on the mission, the enemy and other factors of mission, enemy, terrain and weather, troops and support available – time available, civilians, or METT-TC. Longer cycles allow for a more robust analysis and allocation cycle
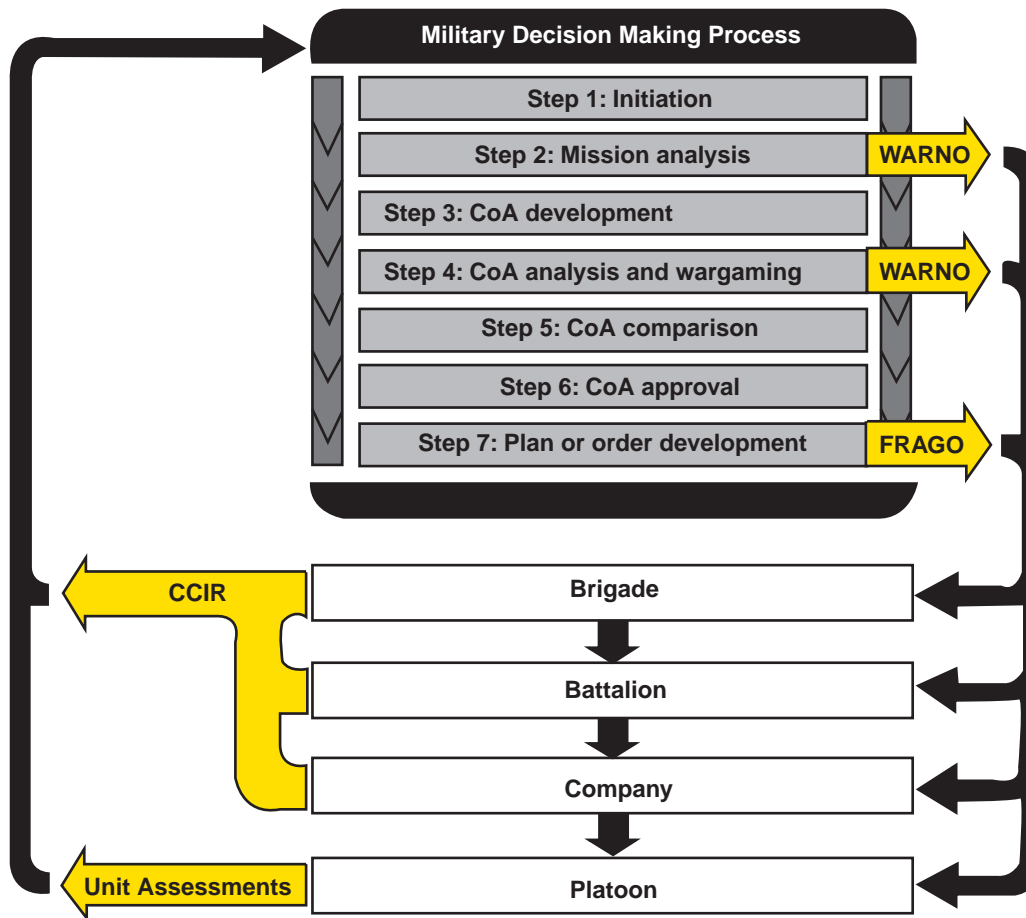
Figure 1. *The logical cycle of the MDMP.*

to ensure we are meeting the desired endstate(s).

Figure 1 shows the logical cycle of the MDMP and how the commander's critical information requirements and lines of effort tie it all together. We use these as our road map throughout MDMP to guide us along our targeting objectives to ensure that when assessments are conducted, they are used to determine change along the campaign plan. The process may seem simple enough; however, vertical collaboration with our higher headquarters and subordinate units is critical. This collaboration enhances our ability to assess change and improve the targeting effort. More often than not, our collaboration piece of the fight is broken, preventing us from measuring success or failure. In the case of the FSO rotation, the disruption within the ABCS disrupted targeting.

Assessments and analysis are continuous. Assessments close the gaps between targeting cycles. They essentially help

drive future target development and determine whether the actions we are taking as a force are appropriate for the desired endstate. Close collaboration, use of running estimates and careful analysis of the enemy situation synchronize our efforts in CoA development and wargaming. They determine our ability to assess our operating environment.

We use assessments to predict change to our campaign plan and to determine the appropriate matrix that support our targeting objectives. The forms most common are measures of effectiveness and measures of performance.

Each of these have quantifiable/quantitative indicators that, when used correctly, allow us to judge how we, as a force, are doing. Most BCTs struggle with this concept; they have difficulty articulating the outcome of previously executed targets and determining whether the outcome was successful or had a negative impact on the desired endstate. That, in turn, limits their ability to make informed refine-

ments to their targeting effort, particularly about the CCIR, targeting priorities, high-payoff targets, campaign plan and other aspects of the campaign plan.

Analysis to support assessments is an art. It provides the level of fidelity necessary to drive the targeting process. As depicted in Figure 1, assessments feed the decision-making cycle and keep us on course. The bottom line is that assessments provide the catalyst for the decision-making process at every step in the cycle. We have to ask ourselves whether we are aligned correctly with labor and time in our battle rhythm. Key issues in question include:

- Does the battle rhythm support our ability to conduct solid assessments?
- Do we understand our duties and responsibilities?
- Who conducts assessments?
- Do we have a forum where we can share information with our subordinates? (net calls, commander's

update brief, battle update assessments, rehearsals, etc.)

- Do our collaborative tools/platforms facilitate cross-talk and knowledge management?

These questions may seem simple; they are easy to wave off. However, if a unit really wants to "see itself," the answers are much less facile, as all these areas play a critical role in determining success in achieving our desired effects. They become even more challenging to answer positively when the time to synchronize the four "mores" is compressed by a shift from COIN to FSO.

The commander and staff: no wizard, no crystal ball

The staff's abilities to take a holistic view of the past and the current situation, and to predict the future enhance the commander's abilities to make sound decisions, give cogent guidance and establish realistic priorities. Staffs must paint a clear picture for the commander. The first step is to understand the commander's priorities (lethal/nonlethal); that understanding should frame how the staff articulates what they want to target, in consonance with the campaign plan, the CCIR and established targeting objectives. This is how a staff achieves a common visualization of the overall fight.

Establish a common vision. Most BCT staffs struggle getting to this point. They never really understand how they are supporting maneuver commanders. Measuring success or failure, assessments allow the staff to provide the predictive analysis necessary to drive future targeting, determine critical gaps in planning and avoid friction points that will stifle operations. It starts with a common visualization of the operating environment, determined by the ability to achieve situational awareness and situational understanding.

The staff must share and understand that visualization before planning can begin. They must determine the following, prior to moving forward in the planning process:

- Threat;
- CCIR;
- Operations;
- Priorities;
- Target nominations;
- Campaign plan shifts; and
- Assessments.

Adjust that vision constantly. At this stage, the commander should be able to provide clear, concise guidance to the staff. His guidance steers the staff's targeting against the campaign plan. In mission-analysis phase, the staff defines the problem and seeks appropriate inputs from battalions that will ultimately feed the working groups. Once the staff has finished wargaming and has synchronized enablers against all the competing targets, it looks ahead and proposes certain questions pending target execution:

- What was our desired endstate?
- What was the outcome?
- Was the target fully exploited? If so, what does it mean?
- Did the action succeed or fail? Why?
- What measures are we using to assess? (MOE/MOP)
- How does the success or failure drive decision points?

Front-loading these questions before execution helps focus the staff on what they should gather to assess targeting along all lines of effort.

The warfighting-function masters

The deputy commanding officer and/or executive officer, along with the fire-support officer, intelligence officer and targeting officer, play key roles in the targeting and planning process. They guide successful execution of targets and ensure subordinate units are primed for success prior to conducting operations.

This is not to say other staff officers are not important; they are. These particular staff officers, however, provide a warfighting-function foundation for the planning staff. Any holes within these WFFs will reflect as gaps in the process. Below are excerpts of the vast span of duties and responsibilities of each.

The deputy to the commanding officer or the executive officer provides the C2 to organize the staff and make decisions on behalf of the commander. He enforces the commander's guidance and targeting priorities and manages the campaign plan to ensure the BCT is targeting in accordance with the commander's operational endstate. Without this seat filled, the staff would lack the necessary direction and would be unable to make sensible recommendations for future targeting.

The FSO is an equally important member of the planning staff. He is, essentially, the conduit between lethal and nonlethal fires planning. His responsibilities go beyond that of just fire support; he ensures the staff, as a whole, understands all aspects of fires planning, preparation and execution for BCT operations. The FSO is the engagement-and-attack guidance manager for the commander and guides the staff in targeting according to priorities set in the commander's fire-support tasks. The FSTs establish the way ahead for task accomplishment for the various problem sets.

The S-2 manages the intelligence, surveillance and reconnaissance plan as the cornerstone for most operations. Without S-2 involvement in the targeting and planning process, the "decide and detect" portions of the targeting model suffers. Most information funnels through the intelligence section; their ability to look through the enemies' eyes helps the commander determine DPs in target execution.

Lastly, the targeting officer is the binder for the planning staff. His span of involvement reaches across the entire staff as well as to subordinate units. In simpler terms, he is the bridge between intelligence and operations. Doctrinally, the targeting officer works closely with the S-2 to facilitate the exchange of information, but his duties and responsibilities have grown significantly. He may be involved in portions of information operations and civil-military operations. The ability to multi-task and speak the language of all the WFFs make this position on the staff crucial in helping solidify the staff's efforts and ensuring they are targeting along the campaign plan by adhering to the established targeting objectives.

These duties are only a sample of the vast responsibilities these key positions entail, but this snapshot shows the importance of these key individuals. The remaining staff members are equally important but many times not filled, causing one of the mentioned WFFs to fill this role.

It's problem-solving

To take a final look at what targeting really is, it is tactical problem-solving. Quite simply, it is the marriage of MDMP and targeting. This concept remains unchanged with the move from high-intensity conflict to today's COIN fight and will remain just as relevant in future FSOs. Targeting and MDMP together prevent staffs from falling into a "fire and forget" mentality that plagues so many units by not assessing the outcome of all operations and target execution.

All this is called targeting, planning and cyclical MDMP. It integrates a holistic view of the targeting construct, integrated with intelligence preparation of the

battlefield along all lines of effort. The solutions emerge in the various targeting meetings to align targeting and MDMP on the course the commander has set, to reach his desired operational endstate. More often than not, the problem lay not in the process itself, but the institutional understanding of doctrine.

(*Editor's note: CW4 Scott McKnight, program manager, Warrant Officer Education System, and CW4 Jimmy A. Gomez, 131A senior instructor/course manager, both from Fort Sill, OK, contributed to this article.*)

CW3 Tommy Green is the senior targeting observer/controller at JRTC, Fort Polk, LA. Previously he served as the targeting officer for 2nd BCT, 1st Infantry Division, Fort Riley, KS, and deployed in support of Operation Iraqi Freedom. He also served as the targeting officer for 3rd BCT, 1st Armored Division, Fort Riley. Prior to his time in 3-1 Armor, he was assigned as the Golf Battery executive officer and the brigade targeting officer for 1st BCT, 1st Infantry Division, as part of the military-transition-team training mission. He deployed and was assigned as a target-acquisition detachment commander as part of 18th Field Artillery Brigade in support of OIF. He also served as the radar-section leader and then brigade targeting officer for 1st BCT, 1st Infantry Division, deployed also in support of OIF.

ACRONYM QUICK-SCAN

ABCS – Army Battle Command System
BCT – brigade combat team
C2 – command and control
CCIR – commander's critical information requirements
CoA – course of action
COIN – counterinsurgency
D3A – decide, detect, deliver and assess
DP – decision point

FM – field manual
FSO – full-spectrum operations
FSO – fire-support officer
FST – fire-support tasks
JRTC – Joint Readiness Training Center
MDMP – military decision-making process
METT-TC – mission, enemy, terrain and weather, troops

and support available-time available, civilians
MOE – measures of effectiveness
MOP – measures of performance
NCO – noncommissioned officer
OIF – Operation Iraqi Freedom
WFF – warfighting functions

Armor in South Vietnam (the final years)

by LTC Scott K. Fowler

This article discusses the use of armor by the United States, Army of the Republic of Vietnam and North Vietnamese Army during the final years of South Vietnam's existence (1972-1975). When I say armor, I include cavalry as well (tanks and armored-personnel carriers conducting armor/cavalry operations).

The United States used tanks in South Vietnam designed for high-intensity conflict in Europe. After a study by U.S. armor officers found that more than 46 percent of the terrain in South Vietnam was traversable year-round by armored vehicles, armored units conducted operations in every geographic area in Vietnam. However, the vehicles experienced some severe restrictions traversing the Mekong Delta and the Central Highlands, according to GEN Donn Starry, and the use of medium and light tanks in South Vietnam had mixed results.[1]

"Medium tanks were severely restricted in Vietnam," according to LTC Ray Battreall Jr. "They were able to negotiate coastal sand, piedmont hills, the central plains and – surprising to some – rice paddies without difficulty. Light tanks suffered the same limitations as medium tanks. Being lighter and narrower, they were able to make better use of existing bridges. In turn, this allowed them access to larger and more widespread operational areas and increased their opportunity to engage the Viet Cong."[2]

Departure of U.S. forces

GEN Starry, commander of 11th Armored Cavalry Regiment in South Vietnam (1969-1970), wrote the following: "With the [Jan. 28, 1973] ceasefire, the last U.S. advisers left the country,

and for the first time, South Vietnamese divisions and corps were truly on their own."[3] There were no advisers to summon and coordinate the once-vast U.S. tactical and strategic air power, naval gunfire and on-call resupply, nor did these resources exist any longer. This forced some South Vietnamese commanders to readjust their battlefield techniques, but most armored commanders were not overly dependent on air support.

The organic firepower available to armored-unit commanders generally made them more self-sufficient and self-confident than commanders of other ground units. Consequently, the departure of advisers from tank and cavalry units, which in most cases had already occurred by mid-1971, did not have much impact.

With the ceasefire came an overdue change in the role of armored forces in Vietnam. Armored units employed in a purely tactical role as front-line troops for maneuver and fire support. In practically every operation of size or note, cavalry was there, slugging it out alongside infantry or spearheading an offensive against an enemy sanctuary. However, the conventional warfare and large-scale operations initiated by the North Vietnamese during their spring offensive of April 1972 had dictated a substantial change in this employment.

Continuous front-line exposure of armored units in static defensive positions soon resulted in unacceptably high losses of men and vehicles. Fortunately, there appeared to be growing awareness among high-level commanders and staff officers of the need to use armored and cavalry forces as mobile reserves. The experiences of April 1972 made it immediately apparent that using armored units in a static role, where inherent advantages of firepower, mobility and shock-effect, avoiding exploitation, invited piecemeal destruction. The tactical situation that existed immediately before and for some time after the ceasefire was ideal for the employment of armored forces as mobile reserves.[4] With this change, South Vietnamese armor leaders had to adapt to their new surroundings and procedures for fighting and re-supplying.

Beginning of the end

The NVA started moving its units forward into South Vietnam after the 1972 offensive in conjunction with a massive buildup of its main and local forces. The NVA occupied the western half of the northern part of South Vietnam, or Military Region I; the northwestern part of Military Region II; and the western part of Military Region III. After the Paris Agreement in 1973, Hanoi started moving units into these occupied areas with sophisticated artillery, anti-aircraft artillery and radars.

"Hanoi also moved a great number of armored vehicles to South Vietnam; many were introduced for the first time on the battlefield such as tank-launched Scissors Bridge, BTR armored-personnel carriers,

North Vietnamese T59 tank captured by South Vietnam's 20th Tank Regiment, south of Dong Ha, Quang Tri province, Vietnam, during the 1972 Easter Offensive. (U.S. Army photo)

ASU-75 airborne assault guns and the T-60 medium tank," GEN Cao Van Vien recalled.[5]

By 1974, the NVA conducted a substantial overhaul to the Ho Chi Minh trail, making it an all-weather road. The NVA could now "sustain a general offensive like the one in 1972 for an estimated 18 months," said GEN Van Vien. "Also, the time required to send personnel from the North into the South was reduced from four months to approximately three weeks."[6]

NVA armor captures Saigon, ending South Vietnam's existence as a free nation. (U.S. Army photo)

ital of South Vietnam, it worried ARVN leaders when Phuoc Long came under attack. The battle for Phuoc Long ended Jan. 15, 1975. During the battle, the enemy used tanks with sappers hanging on them to attack the city center. American-made M-72 Light Anti-Tank Weapons inflicted little damage on enemy tanks; in this battle, 90mm recoilless rifles proved more effective, GEN Van Vien recalled.

Fatal reductions

The ARVN's soldiers faced many grave challenges after the 1973 Paris Peace Accords. With the threat of dramatic reduction and eventual discontinuance of American congressional aid to South Vietnam, the ARVN leadership had to make some tough choices; it had to defend a nation that was narrow and long on a reduced budget.

"According to Article 7 of the Paris Agreement, the South Vietnamese armed forces could replace arms, munitions and war material damaged, worn out or used up after the ceasefire," said GEN Van Vien. "However, limited funds permitted replacement of only a few trucks, tanks and artillery pieces during the fiscal years 1973-74. M-48 tanks for the ARVN were replaced at 75 percent of requirement, and more than 4,000 vehicles transferred by U.S. and allied troops remained unserviceable for lack of spare parts."[7]

Not only was material replacement a problem for the ARVN leadership, but personnel was as well. The ARVN leadership could not maintain its quotas of labor needed to sustain it. A 2 percent desertion rate and potential draftees dodging the draft were two reasons for the ARVN's low numbers. Surprisingly, the draft dodgers (for the most part) did not join the communists. They either vanished into the cities or avoided the authorities in their villages with the help of friends and family, according to GEN Van Vien.

The difficult decisions for ARVN armor units were just as painful as the other branches of the ARVN. "Two armor task forces were activated with assets of the Armor School, to include M-48 and M-41 tanks and M-113 armored personnel carriers," said GEN Van Vien. "The two task forces were to stand ready for deployment within two and six hours respectively. In Summer 1974, the ARVN forces made every effort to retake important areas and population centers the enemy had occupied. But their losses were high, and their forces became overextended."

1975

In 1975, North Vietnam's leaders began planning for a new offensive. They were uncertain whether the United States would resume bombing or once again intervene in the South. When their forces overran Phuoc Long Province, north of Saigon, without any American military reaction, they decided to proceed with a major offensive in the Central Highlands.[8]

In late December 1974, North Vietnamese forces attacked Phuoc Long, which is 75 miles northeast of the former Saigon. A town with a population of about 30,000 and close to the cap-

From March to April 1975, Military Region II was under attack by NVA forces heading due east from the Central Highlands. They attacked along three routes: QL-19 to Qui Nhon, LTL 78 to Tuy Hoa and QL-21 to Nha Trang. Roadblocks of ARVN Rangers and M-48 tanks from 21st Tank Squadron along each route stopped NVA movements. However, by March 27 the final blockade position was destroyed, and the NVA column moved on to the coastal city of Tuy Hoa.[9]

By April 15, the situation in Military Region I was lost and Military Region II was bleak, at best, for ARVN forces. In Military Region II, NVA units reached the city of Ca Na, their final port in the Ninh Thuan province. In Ca Na, a column of enemy troops and tanks exchanged gunfire with South Vietnamese naval ships, where the NVA lost several of their tanks from naval gunfire.[10]

The final prize for the NVA and North Vietnam was the city of Saigon, and it was in Military Region III, the southern portion of South Vietnam. During the final days of South Vietnam's existence, ARVN soldiers and leaders pressed on. "The enemy offensive [in the south] was conducted on four different fronts," said GEN Van Vien. "To combat this, the remaining ARVN forces (III Corps) had three divisions: 3rd Armor Brigade (two M-41/M113 squadrons and one M-48 squadron), which was positioned northeast of Saigon (east of Bien Hoa –between Main Routes 1 and 15) from [April 25-29, 1975]."[11]

By the afternoon of April 28, 1975, the enemy had surrounded everyone within 130mm artillery range. By April 29, 1975, 3rd Armor Brigade, part of the 18th Division, moved southwest to a new position south of Long Binh Base, due east of Saigon. The Dong Nai River separated the two positions. This is the last GEN Van Vien speaks of ARVN armor in the fight to preserve South Vietnam. At 10 a.m. April 30, 1975, "President Minh ordered the armed forces to stop fighting. South Vietnam fell to communist control and no longer existed as a free nation."[12]

Current doctrine

Starting in 1972, the NVA primarily used its armor in an offensive role. U.S. and ARVN forces used armor in both offensive and defensive roles. In 1970, invasions of enemy safe havens just across the Cambodian border also employed armor and cavalry units. ARVN forces also heavily used armor from the 1972 Spring Offensive all the way to the defense of Saigon April 30, 1975.

Against these facts, keep in mind that today, when Soldiers read U.S. Army Training and Doctrine Command Pamphlet 525-3-1, they read in Chapter 3 ("How the Army Fights") that combatant

commanders should fight as combined arms: "Army formations integrate fire and maneuver, employing appropriate combinations of infantry, mobile protected firepower, offensive and defensive fires, engineers and Army aviation and joint capabilities to achieve desired outcomes."[13]

The pamphlet further states that when employing forces for combined-arms maneuver and wide-area security, Army forces defeat or "fix" the enemy before he can attack. This allows the joint-force commander to retain the initiative; it further states that future brigade combat teams will require reconnaissance formations with additional combat power to gain and maintain contact with the enemy, fight for information and conduct WAS.

Army leaders found out in South Vietnam, that armor and cavalry, fighting as combined arms, can fight for information and can wreak havoc on the enemy with its heavy forces, regardless of the terrain and environment.

LTC Scott Fowler serves as the branch chief-armor for the U.S. Army Armor School at Fort Benning, GA. He served in Iraq in 2007 in the Theater Observation Detachment, Center for Army Lessons Learned, Multinational Division-Center (3rd Infantry Division), observing information operations. Other assignments have included various command and staff positions, encompassing executive officer, 4th Cavalry Brigade, Fort Knox, KY; plans officer, 4/85 Training Support Brigade, Fort Knox; S-3, 103rd Chemical Battalion, Kentucky Army National Guard; commander, Army Reserve Officer Training Corps, University of Kentucky, Lexington, KY; company commander, 3rd Battalion, 123rd Armor, KYARNG; platoon leader, A Troop, 1st Squadron, 4th Cavalry, 1st Infantry Division (Forward), Boeblingen, Germany; and tank-platoon leader and company executive officer, C Company, 4th Battalion, 37th Armor, 2nd Brigade, Fort Riley, KS. His military educa-tion includes the U.S. Army Command and General Staff College, Armor Officer Basic and Advanced Courses, and Combined Arms and Services Staff School. He holds a bachelor's of arts degree from Northern Kentucky University and a master's of business administration degree from Trident University.

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ACRONYM QUICK-SCAN

ARVN - Army of the Republic of Vietnam
KYARNG – Kentucky Army National Guard
NVA - North Vietnamese Army
WAS – wide-area security

Exercise Big Lift: an Example in Strategic Deployment

by Commander David L. Teska

The United States is moving into a "new" post-war era as it winds down combat operations in Iraq and Afghanistan. According to one estimate, 90 percent of U.S. forces will reside in the contiguous United States by 2013.[1] This shift in force projection will have major political and strategic ramifications for U.S. national-security policy. Any hint of retrenchment by the United States may give our allies cause for alarm and may embolden potential adversaries, who may doubt our resolve and perhaps interpret our actions as a neo-isolationistic shift in U.S. support to our allies and our commitments.

As the change in posture of U.S. forces takes shape, relying on strategic airlift and sealift capability will be key to meeting national interests. The need to respond when and where needed, as history shows, can develop in the most unlikely places, against adversaries nobody expects.

Iraq's sudden and unprovoked invasion of neighboring Kuwait Aug. 2, 1990, caught the world off-guard and presented the United States with an unexpected war. Five days later, U.S. Military Airlift Command launched the first airlift mission of Operation Desert Shield.[2] From Aug. 7, 1990, through the last airlift mission flown March 10, 1991, MAC aircrafts and commercial charters flew nearly 500,000 troops and more than 538,000 tons of cargo in support of Operation Desert Shield/Desert Storm.[3] The United States' swiftly putting boots on the ground in-theater sent a powerful message to Iraq – one ultimately backed up with the forceful eviction of Iraqi forces from Kuwait just six months later by the coalition the United States had assembled.

Pre-war logistical planning called for sealift to move supplies and equipment too heavy or large to go by air. However, the lack of in-theater storage, a relatively small amount of pre-positioned material, the long distances involved and the urgency of critical supplies resulted in a high demand on airlift, with 95 percent of cargo going by air vs. the planning figure of 85 percent.[4] Success also hinged on the synergy designed to meld airlift and sealift so troops and equipment could marry up in-theater efficiently.

Ultimately, U.S. Transportation Command would move more troops and supplies during the first three weeks of Desert Shield than moved during the first three months of the Korean War. By the sixth week, MAC had surpassed the tonnage flown during the Berlin Airlift of 1948-49,[5] in which more than 2.3 million tons of supplies reached the blockaded German city.[6]

Exercise Big Lift

Tensions between former wartime allies had existed since before the guns went silent across Europe in 1945. In August 1961, East Germany, with backing from the Soviet Union, constructed the Berlin Wall to stop the chronic "brain drain" of skilled labor from East Germany to Western Europe and beyond. The crisis in Berlin in August 1961 was just the latest in a string of incidents that occurred within that still-occupied city at its nadir.

Coincidentally, in October and later in November 1963, relations between the Soviet Union and the Western Allies over the right of access to West Berlin and East Germany's status as a sovereign state repeatedly came to the forefront during this period. A series of convoy harassment and delaying incidents in October and November 1963 along the autobahn between West Germany and West Berlin only furthered the belief that the Soviet Union was out to harass the allies regarding their access to their respective sectors in West Berlin.[7]

The Cold War era only heightened tensions amidst dramatic change for the United States. In October 1963, desirous to prove it possessed a global-deployment capability, the United States set out to accomplish what hadn't been done before: airlift a division-sized combat formation overseas, marry it to pre-staged equipment and have it combat ready in a matter of days. Planners gave the exercise the name "Big Lift," a name that simply stated what the exercise set out to accomplish. U.S. Defense Secretary Robert S. McNamara, speaking at a news conference to announce the upcoming exercise just a few weeks prior to its execution, said Big Lift would "provide a dramatic illustration of the United States' capability for rapid reinforcement of [North Atlantic Treaty Organization] forces."[8] The defense of Western Europe represented a sizeable commitment by the United States, with more than 360,000 troops stationed in Europe, mostly in West Germany.[9]

Chosen for this complex exercise was 2nd Armored Division (Hell on Wheels) under the command of MG Edwin H. Burba.[10] Big Lift included the "wheelmen" of 2nd Armored Division, along
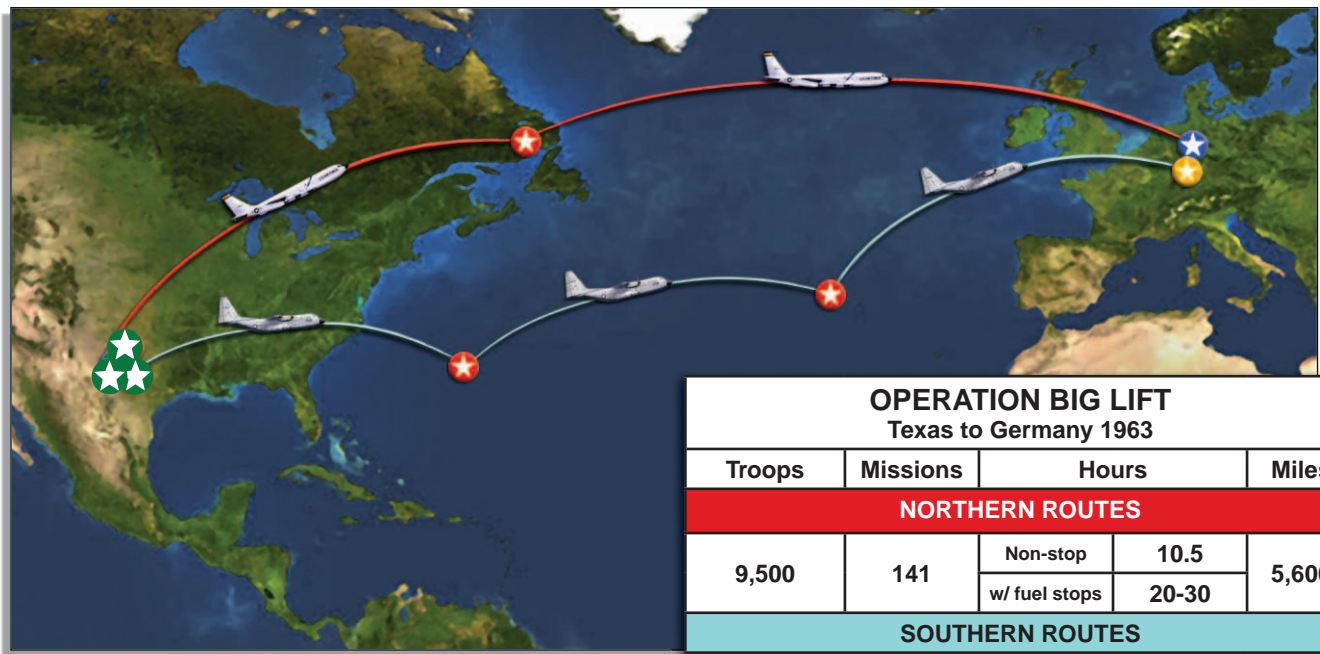
Map Key

✪ **Ft. Hood & surrounding Air Force bases**	✪ **Ramstein, Germany**
✪ **Fuel stops**	✪ **Rhein-Main, Germany**

OPERATION BIG LIFT				
Texas to Germany 1963				
Troops	**Missions**	**Hours**		**Miles**
NORTHERN ROUTES				
9,500	141	Non-stop	10.5	5,600
		w/ fuel stops	20-30	
SOUTHERN ROUTES				
5,800	95	w/ fuel stops	20-30	6,000
OPERATION TOTALS				
15,300	236	63 hours 5 minutes		

Figure 1. *Operation Big Lift mission statistics and route map.*

with 2/31st and 2/36th Artillery from Fort Sill, OK, and 6th Transportation Truck Battalion from Fort Eustis, VA.[11]

Big Lift was truly a joint operation. The Air Force, in addition to handling the airlift, deployed its Composite Strike Air Force comprised of 1,500 airmen and aircraft from several bases across the United States to West Germany for the exercise.[12]

My father, retired LTC Thomas Teska, served with the U.S. Army in West Germany from 1960-63. At the time, he said that conventional wisdom held that war with the Soviet Union was not a matter of "if" but "when." No one could conceive, he said, that two sides so diametrically opposed to each other and each maintaining large conventional forces in Western Europe could co-exist peacefully. In mid-1963, he and my mother moved to Fort Hood, TX, just in time for then-1LT Teska to immerse in the planning for Big Lift. Having just come from a tour of duty in West Germany, the Army had him conduct U.S. Army Europe driver testing for 2nd Armored Division Soldiers so they could safely navigate West German roads. This included posting European road signs on Fort Hood roads so drivers would get familiar with them in advance of their deployment.

Initial deployment

To meet the deadline of having all troops in place within 72 hours, the Military Air Transport Service[13] used the new jetpowered C-135 Stratolifter (a modified Boeing 707 more familiar today in its tanker variant, the KC-135 Stratotanker), the stalwart propeller-driven C-124 Globemaster II and the C-130 Hercules. Troops went by one of two routes – a northern route using C-135s that went from Texas to eastern Canada, across the Atlantic and then on to Germany, or the southern transport route using C-124s and C-130s, which went to West Germany by way of Bermuda and the Azores. Troops who went by C-135 clearly had the more relaxing trip – flight time on the faster C-135s was

a relaxing 10½ hours, compared to the fatiguing 20 to 32 hours it took if moving by C-124 and C-130 due to slower speeds and the need for more frequent fuel stops.[14]

By the time the final C-130 landed at Sembach Air Base with its planeload of 60 troops, MATS had achieved an impressive feat: in just over 62 hours (nearly nine hours ahead of schedule), its 206 planes had airlifted 15,278 soldiers and 459.6 tons of equipment on 236 missions. Crews flew more than 13,000 hours without a mishap. In less than six days, 2nd Armored Division deployed from Texas, married up with pre-staged equipment and was combat ready.

Incredibly, only one mechanical issue occurred. A C-124 out of Lajes Air Station had to return to the Azores due to an oil leak. Troops transferred to a back-up plan and continued the trip.

The aircraft MATS used during Big Lift represented only 40 percent of its total airlift capability at the time.[15]

Maneuver operations

Getting 2nd Armored Division troops to West Germany was only part of the operation – the major objective of the deployment, after all, was to reinforce NATO forces and defend Western Europe. During the field-training exercise phase of Big Lift, the 2nd Armored, temporarily assigned to U.S. 7th Army and the attached V Corps, VII Corps and the German III Corps, comprised the defending "blue force." Against the blue force was 3rd Infantry Division in the role of the "orange" aggressor force undertaking an "invasion" of West Germany from the east.[16]

Once combat ready at the assembly area near Darmstadt, West Germany, 2nd Armored conducted a series of maneuver operations as part of Big Lift's FTX component:

- Reaction to a threatening situation and border violation;

- Offensive operation, including assault river crossing;
- Mobile defense, including local counterattack;
- Rear-area security;
- Heliborne operation; and
- Chemical and nuclear warfare.[17]

Most of the equipment the 2nd Armored Division needed to fight the notional war, primarily M48 Patton tanks and M59 armored personnel carriers, was in place upon arrival, stockpiled after the Berlin crisis two years before. This idea of stockpiling heavy equipment would eventually develop into the system of permanently "prepositioning of material configuring in unit sets," or POMCUS.

At the conclusion of Big Lift's maneuver phase, 2nd Armored returned its equipment to the pre-stage sites, then troops airlifted back to Texas. By Dec. 5, the division's last element had returned from Germany.

MATS would repeat its ability to deploy a division-sized troop contingent overseas by airlifting 25th Infantry Division from Hawaii to Okinawa, Japan, for Exercise Quick Release in January 1964.[18]

At the time, Big Lift was big news as the largest troop movement by air ever attempted. The Army even made a short film – "The Point of the Spear" – for its documentary series "The Big Picture."[19] *TIME* magazine in its Nov. 1, 1963, issue highlighting Germany and the defense of Europe, and featuring West German Chancellor Ludwig Erhard on its cover, gushed that Big Lift was "the biggest, fastest troop lift ever attempted" and was one "whale of a show."

Criticizing Big Lift

Big Lift did have it critics. GEN Paul L. Freeman Jr., USAREUR commander at the time, bluntly referred to it as the "big hoax,"[20] and GEN Howell M. Estes Jr., commander of MAC 1964-1969, wrote in the *Air University Review*'s September-October 1969 issue that true combat airlift did not (in 1969) yet exist.

GEN Estes went on to state that the role of modern combat airlift is to "airlift combat forces and all their battle equipment in the size and mix required – with the greatest speed – to any point in the world, no matter how remote or primitive, where a threat arises or is likely to erupt." At the time, the C-141 Starlifter was just entering service with the Air Force and the C-5 Galaxy was on the horizon, and both aircraft had the capability to provide the global combat airlift the United States needed. Big Lift, despite having moved a large number of troops from one continent to another totally by air, failed in his eyes to validate that combat/strategic airlift had matured because it was primarily an exercise in moving troops, and not the troops and their equipment, and had at its disposal well-prepared airbases in West Germany.[21]

Many Western European leaders were concerned at the time at what Big Lift presaged for the defense of Western Europe, and the U.S. commitment to it and the NATO alliance. Namely, the United States might learn from Big Lift that it could defend Western Europe from bases in the United States without the costly expense of maintaining a large troop presence in Europe. Put another way, might the United States start reducing the size of its contingent of forces in Western Europe, thus leaving its NATO allies vulnerable to Soviet aggression and intimidation? Conversely, it was also thought that the Soviets would view such a retrenchment as a sign of a wavering of U.S. resolve to the defense of Western Europe.

Former U.S. President and NATO leader Dwight D. Eisenhower himself had said as much in an article in the *Saturday Evening Post*. "I believe the time has now come when we should start removing some of those troops," Eisenhower wrote. "One American division in Europe can 'show the flag' as definitively as several."[22]

History, of course, tells us that did not happen. The United States maintained a robust and active military presence in Europe well into the mid-1990s. Starting in 1969, the U.S. military regularly began exercising the strategic airlift of forces to West Germany known as Exercise Redeployment of Forces to Germany, or REFORGER. This exercise was conducted until 1993, four years after the fall of the Berlin Wall in 1989 and two years after the dissolution of the Soviet Union in 1991. REFORGER's combining CONUS-based units with pre-staged equipment maintained at POMCUS sites in West Germany harkened back to the concept exercised during Big Lift.

Since the Vietnam conflict, the United States has relied exclusively on strategic airlift to deploy troops around the world. The bulk of our equipment and supplies, if not already in place, goes by sea aboard cargo ships operated or contracted by the Navy's Military Sealift Command or via one of MSC's 30 pre-positioned ships.[23]

Big Lift not only established that the United States could deploy forces from CONUS to Western Europe on short notice, but it marked a dramatic shift in national-security thinking. The United States clearly sent a message to its allies and potential adversaries alike that the time might someday come when America, for reasons of domestic and economic necessity, might not maintain a large overseas presence to support commitments to its allies around the world. Today, our political and military leaders, in an era of ever-shrinking budgets, know well that issue will resurface again soon as the United States – the Cold War long over and its two wars in Iraq and Afghanistan all but concluded – will turn to strategic mobility as the key to remaining viable and engaged on the world scene.

(***Editor's note***: *For this article, the author not only relied on the expertise and experience of retired LTC Thomas E. Teska, who – as noted – took part in Big Lift in Germany in the early 1960s, but on LTC Greg Penfield, Combined Arms Center, Fort Leavenworth, KS; and LTC Tom Magee, U.S. Army Reserve.*)

Commander David Teska's current assignment is senior Reserve officer, Coast Guard Sector, San Diego, CA. He previously served as emergency-preparedness liaison officer, 8th Coast Guard District; action officer/command duty officer, U.S. Transportation Command; assistant planning officer, 8th Coast Guard District; and Marine casualty investigator/command duty officer, Coast Guard Marine Safety Office, St. Louis. He deployed with the U.S. Coast Guard to Bahrain for Operation Desert Storm with Maritime Interception Operations in April-July 1992. His military schooling includes the U.S. Naval War College, where he obtained a certificate of Naval Command and Staff in November 2006; graduate of the Naval War College's Naval Command and Staff program through the College of Distance Education, November 1996; U.S. Army Field Artillery Officer Basic Course, Fort Sill, OK, July 1987; and commissioning as a second lieutenant in the U.S. Army Reserve at Texas Tech University, May 1984. He holds a bachelor's of arts degree in history from Texas Tech University and a master's of science degree in journalism from the University of Kansas.

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Fighting an Uphill Battle

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[13] Kanwal, Gurmeet, *Heroes of Kargil*, New Delhi, India: Army Headquarters, 2002, and *The Kargil Committee Report: From Surprise to Reckoning*.

[14] Musharraf, Pervez, GEN, *In the Line of Fire: A Memoir*, New York: Free Press, 2006. He also claimed that the Pakistani NLI was not to cross the LOC and he did not know the extent of the attack until May 7.

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[17] Ibid.

[18] *The Kargil Committee Report: From Surprise to Reckoning*. However, Musharraf claimed that in the Kashmir, exchange of fire and artillery were almost everyday occurrences.

[19] Ibid.

[20] Kanwal.

[21] *The Kargil Committee Report: From Surprise to Reckoning*.

[22] Acosta.

[23] Schofield.

[24] *The Kargil Committee Report: From Surprise to Reckoning*. The high percentage of artillery deaths wasn't necessarily unusual since most casualties in World War II were from indirect fire.

[25] Acosta.

[26] Kanwal.

[27] Acosta.

[28] Mishra.

[29] *The Kargil Committee Report: From Surprise to Reckoning*.

[30] Acosta.

[31] Most frontal attacks only require three friendly Soldiers to every one of the enemy in a prepared defense. Because of the region's steep cliffs, the attackers required many more.

[32] Kanwal. Although movement was "slow and painful," the Indians learned how to fight the NLI. After eight days, there were 150 casualties. Also see Acosta.

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[44] Gates, Robert, "Remarks as Delivered by Secretary of Defense, Fort Leavenworth, KS," May 7, 2010, http://www.defense.gov/speeches/speech.aspx?speechid=1465, accessed May 8, 2010. He cited the British colonial army before World War I as a prime analogy.

Artillery Precision-Guided Munitions and NTC

by MAJ Michael S. Coombes

Precision-guided munitions provide the commander of a brigade combat team valuable means to employ fires throughout full-spectrum operations. Also, the National Training Center provides BCTs the only opportunity in the United States to conduct PGM live-fire training within a fully integrated training scenario. In both live-fire and force-on-force training, rotational units at the NTC will be able to hone their skills in the planning and execution of PGM missions in support of commander's intent.

This article is for maneuver commanders who may participate in a NTC training rotation. It covers previous PGM live-fires at the NTC, including lessons-learned; force-on-force PGM replication; techniques for the employment of PGMs; and a brief overview of Excalibur and Guided Multiple-Launch Rocket System capabilities (unclassified). The intent is to educate the Army's leadership on training opportunities at the NTC and on artillery PGM best practices.

PGMs and NTC

The Global Positioning System-aided Excalibur 155mm round and GMLRS are combat-proven and will remain valuable attack options to the maneuver commander for years to come. Both have proven their value in the counterinsurgency environments of Iraq and Afghanistan and will prove equally valuable in major combat operations. PGMs enable the present-day warrior to better leverage the effects of artillery fires.

The NTC provides BCTs the opportunity to employ PGMs in live-fire exercises and with simulated effects within the force-on-force training scenario. The NTC is the only location within the United States for Army units to execute live Excalibur and GMLRS fires with ground observers and within the context of a brigade-level tactical training scenario.

Why PGMs?

Artillery has supported victory since the 13th Century, and indirect fire has been commonplace on the battlefield since World War I. Though extremely effective when properly employed, conventional munitions have limitations that can preclude them from achieving the desired effects in urban and complex terrains. Increased volume of fires masks the inherent, unaccountable errors of conventional artillery and rocket munitions.

Accuracy and limited volumes of fire are of vital concern when collateral damage is of tactical and strategic concern. First, PGMs reduce the need for high volumes of fire. Due to the unique ballistics of surface-to-surface PGMs, they also achieve superior ranges to those of traditional artillery and rockets. Second, the reduced volumes of fire result in less strain on logistic systems. Because of the unique capabilities provided by PGMs, the operations group at the NTC works diligently to ensure PGMs fully integrate into the training opportunities provided to BCTs.

Looking beyond the COIN fights in Iraq and Afghanistan and toward full-spectrum and major combat operations, the operations group and 11th Armored Cavalry Regiment develop training scenarios based on the hybrid threat covered in Training Circular 7-100. Hybrid-threat tactics, techniques and procedures during future rotations will ensure the need to employ PGMs. The hybrid threat will shield itself in urban areas and exploit the Blue Forces' restrictive rules of engagement to gain positions of advantage and counter BLUFOR technological advantages. It is a likely probability that contemporary operational environment forces will use this technique to protect indirect-fire systems and high-value targets such as command-and-control nodes and radars. PGMs will give the BLUFOR the opportunity to engage targets while minimizing collateral damage.

Details, capabilities, advantages

Excalibur. Excalibur is a GPS-guided, inertial-measurement, unit-aided, fin-stabilized, 155mm-caliber artillery projectile delivered by the M777A2 and M109A6/A7 howitzers. It has a circle of equal probability of less than 10 meters at all ranges. This is a huge advantage over conventional artillery, which experiences increased CEP at greater ranges. The Excalibur payload is equal to that of a standard high-explosives round. However, the increased probability of target hit greatly increases the lethality of the like-payload. The round can be set to function in the proximity, point detonating and delay modes for flexibility against an array of target types.

Excalibur ranges vary with projectile generations. First-generation rounds (XM982) can range to 25 kilometers, and later generations (M982) out to 37 km. All Excalibur rounds are fired high-angle and, due to the path assumed after acquiring GPS tracking, Excalibur has steep attack angles. This characteristic makes Excalibur an exceptional option for attacking targets in defilade, especially at greater ranges. The enhanced effects due to the accuracy of Excalibur increases howitzer survivability due to lower counter-fire detection probability and limited threat capability to match extended ranges.

GMLRS. GMLRS is a GPS-augmented, inertial guided rocket. GMLRS has two payloads, Dual-Purpose Improved Conventional Munitions and GMLRS-Unitary. The DPICM version carries 404 M85 submunitions. GMLRS-U is a 200-pound warhead that successfully deployed in support of both operations Iraqi Freedom and Enduring Freedom. The M270A1 (Multiple-Launch Rocket System) and M142 (High-Mobility Artillery Rocket System) platforms deliver both. GMLRS provides persistent, responsive, all-weather, rapidly-deployable, long-range, surface-to-surface and precision-strike capability.

GMLRS has a range of more than 70 km and a CEP of less than 10 meters at all ranges. Like Excalibur, GMLRS provides steep attack angles, nearly nullifying the adversary's use of defilade positioning for protection. Obviously, GMLRS provides a higher-level firepower over the Excalibur round. The increased firepower allows attacks against larger and/or more protected targets with higher collateral-damage

concerns. Nevertheless, the high reliability of the GMLRS, coupled with the ability to choose between various fuse-settings (point detonating, proximity and delay) makes GMLRS an ideal means of attack when collateral damage is a concern.

Fight and win with PGMs

Fighting and winning with PGMs starts with the commander's intent for fires. PGMs are a means to support the overall scheme of maneuver, as do all fires support. The development of fire-support tasks and associated fire-support products such as the high-payoff target list and attack-guidance matrix with target-selection standards remain the foundation for effective fire support. When the need or desire for PGMs is identified, units must understand how to resource and deliver PGMs in a timely manner.

Units should consider the use of Excalibur and GMLRS when:

- Minimizing collateral damage is critical;
- The terrain hinders effective employment of conventional munitions due to their trajectory limitations;
- Conventional munitions cannot range the target;
- Minimizing the number of rounds fired is critical; and
- In situations requiring the use of a PGM, yet weather conditions or lack of responsiveness preclude the use of other PGMs, or a designator is not available (Special Text No. 3.09.74).

PGMs require GPS keys. Unit communication sections must understand the importance of the specific keys required and have distribution plans to support in a timely manner. For Excalibur, howitzer-section chiefs need to understand the distribution plan supporting them. Also, they should also understand how to load the keys and use the Enhanced Portable Inductive Artillery Fuze Setter to transfer the GPS keys to the Excalibur round.

The value of prosecuting targets with PGMs is the ability to ensure target hit and achieve the desired effects. The importance of accurate target location – including the requirement of target mensuration for hardened targets or in areas of high collateral damage concerns – is paramount. Inaccurate location of targets will result in units "missing precisely," possibly resulting in unacceptable collateral damage or failure to achieve desired affects. Therefore, unit training must use the Pocket-sized Forward-Entry Device

and the Digital Precision Strike Suite-Special Operation Forces to ensure accurate target location.

NTC PGM live-fires

Live-fire training exercises provide the best opportunity for Soldiers and units to gain full confidence in their equipment and systems. Although seemingly counterintuitive, the training safety danger zones for PGMs are significantly larger than the SDZs for munitions that follow a simple ballistic flight. Because of this, live-fire training with PGMs at home stations is difficult. At the NTC, the commanding general approved deviations to the PGM SDZs that allow realistic incorporation and use of PGMs. Currently, the NTC stands as the only Army installation with a deviation that allows ground observation of both Excalibur and GMLRS.

Battery C, 3rd Battalion, 13th Field Artillery, fired the first PGMs at the NTC fully integrated within a training scenario Aug. 14, 2010. The unit fired two GMLRS rockets against a division target. Both rockets impacted within seven meters of the target's center grid, completely destroying the target (an 8-foot-by-8-foot plywood structure surrounded by a 16-foot-by-16-foot plywood fence). While target destruction was impressive, the lack of collateral damage was even more so. Most shrapnel landed within 30 meters of the impact grids, with a small amount found out to 80 meters. Notably, foam targets placed 70 meters from the target suffered no visible signs of damage.

Second Battalion, 8th FA (part of 1st Brigade, 25th Infantry) fired the first Excalibur rounds Feb. 22, 2011, during the force-on-force phase of a mission-rehearsal exercise. Due to a target-location error of 10 meters, the amount of destruction against the target building was less than desired. Nevertheless, collateral damage would have been very limited. Most shrapnel settled within 20 meters of the impact grid, with some shrapnel located out to 40 meters from the impact.

Since this event, live Excalibur missions have become common during MREs. On April 28, 2011, 2-29 FA (4th Brigade, 1st Armored Division) scored a direct hit, leveling the 16-foot-by-16-foot plywood structure.

During past scenarios, BCTs received orders to execute Excalibur missions against division high-payoff targets or to secure division assets and conduct target-site exploitation for GMLRS missions. One scenario included a simultaneous close-air-support strike against another division target, requiring a detailed air coordination and control plan. In each case, conditions

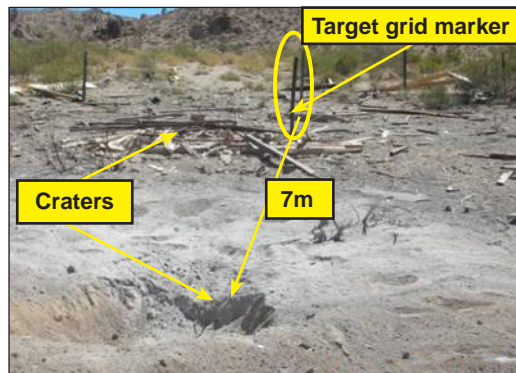*Figure 1. Btry. C, 3-13 FA, fires PGMs at NTC Aug. 14, 2010. (Photo by MAJ Michael Coombes)*

Figure 2. GMLRS-U rocket craters at NTC Aug. 14, 2010. (Photo by MAJ Michael S. Coombes)

Figure 3. Excalibur-target impact grid during 2nd Bn., 8th FA's live-firing Feb. 22, 2011. (Photo by CPT Joshua P. Aranda)

Figure 4. Excalibur-target impact grid during 2-29 FA's live-firing April 28, 2011. (Photo by CPT Joshua P. Aranda)

were set for the unit to obtain intelligence linked to the scenario to validate unit TSE plans and execution. Current scenario designs incorporate intelligence threads leading to the need to execute GMLRS or Excalibur missions.

The PGM live-fires were invaluable exercises that provided each BCT important lessons-learned and the confidence to leverage PGMs in combat. Trends from those missions include unit struggles acquiring accurate target location with sensor systems, target mensuration, proper TSE, management of required GPS keys and development of assessment and reattack criteria.

The struggles with accurate target location and managing GPS keys are the greatest concerns. Units can improve target locations with increased training for all observers with organic equipment and software such as Lightweight Laser Designator Rangefinders, PFED and DPSS-SOF (see Special Text 3.09.74 for employment TTPs and sensor-system TLE capabilities). Concerning GPS keys, the trend during MREs is for the FA battalion to task-organize platoons to task forces with varying command relationships (direct support, tactical control, operational control). However, gaining task forces have little to no understanding of the requirement for GPS keys. Prior coordination by task-force communication sections would ensure timely availability of GPS keys to platoons. Consequently, task forces must demand that their artillery maintain PGM capability at all times.

NTC force-on-force replication

As anyone who has been to a combat training center knows, Multiple Integrat-ed Laser-Engagement System rules the battlefield. The NTC uses the Area Weapon-Engagement System to replicate fires in a force-on-force environment. AWES use algorithms to determine damage through MILES. The algorithms account for munitions type, volume of fires and target type. Under this system, PGMs are extremely lethal.

Unit requirements to employ PGMs during force-on-force are the same to conduct live-fires. To fire Excalibur, units must have PGM-capable howitzers, possess the M1185A1 EPIAFS and possess the correct GPS keys. There are two means available to fire GMLRS. The first is a request through division for notional MLRS support. The second is for BCTs supported by actual MLRS or HIMARS units; these units must be GMLRS-capable and possess the proper GPS keys.

To date, there has been little consideration for the use of PGMs by rotational units at the NTC during force-on-force. The current trend is for howitzers not to remain PGM-capable during steady-state operations. Sections either fail to receive and maintain GPS keys or fail to maintain an operational EPIAFS. Furthermore, BCTs often disregard the range advantages provided by Excalibur, resulting in units ordering an abundance of rocket-assisted projectiles instead of Excalibur to provide fires at extend ranges. However, the RAP round experiences significant CEPs with increased range, where the Excalibur round maintains a CEP of less than 10 meters at all ranges.

Programming PGMs at NTC

BCTs wanting to train PGM employment at NTC must first identify PGM employ-ment as a training objective in the unit's mission letter to the NTC. For live-fire, firing-unit crews must be qualified within six months and, if necessary, receive new-equipment training. Requests for PGMs require the establishment of an approval-authority chain in the Total Ammunition Management Information System; currently, each heavy BCT and Stryker BCT is authorized one Excalibur round and one GMLRS-U rocket. Lastly, units must coordinate for, draw and maintain GPS keys.

MAJ Mike Coombes is the deputy fires trainer at NTC, Fort Irwin, CA. He has also served as an FA battalion battle-staff trainer and targeting combat trainer at NTC, and instructor-in-gunnery/exchange officer, Royal Canadian Artillery School, Gagetown, New Brunswick, Canada. He commanded A/5-82 FA, 4/1 Cavalry Division, Fort Bliss, TX, and his combat experience includes two deployments in support of Operation Iraqi Freedom with 3-2 Stryker BCT (2003-2004) and 4/1 Cav Division (2006-2007). His military schooling includes the Field Artillery Captain's Career Course, Pathfinder Course and Field Artillery Officer Basic Course. He holds a bachelor's of arts degree from the University of Texas-Austin in history and an associate's of arts degree in engineering emphasis from New Mexico Military Institute.

ACRONYM QUICK-SCAN

AWES – Area Weapon-Engagement System
BCT – brigade combat team
BLUFOR – Blue Force
CEP – circle of equal probability
COIN – counterinsurgency
DPICM – Dual-Purpose Improved Conventional Munitions
DPSS-SOF – Digital Precision Strike Suite-Special Operation Forces
EPIAFS – Enhanced Portable Inductive Artillery Fuze Setter
FA – field artillery

GMLRS – Guided Multiple-Launch Rocket System
GMLRS-U – Guided Multiple-Launch Rocket System-Unitary
GPS – Global Positioning System
HIMARS – High-Mobility Artillery Rocket System
Km – kilometer
MILES – Multiple Integrated Laser-Engagement System
MLRS – Multiple-Launch Rocket System
MRE – mission-rehearsal exercise

NTC – National Training Center
PFED - Pocket-sized Forward-Entry Device
PGM – precision-guided munitions
RAP – rocket-assisted projectile
SDZ – safety danger zone
TLE – target-location error
TSE – target-site exploitation
TTP - tactics, techniques and procedures

11ᵀᴴ ARMORED CAVALRY REGIMENT

The **11ᵗʰ Armored Cavalry Regiment was organized in 1901 and saw service in the Philippines. In 1916, the regiment also rendered service on the Mexican border. The "Black Horse" shoulder-sleeve insignia was approved May 1, 1967. It bears the traditional Cavalry colors of red and white. The rearing black horse alludes to the regiment's nickname "Black Horse."**

Headquarters, Department of the Army
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