ARMOR

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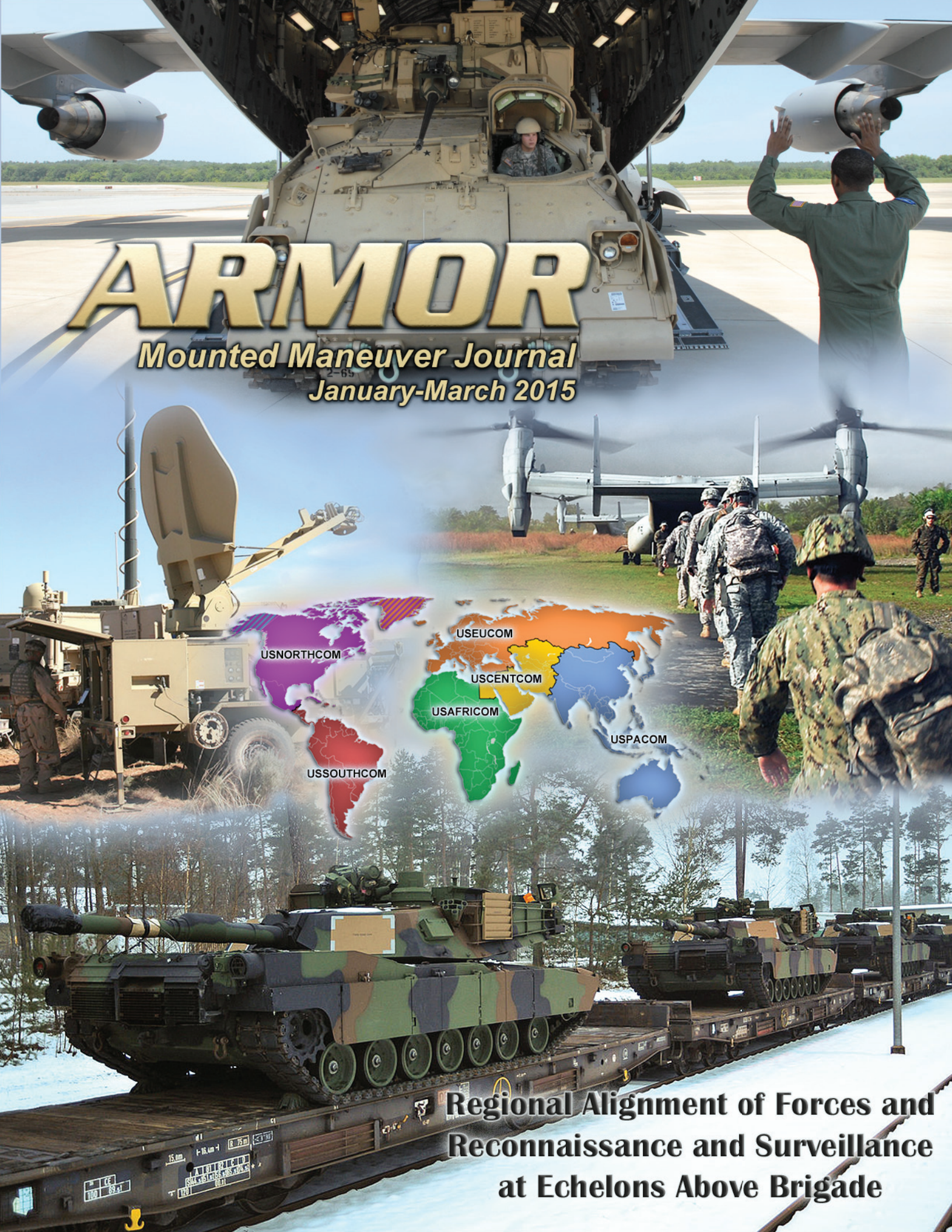
January-March 2015



Regional Alignment of Forces and Reconnaissance and Surveillance at Echelons Above Brigade

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CHIEF OF ARMOR'S HATCH

BG Scott McKean
Chief of Armor/Commandant
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Looking to the Future of Combat Vehicles

"We must invest in mobile protective firepower [sic] and develop combat vehicles that provide land forces with the appropriate combination of mobility, lethality and protection," said Chief of Staff of the Army GEN Raymond T. Odierno at the recently held Association of the United States Army conference.[1]

He also listed improvements the Army needs:

- The Army must invest in light reconnaissance and security capabilities, and in the lethality of missiles, interceptors and sensors.
- The Army should also innovate with directed energy, a new Infantry Fighting Vehicle (IFV) and a future tank with autonomous capabilities.
- The Army must also reduce the size of its command-and-control footprint but also needs reliable and protected flow of information while on the move.
- It is imperative that we adapt new technologies to warfighting concepts better than anybody else.[2]

Today, we continue to find ourselves in a challenge to keep up with technology while in a resource-constrained budgetary environment. There are several initiatives under consideration as we look to modernize the armored force. The Army is in the midst of developing a combat-vehicle modernization strategy (CVMS) that captures the essential requirements needed within our formations, not just our vehicle portfolios.

For example, the mobility of the infantry brigade combat team (BCT) is a significant shortfall coupled with a need for mobile protected firepower. As a former Sheridan platoon leader, I saw firsthand the impact a light tank brings to an infantry force and how it exponentially increases the formation's effectiveness.

However, technological innovation is not the panacea for future maneuver. GEN Donn A. Starry considered these same challenges and provided very sage guidance back in the 1980s. Instead of solely relying on technology, it "must be harnessed to provide systems whose general characteristics are spelled out by a carefully structured operational concept of how the battle is to be fought. Technology should be harnessed to the tasks of identifying and developing the means to render ineffective heavy enemy investments in specific systems or capabilities. New weapons technologies should not just seek to match the enemy, qualitatively or quantitatively or both. Rather, they should seek to challenge the enemy in new, different and demanding ways. Technology must make the outcome of battle less, not more, predictable."[3]

At the Maneuver Center of Excellence (MCoE), we are working on future maneuver as part of the Army Operating Concept. Joint-task-force-capable division headquarters that can task-organize different BCT types (i.e., a Stryker battalion attached to an armored BCT) may provide options for tactical problems other than material solutions. The MCoE is facilitating seminars and battlelab exercises with the operational force and U.S. Army Training and Doctrine Command centers of excellence to put forth the intellectual rigor before the physical work. Set the theater, joint-force entry, joint combined-arms maneuver and wide-area security are ongoing efforts and provide interesting insights and opportunities for furthering the development of future maneuver.

As we work on the operational concepts, work continues on our vehicle modernization. The CVMS prioritizes enhancements over the near-, mid-, and long term. Most immediately, we need to improve on the ability to handle future weight growth; prioritize mobility and lethality improvements; plan for their transitions; adjust to doctrine, organization, training and leadership; and develop new programs addressing overmatch in the mid-term. Ultimately, the strategy must reduce the BCT's sustainment requirements, further enhancing our expeditionary capacity in a complex world.

The Abrams main battle tank

continues to undergo enhancements aimed to sustain capabilities of providing mobility, protection and firepower as well as versatility across various environments, to include hybrid threats. The research-and-development community is working to determine the capabilities of the future main battle tank and look for weight reductions, but with Abrams lethality and force protection. This effort generates learning requirements and informs experimentation, especially as we look at potential integration of autonomous systems or vehicles against direct-fire maneuver requirements. These solutions will maintain the Abrams tank as the critical component to decisive landpower as it retains technological, physical and psychological advantages against determined enemies.

Existing M3 Cavalry Fighting Vehicles are being converted into M2s (IFV configuration) to carry six scouts – the three-scout crew and three dismounted scouts. Enhancements are being made to add more seating and reduce the amount of 25mm ammunition and missiles stowed inside the Bradley. These configurations support the approved 6x36 Cavalry-squadron standard scout platoon (SSP) force-design update. Combined-arms battalions will transition to the SSP as Bradleys become available, remaining configured with three Bradley Fighting Vehicles and five uparmored humvees in the interim.

Other notable modernization efforts are ongoing with the M109 Paladin Howitzer and Joint Light Tactical Vehicles (JLTVs).

The recent review of capability gaps in our vehicle portfolios highlight the need to address fundamental shortcomings with our CVMS:

- Modernized vehicles require network coverage over large distances on the move for situational awareness and the ability of commanders to make timely decisions.
- Modernized vehicles require lethality upgrades to maintain overmatch due to the proliferation of enemy technologies emerging among near-peer threats.
- Reconnaissance and security assets require enhanced/improved mobility and survivability due to a reduction in R&S effectiveness in the execution of screen, delay, guard and movement-to-contact.
- The ABCT's fleet of aging M113 family of vehicles (FoV), M109 FoVs and wheeled fleet have blast and ballistic protection vulnerabilities.

Finally, the integration of Active Protection Systems (APS), especially on our less protected fleets, must be part of our immediate research and development, as well as non-developmental options. There are some who doubt APS' capabilities, but given the proliferation of anti-tank missiles and the increasing potential for expeditionary operations, this critical capability may prove vital to survivability. The Armor School will continue to pursue opportunities to work with Army Capabilities Integration Center on APS development.

We encourage discussions from the armored-force community on modernization and combat-vehicle capabilities. The Armor School established a Common Access Card-access MilBook page (www.milsuite.mil/book/Armored_Force) for discussion forums, including topics such as the light tank. We also have our Facebook page (www.facebook.com/usaarms) for general discussions. We always look forward to your professional articles that generate awareness and debate on topics relating to armored warfare. We must keep engaged and always Forging the Thunderbolt!

Notes

[1] Kathleen Curthoys, "Odierno: Readiness at historically low levels," ***Army Times***, April 2, 2014, http://www.armytimes.com/story/military/pentagon/2015/04/01/odierno-army-readiness-at-historically-low-levels/70805808/.

[2] Ibid.

[3] Lewis Sorley, editor, ***Press On! Selected Works of General Donn A. Starry***, Vol. 1, Fort Leavenworth, KS: Combat Studies Institute Press, U.S. Army Combined Arms Center, http://usacac.army.mil/cac2/cgsc/carl/download/csipubs/PressOnI.pdf.

Acronym Quick-Scan

APS – Active Protection Systems
BCT – brigade combat team
CVMS – combat-vehicle modernization strategy
FoV – family of vehicles
IFV – Infantry Fighting Vehicle
MCoE – Maneuver Center of Excellence
R&S – reconnaissance and security
SSP – standard scout platoon

LTC Marcus Jones, former 1st Armored Division chief of fires, and MAJ John Dvorak, division G-3 chief of exercises and simulations, were also co-authors of "1st Armored Division Leads Army in Re-examining Mission Command 'Initiatives,'" listed as written by BG Joseph P. Harrington and Dr. William M. Rierson in the October-December 2014 edition of ***ARMOR***.

Jones is currently a student at the U.S. Army War College. Prior to serving as 1st Armored Division's chief of fires, he commanded 1-19 Field Artillery and served as chief of doctrine at the U.S. Army Fires Center of Excellence, Fort Sill, OK; executive officer and S-3, 3-16 Field Artillery, Operation Iraqi Freedom 2008-2010; effects coordinator, 2nd Brigade Combat Team, 4th Infantry Division, Operation Iraqi Freedom 2005-2007; commander, B/6-27 Field Artillery; and commander, Service Battery, 1-17 Field Artillery. He holds a bachelor's of arts degree in political science from the University of Arkansas.

Previous duty assignments for Dvorak, a Functional Area 57 simulations-operations officer, were instructor, Department of English and Philosophy, U.S. Military Academy, West Point, NY; mentor to

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GUNNER'S SEAT

CSM Michael Clemens
Command Sergeant Major
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Excellence in Sustainment

"Gentlemen, the officer who doesn't know his communications and supply as well as his tactics is totally useless." –GEN George S. Patton

The Soldiers of Eagle Troop, 2nd Squadron, 2nd Armored Cavalry Regiment, had been at war for 72 hours, moving across a featureless plain that was the Iraqi desert when they made contact on the afternoon of Feb. 26, 1991, with elements of the Tawakalna Division's 18th Brigade. What followed was a remarkable feat of arms, a validation of the U.S. Army's training and a tribute to the skill of the tank and Bradley crews that defeated an enemy more than twice their size in a prepared defense. Just as remarkable, however, is how they got to 73 Easting.

Only 100 ground combat hours were necessary for the Army to re-establish itself convincingly as a successful land-combat force. During that brief period, U.S. forces moved more combat power faster and farther than any similar force in history. They averaged 95 kilometers per day, more than twice as much as the Wehrmacht's best blitzkrieg effort. Helicopter-borne forces conducted history's greatest aerial envelopment by placing the combat elements of an entire division 160 miles deep behind enemy lines.

None of this would have been possible without an almost instinctive knowledge, at all levels, of our requirements for and ability to conduct logistic operations all the way down to the individual Soldier at the furthest reaches of our formations.

During Vietnam, GEN Donn Starry noted that a critical problem was the tendency of logistical units to stick to base camps; this was evident early in the war and continued to the end. Logistical units, particularly supply and maintenance elements, were unprepared psychologically and in practice to live in the field close to the units they supported. Although Army doctrine stressed that this support should be provided in forward areas, the practice was to centralize support facilities in built-up, well-developed, permanent base camps, similar to installations in the United States. In practice, they placed support facilities as close to the coast as possible, often more than 100 kilometers from the fighting units, and accessible only by means of tenuous supply and evacuation routes. While this placement was easier for the supply and maintenance units, it was a hardship for the combat units.

If you substitute airfield for port, this description certainly does not sound very different from how the Army has operated during the last 13 years. However, as the Army shifts to decisive-action training environments and focuses on an expeditionary mindset for our operations in the future, we must regain our ability to sustain formations that are moving 95 kilometers a day and ensure they are prepared to fight.

Illustrating the importance of understanding logistics at the lowest level is 3rd Battalion, 69th Armor's movement to and assault on the key objective of the Al-Kaed Bridge spanning the Euphrates River in 2003. Military historian John B. Dwyer describes the situation well in an article in ***The Washington Times***: "Four hundred meters long with concrete columns that could easily support a 70-ton Abrams tank, it had to be captured. … Because it was so vital, the Iraqis deployed the Medina Division's 10th Brigade, an armored brigade, and a Special Republican Guard commando brigade to defend it. … [T]he general commanding all Republican Guard units in the area ordered the bridge demolished before American forces could cross it."[1]

As Dwyer relates, "On April 1, nine days and 350 miles after [Task Force 3-69 Armor] had roared across the berm into Iraq, they were in position to assault the objective. A and C Companies, 3-69 Armor, along with B and C Companies, 3rd and 2nd Battalions, 7th Infantry, and Company A, 11th Engineer Battalion, supported by artillery and attack aviation, had battled past a 250-foot escarpment, taken the Al-Kifle Bridge and fought through an apocalyptic two-day sandstorm. Now they faced the dangerous Karbala Gap, where vehicles were channeled through an 1,800-meter-wide strip and where chemical weapons were expected to be used."

The decisive battle was now at

hand. With the scouts in the lead, 3-69 Armored moved toward the bridge.

"Three miles down the road, [the scouts] encountered Iraqi forces and came under mortar fire," Dwyer wrote. "Maneuvering away from it, they called in artillery and air support as [Company A's] tanks executed a flanking attack, three platoons abreast. An hour and 15 minutes later, they had routed the enemy, and the rest of the task force fell in behind them. … Nearing the bridge, A Company was firing at targets at distances ranging from 10 to 1,000 meters away, some of them truck-borne rocket-propelled-grenade teams. … When their missions were completed that day, A Company had been in combat for six straight hours."

Knowing the bridge had been rigged for demolition, it became the dangerous mission of Company A, 11th Engineers, to locate and cut the connecting wires. To cover and help protect them, a smoke platoon moved forward. Their efforts were augmented by artillery smoke rounds. Meantime, map analysis revealed the most likely positions for Iraqi demolition trigger teams. A barrage from 1st Battalion, 41st Field Artillery, leveled that area, and yet the Iraqis were able to detonate several charges on the northern span, leaving three lanes open. The brave American engineers persevered and soon rendered the bridge safe for U.S. troops to cross.

Company C's tanks and teams of 2-7 infantrymen charged across Al-Kaed Bridge at 4:30 p.m. April 2. "Muddy terrain forced C Company into a hasty arc-shaped defensive position for the expected enemy counterattack," Dwyer wrote. The defensive arc was oriented northwest to east, with two tank platoons and a mechanized-infantry platoon deployed to cover likely approaches.

"At 11:30 [p.m.], the Iraqis started coming," said Dwyer. "What became known as the Battle of Charlie 6, lasting until 2:30 a.m., had begun. It was the biggest tank-mechanized engagement of the war. With their 120mm main guns, thermal sights and combat-tested crews, the Abrams tanks, supported by artillery and attack aviation, proved to be deadly in the night.

"The rest of task force had since secured the near side and then crossed the Al-Kaed Bridge, engaging and defeating three enemy brigades," Dwyer wrote. Task Force 3-69 destroyed more than 20 Iraqi armored vehicles, including Russian-made T-72 tanks, and killed more than 600 Iraqi troops.

Without an intimate knowledge of the fuel and ammunition requirements of their vehicles, and a dedicated plan to meet those requirements, none of Task Force 3-69's accomplishments would have been possible.

Throughout the history of the U.S. Army Armored Corps, our success has been directly tied to our ability to effectively execute logistics. The execution of sustainment during combined-arms maneuver is a task that few leaders below battalion-command teams have experienced. For the past decade, the focus has been on the counterinsurgency fight, and units have not exercised the full spectrum of sustainment functions required in the decisive-action training environment.

For example, with Class III, many companies/troops are using the green/amber/red technique for reporting on-hand statuses. However, the support-planning officer forecasts and orders fuel by gallons at the brigade level. On an M1A2, there is the potential difference of 130 gallons of fuel in the "amber" range. (The M1A2 holds 446 gallons of fuel, and most unit standard operating procedures reflect amber status as between 60 percent to 89 percent of on-hand fuel.) This leads to a potential offset of 520 gallons of fuel for a platoon!

*(**Editor's note**: See "'Driver, How Much Fuel Do We Have?' – An Update" by LTC William Kepley in **ARMOR**'s October-December 2014 edition, http://www.benning.army.mil/armor/eARMOR/content/issues/2014/OCT_DEC/Kepley.html.)*

The noncommissioned officer corps must re-establish itself as the expert on everything that involves vehicles, including sustainment. First sergeants are critical links in this process and should be the driving force in ensuring the success of the formations. At the company, the first sergeant is responsible for gathering all the information from the platoons and submitting a consolidated report to the battalion/squadron. At minimum, the first sergeant should report the combat slant, changes to expenditure rates and the Class I, III and V statuses of the company/troop. This must be done in a standardized manner that allows the squadron/battalion to effectively communicate with the brigade combat troop its on-hand quantities at the unit level to ensure timely delivery and forecasting.

Restoration of sustainment core competencies will require a holistic and repetitive training and leadership-development approach by both the institution and organizations, with just as much emphasis as on current direct-fire training programs, to be successful.

Notes

[1] John B. Dwyer, "Battle of Charlie 6," ***The Washington Times,*** April 3, 2005, http://www.washingtontimes.com/news/2005/apr/3/20050403-093740-9355r/. Dwyer is a Vietnam veteran, serving in 1st Battalion, 69th Armor, and in 1st Battalion, 14th Infantry, in 1968-69.

Continued from Page 3

the Afghan Border Police, Spin Buldak, Afghanistan; commander, Headquarters and Headquarters Company, U.S. Army Armor Center, Fort Knox, KY; commander, Troop E, 1-16 Cavalry, Fort Knox; scout-platoon leader, D/4 Cavalry, Operation Iraqi Freedom 2003; and tank-platoon leader, A/1-34 Armor, 1st Brigade, 1st Infantry Division, Fort Riley, KS. He holds a bachelor's of science degree in economics from the U.S. Military Academy and a master's of arts degree in English from Kansas State University.

Crisis Response: the East African Response Force in South Sudan

by LTC Robert E. Lee Magee

In the wake of Benghazi and the loss of four State Department personnel, U.S. leadership began to consider options for crisis response and determined that the Army possessed the capability to be a key contributor to the joint force's crisis-response team. Crisis response is not and should not be the exclusive domain of U.S. Marine Corps' Marine expeditionary units (MEU) and the Special-Purpose Marine Air-Ground Task Force (SP-MAGTF).

To overcome the tyranny of distance in Africa, U.S. Africa Command (AFRICOM) directed Combined Joint Task Force-Horn of Africa (CJTF-HoA) to stand up a flexible company-sized response force and marry it to a U.S. Air Force C-130 unit stationed at Camp Lemonier, Djibouti. However, any Army unit, regardless of its equipment set, can execute crisis response when teamed up with the appropriate tactical airlift. In the near future, the Army and Air Force should work together to complement the Marine Corps' MEUs to expand the reach of joint crisis-response forces to protect U.S. interests.

At U.S. Ambassador Susan Page's request, the Army and Air Force's East African Response Force (EARF) executed its first operational deployment Dec. 18, 2013. According to Juba's regional security officer (RSO), Bob Picco, the EARF's capabilities, location and speed made it his first choice to support his embassy when political fighting erupted throughout Juba, South Sudan. Prior to the EARF's deployment, the embassy experienced significant skirmishing outside its walls, and long gun battles between Dinka and Nuer soldiers occurred throughout the South Sudanese capital.

Over the next four months, the EARF provided critical force protection, allowing the mission to stay open and supporting the evacuation of 400 U.S. citizens and 350 third-country nationals. A Marine security-augmentation detachment relieved the EARF April 20, 2014.

Figure 1. South Sudan's location in Africa. *(Map from Wikipedia; licensed under CC0 via Wikimedia Commons)*

Training

Company B, 1st Battalion, 18th Infantry Regiment, assumed the EARF's ground-force mission from Company B, 1st Battalion, 63rd Armored Regiment, Dec. 14, 2013. Four days later, the company deployed 45 Soldiers to South Sudan. The company executed this mission as rapidly as it did because of a solid transition with 1-63 Armor; the training program conducted at Fort Riley, KS; and CJTF-HoA's certification process once in theater. Fundamentally, the tactical requirements are not complicated. The EARF's primary mission is a company defense. In a worst-case scenario, the EARF's defensive mission transitions to a noncombatant evacuation operation (NEO).

The battalion and company trained both of these scenarios at home station. At Fort Riley, the brigade's company training lanes incorporated all unified land operations' mission-essential task list tasks for a combined-arms battalion.

Figure 2. Juba, in south-central South Sudan, is the current capital of the new country, created in 2011. *(Map from Central Intelligence Agency's **World Factbook**)*

During company training, each

company executed the defense of an embassy and interacted with the ambassador, RSO and a host-nation security-force commander. During this lane, they reacted to the ambassador's and RSO's requests, hostile crowds, snipers and improvised explosive devices throughout the mission.

The capstone-training event saw the battalion execute a movement-to-contact to secure the embassy under hostile conditions using our tanks and Bradleys. Using Joint Publication 3-68 and 1-63's after-action review (AAR) as our guidelines, the battalion executed a NEO of the embassy, with B/1-18 Infantry executing all actions on contact with the embassy's staff and host-nation security forces.

These training events established the battalion's foundation for our certification in the Horn of Africa.

CJTF-HoA certified the battalion's response force during the relief-in-place with 1-63 Armor Dec. 6-8. B/1-18 Infantry, with a small battalion mobile command element, executed an alert, deployed and executed mission sequence. During this training event, the battalion received a threat stream and Embassy Emergency Action Committee (EEAC) meeting notes that highlighted State Department security "tripwires." After simulating the approval process for deployment, EARF executed its N-hour sequence and loaded two C-130s for a short air movement, then deployed to the U.S. Embassy in Djibouti. Once on embassy grounds, the EARF integrated with the RSO's staff, established operational and tactical communications and emplaced its defenses.

Throughout the mission, the EARF responded to multiple CJTF-HoA injects to drive home training on rules of engagement, crowd control and react-to-contact situations. After the CJTF J-37's AAR, MG Terry Ferrell – then commanding CJTF-HoA and now commanding 7th Infantry Division – certified the EARF for operational employment.

EARF in Juba

After our transition of authority with 1-63 Armor Dec. 14, 1-18 Infantry tracked two deteriorating security situations in Juba and Bangui, Central African Republic (CAR). With no U.S. diplomatic presence in the CAR, the battalion staff focused its efforts on Juba. Supporting the staff's mission analysis, 1-63 Armor had previously executed a reconnaissance of the U.S. Embassy in Juba. This gave the battalion invaluable insight into conditions on the ground in Juba to support our contingency planning.

Figure 3. A B/1-18 Infantry Soldier occupies a fighting position during a drill.

From Dec. 15-17, the civil unrest and political violence systematically advanced the EARF's alert posture and repeatedly altered our load plans for this mission. After receiving the final go/no-go briefing with MG Ferrell Dec. 18, the EARF went wheels-up from Camp Lemonier, Djibouti.

The security situation in Juba Dec. 18 could charitably be called uncertain. South Sudan had closed the airport to civilian traffic, and Juba had been under no-movement orders as well as a 6-p.m.-to-6-a.m. curfew since Dec. 15. Due to these conditions, the battalion actually deployed two EARF packages: one 45-man team via two C-130s and a second 45-man team via CV-22s. The embassy through Ambassador Page and its defense attaché (DATT), LTC Klem Ketchum, secured landing rights from the South Sudanese government, and the primary C-130 force landed successfully, but the CV-22 package returned to Camp Lemonier. Upon landing, the EARF secured the airfield with host-nation forces while the DATT and RSO evacuated 135 U.S. civilians, embassy staff and other nationals.

When both C-130s were loaded with evacuees, the EARF moved to the U.S. Embassy in RSO-provided vehicles. Ambassador Page met us outside her residence, welcomed our arrival, then immediately turned us over to the RSO for tactical employment.

CPT John Young, 1SG Michael Fulkerson and I executed a leader reconnaissance of the embassy's residence and chancery compounds. Upon completion of our reconnaissance, Young, the RSO and the Marine security noncommissioned officer in charge set the company's defensive positions.

We maintained a low profile on the embassy's grounds, setting up reverse slope (wall) defenses, as opposed to maintaining sectors of fire outside the compound. We executed this defense based on our authorities to operate in-country and rules of engagement that limited our operations to securing just U.S. facilities in Juba. With the ambassador's permission, we built defensive positions throughout both compounds that included sandbag fighting positions as well as building tanglefoot and pungi-stick obstacles on the embassy's interior walls. Young integrated his efforts with the Marines and RSO's dip-

Figure 4. B/1-18 Infantry Soldiers get ready to deplane in Juba, South Sudan, Dec. 18, 2013. *(Photo by U.S. Air Force TSGT Micah Theurich)*

Figure 5. The EARF arrives in Juba, South Sudan, Dec. 18, 2013. *(Photo by U.S. Air Force TSGT Micah Theurich)*

lomatic-security force.

The EARF did experience small-arms fire near two of our defensive positions, but we were not actively engaged or harassed by local security forces or nationals otherwise.

While the company focused on establishing its defense, the battalion command group established operational communications with CJTF-HoA. We deployed our secure Internet protocol router (SIPR), global rapid-response intelligence package (GRRIP), tactical satellite (TACSAT), Iridium, world cellphones and Blue Force Tracker nanodevices to maintain our communication links with our higher headquarters. One week later, we improved our operational communications by deploying a J-6 SIPR/nonsecure Internet protocol router access-points terminal, giving the ambassador secure videoteleconferencing communications.

The battalion evaluated the atmospherics in Juba based on three major criteria: the neutral-to-positive South Sudanese security force's reception of the EARF; the positive popular response to our arrival; and the embassy's physical-security posture. In our first situation report to CJTF-HoA, we stated that, based on current conditions, we could hold both compounds until relieved, short of a full combined-arms attack against the embassy. We attributed this environment due to the United States' prominent role in creating South Sudan, in which Americans are generally highly regarded by South Sudan's political leadership and population in general.

Over the next four months, the battalion supported Embassy Juba with physical security and secure mission-command links, and we rapidly learned to maintain embassy generators and facilities. The battalion, working directly with the EEAC, provided daily intelligence fusion from CJTF-HoA's J-2, information exchanges with U.S. officers serving on the United Nations' Mission in South Sudan (UNMISS) and our monitoring of South Sudanese nightly television. Our intelligence summary included the U.S. Department of Defense's (DoD) best estimate on military capabilities and the Sudan People's Liberation Army's (SPLA) and anti-government force's intentions.

A sergeant from Company B, 1-18 Infantry, manned the consular officer's duty phones, helping locate and later evacuate isolated American citizens throughout South Sudan. We conducted daily reconnaissance of the city in conjunction with the RSO staff, staying abreast of the SPLA, police and Ugandan deployments in the city. During these missions, we assessed civilian traffic, lines at gas stations, open and closed shops, and the populace's access to food and water.

We could not have sustained ourselves as well as we did without the embassy's active support. Embassy Juba provided vehicles, housing, water, power and even Internet access for the entire force. This reduced the battalion's logistics footprint considerably. Logistically, the EARF's only consistent needs were Class I and mail.

The battalion rotated the EARF in late January 2014. Headquarters and Headquarters Company, 1-18 Infantry, and

its scout platoon relieved B/1-18 Infantry's rifle platoon, allowing the battalion to reset the EARF's Force Package 1 for future operations. HHC, 1-18 Infantry, maintained the EARF's presence until relieved April 20, 2014, by a 21-man Marine security-augmentation unit detachment.

Understanding environment

This operation should highlight the need for continued development of Army/Air Force crisis-response teams to augment the sea services. It is a joint problem, not a service problem. This battalion is a strong advocate for continuing to build these missions and relationships with the Air Force – especially in light of Benghazi, Juba and even our recent deployment of Army forces to Eastern European countries.

The most challenging aspect in crisis response is the political environment: the United States' national decision-making process and appreciation of the sovereign nation's concerns and interests. Crisis response is foremost a strategic mission and not just an operational or tactical problem. It is a political decision that will demand a whole-of-government decision through principles and deputies committee meetings.

It was an eye-opening experience to provide tactical information as a battalion commander directly to the U.S. National Security Adviser during a principles meeting. I definitely appreciated Ambassador Page's willingness to incorporate the battalion's command group into her EEAC's decision-making process, the State Department's crisis-action-planning meetings in Washington and sidebar conversations asking for our operational and tactical input. We were truly a part of her team.

Understanding the political realities in which a future force operates will only help inform the DoD chain of command. By being so close to Ambassador Page's decision cycle, we helped shaped CJTF-HoA's planning efforts to support the embassy and the EARF.

The United States was a little bit lucky in South Sudan. Because our nation had invested heavily in South Sudan's creation and economic support,

Figure 6. Obstacle effort on the U.S. ambassador's residence compound in Juba, South Sudan. *(Photo by LTC Robert E. Lee Magee)*

Ambassador Page leveraged that investment into host-nation permission to allow the EARF's deployment. This is critical because the EARF, in its current configuration, must deploy in permissive environments.

The embassy also helped navigate South Sudan's sometimes-convoluted decision process and understand the key players in Dinka, Nuer and other significant ethnic groups. Ketchum and LTC Chris Pollard (incoming DATT) cultivated their contacts with the SPLA to gain access to the international airfield and develop SPLA intentions throughout South Sudan. They ensured continued access to the Juba International Airport that enabled EARF logistic operations.

Without this deeper knowledge of South Sudan, the EARF would not have been as nearly successful.

Key suggestions

A tactical commander must understand how to "work friendly" within the joint, interagency, intergovernmental and multinational (JIIM) team with particular regard to mission command. In Juba, we operated under the ambassador's authority. This was Ambassador Page's operation, not AFRICOM's or CJTF-HoA's mission. DoD supported the State Department. The 1-18 Infantry reported to CJTF-HoA for mission requirements and support, but we executed tactically under the ambassador.

Due to American and host-nation political concerns, this was the right way to control this mission. Our chain of command was Ambassador Page to the RSO, then to the EARF. We coordinated everything we did through the ambassador and RSO, and we kept CJTF-HoA informed of all we accomplished. To their credit, not once did the ambassador or RSO refuse a reasonable military request.

Crisis-response forces working with U.S. embassies need to know the difference between a State tripwire and a military decision point. Tripwires are not decision points. They are the embassy's way to subjectively tell its story from the ground and are more closely related to a commander's estimate. A typical military officer would assume that crossing Tripwires 1-9 would dictate a decision to be executed. This is not the case. Crossing a tripwire generates a discussion of actions that might be taken but not an actual decision. Future crisis-response forces supporting an embassy should expect key decisions involving the United States' presence to be made in Washington.

Intelligence fusion is critical to success.

The battalion enabled the ambassador's situational awareness by linking the CJTF J-2, the embassy staff, the EARF's operations and U.S. officers working in UNMISS headquarters together as one cohesive whole. The CJTF J-2 was quickly able to gain access to embassy human-intelligence reporting, UNMISS intelligence reports from their security battalions and EARF reconnaissance throughout Juba. This all helped build a unified common operating picture across the JIIM team. These operation summaries became the basis of State cables and DoD situation reports to the Joint Chiefs and National Security Council staff.

Operational and tactical risks are inherent in these operations. What makes it inherently difficult is the risk to the mission and risk to the force when conditions change unexpectedly. Commanders will have to underwrite both types of risk based on political and State Department decisions. It will be uncomfortable. According to the commanding general who succeeded MG Farrell at CJTF-HoA, BG Wayne Grigsby, we should all operate uncomfortably because it makes us better.

As an example of risk to the force in Juba, the embassy compounds are in downtown locations surrounded by residential housing and tall buildings. In an environment where the United States is not targeted, 45 Soldiers defending these locations is reasonable. If the threat had changed to overt harassment or targeting by host-nation security forces, the risk to the force and mission would have drastically changed as 45 Soldiers with small arms would be hard pressed to defend against that change in threat.

Conclusion

Africa is a huge continent. To put it in perspective, Africa's land area equals the continental United States, China, India and most of Europe combined. The tyranny of distance and current U.S. basing is a major limiting factor for crisis response and is the primary reason to support the continued development of Army/Air Force response teams.

The Marines' SP-MAGTF is a potent force that is basically an MEU-minus without ships and is based in Moron, Spain. The SP-MAGTF is responsible for northern and western Africa. Some of these locations will take a minimum of 24 hours just for travel. The EARF is currently responsible for East Africa and parts of Central Africa, and we can reach all designated embassies in less than 24 hours. In other words, the EARF complements the Marine Corps' effort in covering U.S. responsibilities throughout the African continent. The Army/Air Force team can and should develop more forward-based forces to support U.S. requirements in Africa and other trouble spots throughout the world.

Any competent force can execute crisis response. Collective training and properly aligned resources build crisis-response capacity. Although I selected B/1-18 Infantry, a mechanized-infantry company, to execute this mission, I could have just as easily task-organized a tank company to execute this mission. The key requirements to execute this mission are a force that is trained to execute DoD and NEO collective tasks and is equipped with nonstandard communications equipment – for example, GRRIP, Iridium and TACSATs.

Finally, the Army force has to be paired with airlift. Right now, the EARF is paired with an Air Force C-130J. In the future, the air component should also have a vertical-lift capability: CV-22, MV-22, CH-47s or even UH-60s.

The EARF's first real-world deployment is a definite success story. U.S. operations in South Sudan should generate a serious discussion between the Army and Air Force to develop crisis-response forces that complement, not replace, our sea service's missions. As a point of fact, the SP-MAGTF supported EARF operations by providing vertical-lift evacuation options in case conditions changed on the ground. The SP-MAGTF also evacuated 25 U.S. Embassy personnel in mid-January. Crisis response is a joint mission and the U.S. Army, with our Air Force counterparts, need to be a part of it. No one service can cover the globe or Africa with just its own assets.

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Acronym Quick-Scan

AAR – after-action review
AFRICOM – U.S. Africa Command
CAR – Central African Republic
CJTF-HoA – Combined Joint Task Force-Horn of Africa
DATT – defense attaché
DoD – Department of Defense
EARF – East African Response Force
EEAC – Embassy Emergency Action Committee
GRRIP – global rapid-response intelligence package
HHC – headquarters and headquarters company
JIIM – joint, interagency, intergovernmental and multinational
MEU – Marine expeditionary unit
NEO – noncombatant evacuation operation
RSO – regional-support office(r)
SIPR – secure Internet protocol router
SP-MAGTF – Special-Purpose Marine Air-Ground Task Force
TACSAT – tactical satellite
UNMISS – United Nations Mission in South Sudan
USARPAC – U.S. Army Pacific
SPLA – Sudan People's Liberation Army

Balancing Regionally Aligned Force Requirements with Readiness Requirements

by LTC Joshua D. Wright, MAJ Matthew C. Stanley and MAJ Kevin P. Ryan

U.S. national-security strategy formulates a policy of regionally aligning our land forces to efficiently and effectively dismantle, disrupt and defeat global terrorism. Since 2012, the U.S. government's policy has been to accomplish that regional alignment of military forces via strategic partnerships that provide the combatant commander (COCOM) the forces to enable the deterrence, disruption, pursuit and defeat of global terrorist networks, and to prevent instability within a particular region.

In October 2013, 1st Battalion, 67th Armored Regiment – part of 2nd Armored Brigade Combat Team (ABCT), 4th Infantry Division – deployed to U.S. Army Central Command's (USARCENT) area of operations in support of Operation Spartan Shield (OSS) to conduct a regionally aligned force (RAF) mission. The 1st Battalion, 67th Armor's mission was to deter aggression and limit malign influence in U.S. Central Command's (CENTCOM) area of responsibility (AOR), enhancing regional stability and reassuring regional partners. On order, 1-67 deployed as a mission-ready force (MRF) in support of CENTCOM contingency operations.

Our priorities during this deployment were threefold:

- Maintain the combined-arms battalion's (CAB) readiness for both mission-essential task list (METL) and assigned-mission-task (AMT) requirements;
- Engage with regional and local partners; and
- Retain force protection on key terrain.

The overarching question became, "How does a CAB effectively balance both mission requirements and maintain readiness?" This article will study that question with the intention of not only answering it but also providing a framework for the Army's RAF 2020 strategic-planning guidance. We were able to reinforce strategic partnerships and retain absolute readiness for any contingency through holistic training and by combining AMTs and mission-essential tasks (METs) into a readiness program developed, executed and assessed during the deployment.[1]

RAF concept

The concept of RAF is nascent in maturity but has been conceptualized in multiple documents such as the 2013 ***Army Strategic Planning Guidance***, which reinforces the RAF's importance as a key component of the Army of the future in 2020 and beyond. Furthermore, the Army's vision statement opines this in part with, "The Army is globally responsive and regionally engaged. …"

Also, a near-term objective for the Army through Fiscal Year (FY) 2015 is to transition to an RAF force fully reinforcing the four Army imperatives. Regional alignment synchronizes the Army's strategic framework of *prevent, shape and win*. Aligning land forces with regions enables, empowers and provides the Army flexibility, agility and adaptability across a full range of military operations through the integration of planning, exercises, cultural skills, language skills, predictability and contingency operations. The OSS brigade serves, albeit untasked and non-aligned, as this force for USARCENT.[2]

USARCENT currently does not have a neatly aligned regional force and fully depends on the OSS brigade as a designated portion to serve as its RAF. This is not a negative comment on USARCENT, as using the OSS brigade is a feasible action and/or solution to an actual committed RAF force for the AOR. The assigned mission from USARCENT to brigade and finally to the CAB is the conduct of multinational exercises and operations. Each battalion was partnered with host-nation forces compatible with their organic capabilities, but – and more importantly – within the region, there was no continuity of operation for multinational exercises and thus no continuity of an RAF at the tactical level.

The proposal is to task one CAB as the

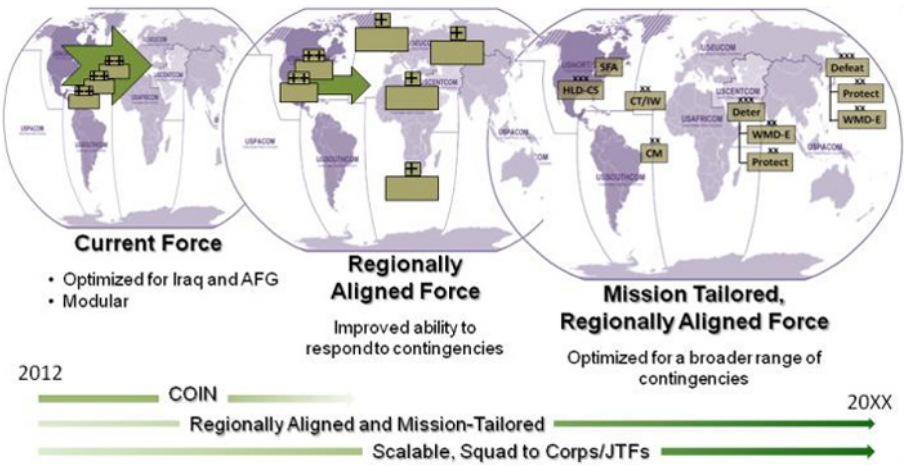

Figure 1. This chart from the 2013 Army Strategic Planning Guidance depicts the Army's transformation from a COIN-centric force to a mission-tailored RAF in 2020 and beyond.

1-67 Armored Regiment METL	Current Assessment 1st Qtr FY14	Training Strategy for 2nd Qtr FY14	METL Assessment 2nd Qtr FY14	Training Strategy for 3rd Qtr FY14	METL Assessment 3rd Qtr FY14
Conduct mission command (ART 5.0)	T	Deployment ops Tm/Sqd LFX Range density Plt EXEVAL EDRE (Level 1,2, 3) PEO Gunnery (II, V, VI) OPD/NCOPD	T	Husky (FS3) Cobra (IC14) Co EXEVAL PEO Bn EXEVAL OPD/NCOPD	T
Conduct offensive operations (ART 7.1)	T	Range density Plt EXEVAL EDRE (Level 1,2, 3) PEO Gunnery (II, V, VI) Tm/Sqd LFX	T	Co EXEVAL OPD/NCOPD Bn EXEVAL Cobra (IC14) Husky (FS3)	T
Conduct defensive operations (ART 7.2)	T	Range density Plt EXEVAL EDRE (Level 1,2, 3) OPD/NCOPD Gunnery (II, V, VI)	P	Co EXEVAL OPD/NCOPD Bn EXEVAL Husky (FS3)	P
Conduct stability operations (ART 7.3)	P	Range density Plt EXEVAL EDRE (Level 1,2, 3) OPD/NCOPD SECFOR missions	T	OPD/NCOPD Husky (FS3) Co EXEVAL Bn EXEVAL	T
Conduct security operations(ART 6.7.3)	P	Range density Plt EXEVAL EDRE (Level 1,2, 3) OPD/NCOPD Gunnery (II, V, VI)	T	OPD/NCOPD Co EXEVAL SECFOR Bn EXEVAL Husky (FS3) Cobra (IC 14) Eager Lion	T
Employ fires(ART 3.2)	T	EDRE (Level 1,2, 3) OPD/NCOPD Tm/Sqd LFX MORTEP Plt EXEVAL JAAT	T	Co EXEVAL OPD/NCOPD Bn EXEVAL JAAT	T
Perform force projection and deployment (ART 1.1)	T	Deploy ops Tm/Sqd LFX Range density Plt EXEVAL EDRE (Level 1,2,3) PEO Gunnery (II, V, VI) OPD/NCOPD	T	Rear-detachment operations Co EXEVAL SECFOR Bn EXEVAL OPD/NCOPD EDREs Deployment ops in support of TSC-E	T
Provide logistic support (ART 10.0)	T	Deploy ops Tm/Sqd LFX Range density Plt EXEVAL EDRE (Level 1,2,3) PEO Gunnery (II, V, VI) OPD/NCOPD	T	Co EXEVAL PEO Bn EXEVAL OPD/NCOPD Husky (FS3) Cobra (IC14) Eager Lion Redeployment Deployment ops in support of TSC-E	T
Conduct limited interventions (ART 6.2)	**P**	**Range density Plt EXEVAL EDRE (Level 1,2, 3) OPD/NCOPD Co EXEVAL AMT training**	**T**	**EDRE (Level 1,2,3) OPD/NCOPD Co EXEVAL Bn EXEVAL NEO EXEVALs**	**T**
Participate in multinational training events and exercises (ART 6.1.2)	**P**	**-Individual and small-unit tactical exchanges -Weekly meetings/engagements with KLF partners -Social events -Cobra (IC 14)**	**T**	**-Individual and small-unit tactical exchanges -Weekly meetings/engagements with KLF partners -Husky (FS3) Eager Lion -Persistent partnership with KLF and JAF**	**T**

Abbreviations and acronyms key:
AMT – assigned mission task
ART – Army tactical task
Bn – battalion
Co – company
EDRE – emergency deployment readiness exercise
EXEVAL – external evaluation
FS3 – (Exercise) Friendship III (name at brigade level) (name at battalion level: Operation Dealer Husky) (combined exercise with Royal Saudi Arabia Forces)
FY – fiscal year
IC14 – Intrepid Centurion 2014 (name at brigade level) (name at battalion level: Operation Dealer Cobra) (combined exercise with KLF)
JAAT – joint air-attack team
JAF – Jordanian Armed Forces
KLF – Kuwaiti Land Forces
LFX – live-fire exercise
METL – mission-essential task list
MORTEP – Mortar Training and Evaluation Program
NCOPD – noncommissioned-officer professional development
NEO – noncombatant evacuation operation
OPD – officer professional development
PEO – program executive office(r)
Plt – platoon
Qtr – quarter
SECFOR – security force
Sqd – squad
Tm – team
TSC-E – theater-security cooperation exercise

Figure 2. 1-67 Armor Regiment's METL and AMT (shaded in gray) lists during OSS 13-14.

RAF that fully focuses on and conducts theater-security cooperation exercises (TSC-E) throughout the AOR – which, if done successfully, ensures continued access to the country/region and provides the U.S. regional commander with the flexibility of options for any contingency. Tasking one battalion to conduct many multinational exercises and operations enables and enforces expertise, capabilities and efficiency while simultaneously enabling the brigade to focus efforts with other non-committed forces on other contingency operations. The balancing act of multiple requirements enters the fray once the tasked CAB must retain its wartime readiness.

Maintaining readiness

As in any unit, the deployed battalions in OSS must retain their readiness through a holistic-training glidepath and training guidance that focuses on both their AMTs and METs. The requirements of 1-67 Armor Regiment during this deployment were many.

Foremost, the CAB had to maintain absolute readiness as the task-force (TF) heavy MRF for USARCENT. Within these tasks, the battalion provided the brigade commander and USARCENT commander with a flexible, tailored and responsive force through the development and implementation of a heavy response company, a wheeled response company, a light response company or a heavy TF that could respond to any contingency throughout the USARCENT and CENTCOM AORs in a matter of hours.

In addition, the CAB conducted multiple TSC-Es throughout the region with the Kuwaiti Land Forces (KLF), Royal Omani Land Forces and Royal Saudi Land Forces. The TSC-Es were tailored to the "asks" or needs of the host nation in which the TSC-E was conducted. This is important to note because some nations sought exercises designed to increase interoperability in stability or counterinsurgency (COIN) environments, while others sought increased interoperability within the unified-land-operations continuum based on combined-arms maneuver (CAM).

The tasks were many, but nonetheless entirely realistic. To this end, 1-67 Armor Regiment met and exceeded the expectations of retaining absolute readiness balanced with the multinational exercise requirements. The subsequent paragraphs outline the process, procedures and training that 1-67 Armor Regiment accomplished to achieve this endstate.

The 1-67 Armor Regiment used the Army's design methodology to frame the problem and conceptualize the operation through lines of operations (LOs) or focus areas. The battalion's problem statement was, "How does Task Force Death Dealer maintain absolute readiness while effectively balancing host-nation partnerships and regional partnerships, and while retaining force-protection requirements on key terrain?" Furthermore, once we defined the problem, the battalion framed the problem using LOs: "readiness," "partnership" and "ready and strong," with readiness as the primary focus.

Appropriately, the battalion was nested with brigade's LOs and, as such, assisted in understanding the brigade's mission, problem and operational approach.

Figure 3. LTC Joshua Wright, 1-67 Armored Regiment's commander, and LTC Nabeel Boqammaz, 9th KLF battalion commander, talk through their visions for Intrepid Centurion and what they hope to collectively achieve. Boqammaz took the lead on planning Intrepid Centurion, with 1-67 Armored Regiment providing support to the overall planning process. Intrepid Centurion is a combined exercise between U.S. forces and the KLF.

Figure 4. Left to right, MAJ Jerome Barbour, brigade operations officer; MAJ Kevin Ryan, 1-67 Armored Regiment's operations officer; LTC Joshua Wright, 1-67 Armored Regiment's commander; and COL Waleed Abd Al Rahman, 35th KLF brigade commander, conduct the final stages of planning to kick off the culminating event.

Understanding the problem and operation is the first step in completing the desired endstate but will only advance the operation so far. The true continuation of the operation is the subsequent, yet associated, detailed planning that follows. This is when the balancing, combining and synergy of effort to maintain readiness, yet complete the assigned missions, burgeoned.

TSC-Es

The 1-67 Armor Regiment conducted MET training and subsequently conducted AMT training while simultaneously integrating host nations and regional partners into the exercise continuum, thus maintaining absolute readiness and increasing the interoperability of host nations and regional partners.

The 1-67 Armor Regiment conducted an aggressive and robust training glidepath, commencing with ABCT Level 1 gunnery immediately following assumption of the mission. The battalion sought and gained opportunities to use the space throughout the Udari Range Complex in Kuwait. The battalion concentrated on MET training within the decisive-action contemporary operating environment (COE) throughout the first quarter of FY13 with this training:

- Small-arms gunnery from preliminary marksmanship instruction to advanced close-quarters marksmanship (CQM);
- ABCT Level l gunnery;
- Platoon-level situational-training exercises (STXs) and external evaluations (EXEVALs);
- Company-level STXs and EXEVALs; and
- Culminating with a multinational exercise with 9th Battalion, 35th KLF Brigade, conducting a combined brigade penetration named Intrepid Centurion 2014.

The battalion increased its gunnery proficiency to a distinguished level for both stabilized and unstabilized gunnery, serving well to ensure the battalion was ready to fight and win from any platform. The platoon and company STXs and EXEVALs were offensive operations to penetrate an enemy obstacle and exploit their support zone. The design was a traditional combat-training-center-like lane with the platoons and companies attacking through the enemy's disruption zone, breaching the battle zone, exploiting the support zone and transitioning to a defense. All lanes used an opposing force replicating the COE enemy from the National Training Center (NTC) and observers/controllers/trainers (O/C/Ts), including fire markers.

Intrepid Centurion 2014 not only served as the battalion's validation for METs but also provided a mechanism to conduct a TSC-E, increasing the interoperability of regional partners focused on current contingencies. Moreover, the battalion expertly validated all warfighting functions during this training density, including sustainment operations focused on a non-doctrinal battalion-support area designed, executed and retained by the battalion's forward-support company and validated by the brigade's support battalion.

Also, the battalion validated a scalable mission-command node consisting of a tactical-operations center (TOC), administration and logistical center, and a tactical command post (CP) that was mobile and efficient to transition from on-the-move to fully-mission-capable in under seven minutes. Nevertheless, the battalion still required a scalable tactical CP that could operate throughout the AOR in a heavy, wheeled or light configuration and retain the capability to mission-command in multiple locations simultaneously, which remained a critical requirement for the battalion's AMTs.

Figure 5. The 1-67 Armored Regiment exchanges master-gunner information with 6th KLF Brigade.

Transition between MET and AMT

The Death Dealer Battalion was assigned the additional tasks of conducting limited intervention and multinational exercises as its AMTs. As such, the battalion had a "grand design" to conduct MET training and validation as a primary focus and then quickly transition to its AMT-training glidepath and validations. The transition at battalion level was sequential with minimal mission creep, reducing the friction and focus of effort.

Each company and the battalion conducted a five-week intensive focus on AMTs, including light and motorized training exercises, within a COIN-centric operating environment predominantly centered on stability-and-security tasks. This training design set conditions for the battalion's multinational TSC-E in Oman and Saudi Arabia.

The AMT transition commenced with

battalion-facilitated, company-operated unstabilized gunnery and culminated in company STXs within a COIN operating environment, validating the battalion and companies for future contingencies and multinational exercises. Moreover, the battalion conducted multiple non-combatant evacuation STXs and exercises, thus validating a capability essential for contingency operations as well as the AMT of limited intervention.

Using a similar approach as with the MET training, the battalion refrained from myopically focusing on just one warfighting function, but rather embraced a holistic approach in validating all capabilities for AMT operations. The highlighted function is the scalable mission-command nodes the battalion developed to meet theater requirements.

First, the battalion developed, exercised and validated three tactical CP configurations:

- A light configuration used for rotary-wing flyaway missions, ready to deploy with 18 hours;
- A wheeled configuration used for any contingency and/or fixed-wing flyaway mission, ready to deploy within 48 hours; and
- A heavy configuration ready to deploy within 72 hours.

The battalion was able to fully operate two tactical CPs simultaneously throughout the AOR while retaining the TOC.

Integrating partners

The brilliancy of the grand training design from METL to AMT enabled a synergy of effort facilitating, encouraging and embracing regional-partner integration. For example, during METL training, the KLF participated in the small-arms gunnery, observed ABCT Level I gunnery, observed the platoon and company STXs, and fully integrated into the battalion STXs of Intrepid Centurion. During AMT training, our Kuwaiti partners once again observed and integrated into CQM and close-quarters battle drills, and observed the battalion's stability-and-security training, increasing interoperability of the partnered forces.

More importantly, and more strategically significant, was the full integration of the Royal Omani Land Forces battalion and company during Operation Inferno Creek, and of the Royal Saudi Land Forces brigade and battalion during Operation Friendship III. The TSC-E in Oman focused on light-infantry operations within a COIN operating environment. The TSC-E in Saudi Arabia focused on COIN and wide-area security (WAS) operations. Both of these exercises increased interoperability and military-to-military/state-to-state cooperation, which was exactly what a RAF is charged to do.

Conclusion

To fully realize and complete the end-state of an MRF nested with multiple requirements from brigade and USARCENT while successfully balancing multinational exercises, the battalion effectively, efficiently and endlessly trained to maintain readiness. Over the course of the nine-month deployment, the battalion spent 183 days training in the Kuwaiti desert and surrounding region. The unit conducted 24 platoon and company CAM EXEVALs – including 24 combined-arms breaches using the Assault Breach Vehicle. The 1-67 also conducted two battalion-sized exercises integrating both CAM and WAS, three company air-assault exercises, three multinational TSC-Es throughout the region, seven joint air-attack team (JAAT) live-fire exercises, 54 tactical exchanges and engagements with Kuwaiti partnered brigades, and holistic wheeled and track services.

To conclude, a habitual RAF for USARCENT is essential and understandably nascent, but maturing hopefully by FY16. The concept – and soon the reality – of RAF is the future of an Army that remains globally responsive and relevant through regional engagements. This provides a full range of capabilities to COCOMs in a joint, whole-of-government and/or multinational environment. Furthermore, RAF reinforces and synchronizes the Army's strategic framework of *prevent, shape and win*.

The friction lies with effective balancing of RAF requirements with readiness requirements. We as the authors of this article attempted and hopefully demonstrated a "way" to achieve success through the simultaneity of both missions. Without a doubt, 1-67 Armor Regiment effectively combined AMT training and MET training that indeed reinforced strategic partnerships and retained absolute readiness for any contingency.

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Notes

[1] ***The National Security Strategy***, the White House, Washington, DC, 2010.

[2] ***Army Strategic Planning Guidance 2013***, Department of the Army, Washington, DC, 2013.

Further reading

Professional-development toolkit, "Chief of Staff of the Army Gen. Raymond T. Odierno: Prevent, Shape, Win," www.army.mil, January 2013.

Professional-development toolkit, "Army will prepare for future with regionally aligned forces," www.army.mil, February 2013.

Figure 6. Battalion executive officer MAJ Matthew Stanley conducts the walk-through of the combined TOC for Intrepid Centurion. The TOC alignment joined each section representative with his respective partner, allowing a combined effort for the exercise's onset.

Acronym Quick-Scan

ABCT – armored brigade combat team
AMT – assigned-mission task
AOR – area of responsibility
BCT – brigade combat team
CAB – combat-arms battalion
CAM – combined-arms maneuver
CENTCOM – U.S. Central Command
CGSC – Command and General Staff College
COE – contemporary operating environment
COCOM – combatant command(er)
COIN – counterinsurgency
CP – command post
CQM – close-quarters marksmanship
EXEVAL – external evaluation
FY – fiscal year
IBOLC – Infantry Basic Officer Leader's Course
ILE – intermediate-level education
JAAT – joint air-attack team
KLF – Kuwaiti Land Forces
LO – line of operation
MCCC – Maneuver Captain's Career Course
MET – mission-essential task
METL – mission-essential task list
MRF – mission-ready force
NTC – National Training Center
O/C/T – observer/controller/trainer
OSS – Operation Spartan Shield
RAF – regionally aligned force
STX – situational training exercise
TF – task force
TOC – tactical-operations center
TSC-E – theater-security cooperation exercise
USARCENT – U.S. Army Central Command
WAS – wide-area security

Preparing for a Regionally Aligned Force Deployment: the Raider Brigade's Perspective

by MAJ Robert Walker

The 1st Armored Brigade Combat Team (ABCT) Raiders, 4th Infantry Division, deployed to Camp Buehring, Kuwait, in support of Operation Spartan Shield in February 2013. Although not designated as a regionally aligned force (RAF), the BCT approached the mission set in a way that may be of interest to an RAF-assigned unit.

In the lead-up to the deployment, the BCT looked at the variety of mission requirements and devised an approach to meet them. In a broad sense, the BCT was tasked with security operations, bilateral defense preparations, developing relationships, ensuring strategic access and serving as the U.S. Central Command (CENTCOM) combatant commander's theater reserve. The Raider Brigade approached our planning efforts by adapting the standard ABCT and subordinate-unit mission-essential task list (METL), developing persistent relationships and then building partner capacities.

Organizing for mission

Immediately following the 13-02 rotation to the National Training Center (NTC), the Raider Brigade shifted planning focus to the upcoming deployment. An analysis of the standard ABCT METL revealed some necessary changes, the most significant of which came at the combined-arms battalion (CAB) level. A mechanized force does not often train for air-assault operations and very rarely considers air-assault a METL task. However, given the theater-reserve and security-mission requirements, the 1-22 Infantry CAB added air-assault to its METL and, in coordination with the combat-aviation brigade co-located at Camp Buehring, began an intensive training effort in-theater.

The theater-reserve aspect of the mission required exercising the brigade's rapid-response capability to a broad spectrum of contingencies. To meet these requirements, the Raiders developed force packages that were defined as "scalable, tailorable and rapidly deployable" anywhere within the CENTCOM area. The packages spanned the range of possibilities from high-intensity conflict to fixed-site security to humanitarian-aid distribution. In short, the BCT leveraged nearly every capability within the ABCT into tailored force packages to support the emerging needs of the CENTCOM and U.S. Army Central Command (ARCENT) commanders. Once force packages were developed, each was put through a proof-of-concept and an emergency deployment readiness exercise. Using other ARCENT and CENTCOM assets in Kuwait, the Raiders' force packages were proven ready to deploy by land, air or sea to any contingency.

In the lead-up to the deployment, the BCT commander and select staff officers visited ARCENT headquarters at Shaw Air Force Base, SC. Meetings and briefings were held to discuss operational requirements, mission goals and objectives, and the capabilities

of partners in the region. The Raider Brigade's commander, COL Joel Tyler, was able to meet with the ARCENT commander, LTG Vincent Brooks, in which LTG Brooks specified one of the brigade's goals as finding ways to "export professionalism." The ways to achieving that goal became an attitude of persistent presence with our host-nation counterparts in the Kuwait Ministry of Defense and Land Forces.

Building relationships

The Raiders seized on an opportunity to expand the U.S. Army's relationship with the Kuwait Land Forces (KLF). Besides the Republic of Korea, there are few locations where the U.S. Army maintains maneuver brigades forward-deployed alongside bilateral defense partners on a semi-permanent or consistently rotating basis. Kuwait has hosted a BCT for more than 20 years, but with the U.S. Army's focus of operations on Iraq and Afghanistan over the past 10 years, the quality of engagements with the KLF have unfortunately dwindled. The Raiders saw an opportunity to reverse that trend through persistent presence with our host-nation counterparts. The BCT aligned our partnership relationships with KLF in a "one-up" model – our battalions partnered with Kuwaiti brigades and the Raider Brigade command team and staff partnered with KLF headquarters.

At first, the relationships were tenuous – or, at best, mixed – with officers and noncommissioned officers (NCOs) on each side unsure of where the partnerships should go. It has been said that you can only communicate when you have mutual respect and a mutual purpose. Following some small-unit level tactical exchanges and discussions of common goals, the relationships began to blossom and real communication occurred. Many KLF officers commented on how glad they were to experience the Raider Brigade engagements and share lessons-learned from the past decade or more of sustained conflict. They began to inquire about different aspects of American military life and about how to incorporate some of our lessons-learned into their own formations.

The idea of persistent presence follows a model similar to the military transition team (MTT) or the advise-and-assist team most recently used in Operations Iraqi Freedom and Enduring Freedom. The Raiders endeavored to maintain constant contact when the relationship permitted and, with one unit, the BCT was able to embed Soldiers from both nations in with the other during a small-unit collective-training period. Furthermore, the BCT insisted the partnerships go beyond military-to-military engagements and include cultural exchanges. On many occasions, the BCT invited our counterparts for dinner or social events, and they did the same for our troops. This expansion beyond the key-leader-engagement model produced deeper relationships that opened more doors, allowing units to demonstrate our professionalism to our partners.

Clearly, not every RAF situation will allow nine months of persistent presence, but whenever the opportunity for extended engagements presents itself, units should maximize their participation and make as many Soldiers as possible available to your partners.

Doing 'homework'

Units may prepare for this persistent presence by first understanding the structure of the partner nation's armed forces. The Raider Brigade used multiple open sources to find information on the KLF's history, culture and structure. This helped the Raiders begin to understand our partners even before the BCT deployed. The Leader Development and Education for Sustained Peace Program (LDESP) in Monterey, CA, is an excellent source to "provide regional, geopolitical and cultural framework for understanding the challenges of conducting full-spectrum operations in unique and rapidly changing environments" (LDESP Website). The Raiders hosted a week-long conference to discuss issues and opportunities emerging in the Middle East. Leaders across the brigade found this program to be informative, enlightening and instructive to our mission.

Once relationships were established and common goals were envisioned, the Raiders began working to build our partner units' capacities and capabilities. Persistent engagements helped us understand the KLF brigades' strengths. The senior leadership of KLF units have served most of their careers under threat from outside invasion forces, while most of those in the ranks of lieutenant colonel and above served during the Iraq invasion in 1990. The BCT found officers and NCOs to be well versed in tactics and doctrine, with a great majority of them having attended staff colleges, war colleges and many other professional-military education courses in the United States and in other partnered and allied countries. What most officers engaged their Raider counterparts about was the U.S. Army's ability to sustain operations over long periods of time and about our bilateral-defense-planning efforts.

The Raiders continued the "one-up" relationship model and began exchange events and planning sessions with our partners. Within the battalion-to-brigade partnerships, units exchanged field-training tactics, techniques and procedures; developed combined-task-force maneuver plans under a unified mission command; and shared training plans and techniques, while the BCT staff led an effort to expanded bilateral-defense-planning efforts.

Unit exchanges and exercises

The 1st Special Troops Battalion enjoyed some of the BCT's earliest success with 94th Mechanized Infantry Brigade. Soon after arriving in Kuwait, Soldiers, NCOs and officers of the Phoenix Battalion began exchanging small-unit-level experiences with 94th Brigade soldiers, spanning the range of training events from small-arms ranges, shoothouses and rehearsals, to platoon and company training management.

It was through these persistent lower-level engagements the BCTs began to fully understand our partnership. Kuwaiti and U.S. Soldiers each developed a better understanding of how our respective units operate and the methodology through which the BCTs approach our problem-solving. The Kuwaiti approach is more commander-centric, relying on "green tab" leaders to make even routine decisions in day-to-day operations. This makes sense for units that are comprised of both

volunteers and conscripts, especially when the conscripts are of various nationalities and not citizens of Kuwait. Our own philosophy of mission command is commander-centric as well, but U.S. commanders rely on decentralized execution and trust junior and subordinates' initiative and decision-making to operate within the commander's mission, intent and guidance.

Understanding these differences helped further the relationships. Partners were better able to align the proper officer-to-officer contacts and support common goals and objectives with less interference and frustration by engaging the right persons for necessary decisions.

At the CAB level, 1-22 Infantry worked closely with three maneuver brigades. In May 2012, 6th Armored Brigade conducted a combined-arms live-fire exercise (CALFEX), which incorporated a combined mission-command structure. This enabled U.S. and Kuwaiti battalion commanders to make decisions in parallel, ensuring a unity of command and synchronicity of the operation.

In early April, the Raiders began the planning efforts for a CALFEX. The BCT understood the Kuwaiti collective-training period would wind down as summer and Ramadan approached. The BCT commander wanted to maximize our ability to demonstrate combined-arms maneuver (CAM) and mission command in a live training environment at the combined, bilateral level. The Kuwaitis – having just come off a large multinational Gulf Cooperation Council military exercise – and the Raiders – having just come out of an NTC rotation – were each at the peak of collective training. It was clear each battalion knew the basic tenets of CAM. The overall training objective was to incorporate both trained units into a combined mission-command structure, unified through a common objective, mission, intent and guidance. The staff of both battalions worked for weeks developing the structure under which the units would operate and the mission orders that would convey the exercise's plan.

Early in May, the units began two days of dry iterations, refining the plan and exercising the combined mission command. Officers from 6th Brigade established primary staff positions within 1-22 Infantry's tactical-operations center. These were not traditional liaison officers, but rather were the S-3, battle captains and other staff key to conveying mission orders during the CALFEX.

The exercise very successfully proved that partner units could effectively operate under a combined mission-command structure with a clear mission and unified commanders' intent.

In the area of small-unit training techniques, the 4-42 Field Artillery Straight Arrows initiated an exchange of Soldiers and NCOs with the KLF Field Artillery Regiment (KLFAR). Over the course of a few weeks, Straight Arrow Soldiers embedded and trained as cannon crewmembers on the Kuwaiti PLZ-45 howitzers and, likewise, Kuwaiti "jundis" trained on the M109A6 Paladin. Both units found that although the equipment may be different, the tenants of field-artillery training remain fairly consistent and that each unit had strengths from which the other could learn. This led to a further sharing of training plans and training-management systems. The KLFAR invited Straight Arrow NCOs and officers to help with refinement of small-unit training management and develop better interoperability between our indirect-fire assets. The result was that both units better understood the other's capabilities and training methods and, ultimately, were more prepared to provide fire support to any contingency within Kuwait.

Staff planning

While the BCT's battalions were greatly improving the ability to execute tactical missions alongside our Kuwait partners, the BCT staff was busy engaging the KLF staff to ensure that mission orders were developed in a combined effort. In discussions with the KLF staff, it became apparent that both staffs needed to update bilateral defense plans. Neither American nor KLF officers understood the plans beyond the strategic and operational levels, and there was no combined tactical plan that sufficiently addressed the contemporary operating environment threats. With examples from around the greater Arab world making daily headlines, it was clear to both the U.S. and Kuwaiti staff that aspects of a hybrid threat must be considered in planning for the defense of Kuwait.

The effort to remedy the lack of a tactical plan began with an operational-planning team (OPT) established between the KLF staff and the Raider staff. Each side agreed to send representatives from critical staff sections and across the warfighting functions (WfF). The OPT began with briefings detailing the standing plans and the developing plans from higher echelons. Then WfF breakout working groups (WGs) were created to provide mission analysis through the lens of each function.

The intelligence WG began an in-depth analysis of threat activities in other countries available through open-source outlets. Of major concern were activities in Yemen, Bahrain and Syria – all of which provided examples of how an adversary may foment unrest within Kuwait.

The movement-and-maneuver WG analyzed the forces available and began to envision how to best task-organize the units in the field. The mission-command WG began an exhaustive study into how units across both countries would directly communicate. The sustainment WG explored where Kuwaiti and U.S. units had common logistical demands and assets, and developed ways to efficiently meet the needs of each unit. The fires WG examined the assets available, both joint and combined across each nation.

Once initial analysis was complete, each WfF delivered the results of their WG's efforts and further developed the plan forward.

The first major challenge to overcome was the methodology with which to approach the planning effort. Although most Kuwaiti officers are well versed in the U.S. Army's seven-step military decision-making process, the KLF's doctrinal approach is the five-step British Combat Estimate model. It is advisable to understand what decision-making process any partner nation uses. Formal training on their process before arriving will lead to greater understanding and productivity. The OPT

eventually settled on the process most familiar to the KLF and proceeded with the combat estimate as our planning model.

To ensure the plan met the combined commanders' intent, several briefings were given to the KLF and BCT commanders. In each briefing, planning friction points were detailed, and the commanders deliberated and decided together how planning should proceed. The product was a KLF-centric plan to respond to contemporary threats that threatened Kuwait's stability and security while U.S. forces provided enabling support.

Both sides were confident in the combined staff's ability to plan a major operation and, in the process, learned a great deal about each other's military culture and personal experiences. The capacity for planning was further developed on both sides, and each officer and NCO in the OPT left with great confidence in our abilities to conduct combined mission command and to rely on each other's strengths.

The Raider Brigade's experience in Kuwait may be distinctive to other RAF missions, but the broad principles are useful across any partnership mission. By analyzing the mission and refining unit METL, developing persistent relationships and building partner capacities, every unit may find success in the regional-alignment mission concept.

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Acronym Quick-Scan

ABCT – armored brigade combat team
ARCENT – (U.S.) Army Central Command
BCT – brigade combat team
CAB – combined-arms battalion
CALFEX – combined live-fire exercise
CAM – combined-arms maneuver
CENTCOM – (U.S.) Central Command
KLF – Kuwait Land Forces
KLFAR – Kuwait Land Forces Artillery Regiment
LDESP – Leader Development and Education for Sustained Peace Program
METL – mission-essential task list
MTT – military transition team
NCO – noncommissioned officer
NTC – National Training Center
OPT – operational-planning team
RAF – regionally aligned force
WfF – warfighting function
WG – working group

The following articles authored by members of 3rd Armored Brigade Combat Team (ABCT), 3rd Infantry Division, are intended to share observations, experiences and lessons-learned while supporting U.S. Northern Command (NORTHCOM) as the regionally aligned Force (RAF). As NORTHCOM RAF, 3/3 Infantry Division executed theater-security cooperation (TSC) missions in Canada and Mexico and as the quick-reaction force/rapid-reaction force. The authors, ranging from a reconnaissance-platoon leader to a squadron commander, bring a variety of perspectives to bear on several missions and topics. Of note, at the macro level are discussions on 3/3 Infantry Division's experience in assuming the NORTHCOM RAF mission and the importance of capitalizing on opportunities to maintain interoperability with our allies. Other articles provide insights into preparation for and participation in a joint training exercise and competition in Canada. It is my hope that other units can leverage our experiences as the Army continues to execute missions as the RAF.

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Regional Alignment of a Brigade Combat Team to U.S. Northern Command

by MAJ Chris Manglicmot, LTC Alexis Rivera and CPT Joseph M. Koennecke

The Department of Defense Strategic Guidance for 2012 provided direction for the joint force of the future to become "smaller and leaner, but … agile, flexible, ready and technologically advanced."[1] With the imperative of a budget decrease and an uncertain international security environment, the U.S. Army implemented the regionally aligned forces (RAF) concept that balances efforts to prevent conflicts while maintaining readiness to defeat adversaries. The Army mans, trains and employs RAF to provide combatant commanders (COCOMs) with versatile, responsive and available Army forces. Regional alignment enables COCOMs with forces that provide capabilities to *prevent, shape and win* in today's operational environment.

The 3rd Armored Brigade Combat Team, 3rd Infantry Division, led by COL Charles Costanza, was regionally aligned to Northern Command (NORTHCOM) March 1, 2014, to provide general-purpose forces supporting NORTHCOM through the Army North (ARNORTH) commander, LTG Perry Wiggins, as the quick-reaction force (QRF)/rapid-response force (RRF) and theater-security cooperation (TSC) mission sets. The brigade combat team (BCT)'s alignment to NORTHCOM marks the first time since the COCOMs' inception that this mission was assigned to a single organization with parallel and common echelons of higher headquarters and reporting.

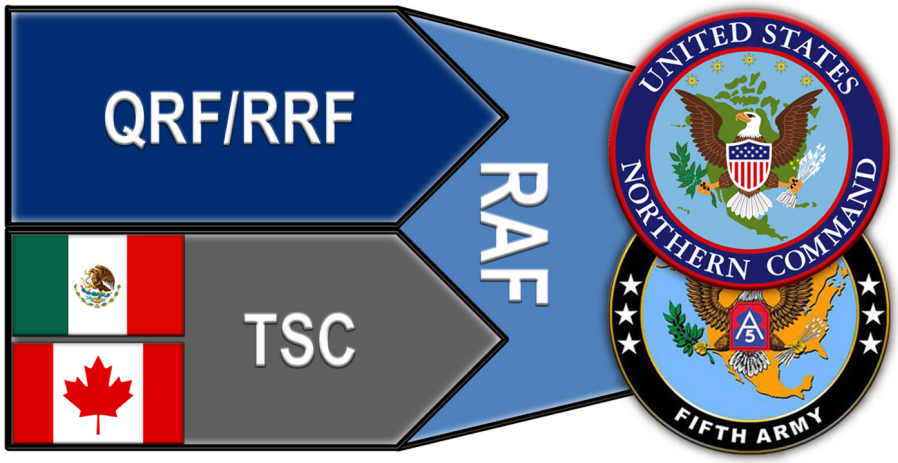

Figure 1. The 3rd Armored Brigade Combat Team, 3rd Infantry Division, was regionally aligned to NORTHCOM to provide general-purpose forces supporting NORTHCOM through ARNORTH as the QRF/RRF and TSC mission sets.

The brigade faced a unique set of new challenges while providing unprecedented levels of staff refinement and capability to the COCOM in execution of the assigned mission sets. Within each mission set, several lessons emerged to man, train and equip the brigade to fully meet the intent as the NORTHCOM RAF. These lessons included developing a shared understanding among multiple higher headquarters, balancing the requirements and priorities of multiple commands, and developing a system-based approach to handle emerging and no-notice missions.

Shared understanding

The most critical element of assuming the RAF mission focused on developing a shared understanding of the mission with multiple headquarters. The brigade maintained routine operational-control relationships to U.S. Army Forces Command (FORSCOM) until Army North (ARNORTH) requested forces to support NORTHCOM in an RAF capacity while maintaining traditional division

and installation tenant-unit relationships. The multiple headquarters, with occasional divergent priorities, required the brigade leadership to achieve shared understanding through consistent messaging and unity of priorities, enabling pre-emptive mitigation of potential friction points over different equities.

Establishing direct-liaison authority (DIRLAUTH) allowed constant collaboration between 3/3 Infantry Division and ARNORTH to expand and identify opportunities on TSC efforts critical to shaping NORTHCOM's area of operation and the implementation of QRF/RRF elements into joint exercises. Before mission assumption, the 3rd Infantry Division commander supported the RAF concept and the importance of the brigade, coordinating directly with ARNORTH by authorizing DIRLAUTH. The quick establishment of defining this command relationship promoted collaboration between the COCOM and FORSCOM to effectively man, train and equip forces seamlessly to maintain momentum with their theater partners.

The brigade achieved unity of effort through messaging based on a strong and consistent theme of priorities. To achieve consistent messaging, a level of transparency was required to share the message with all stakeholders. The brigade held a series of mission-assumption briefs to the ARNORTH commander, with participation from the division commander as well as representatives from FORSCOM. Brigade and subordinate leaders participated in RAF events by traveling to TSC locations and training events. Also, visits from ARNORTH leaders and staff and division support to emergency-deployment-readiness exercises (EDRE) and TSC events demonstrated the highest level of commitment to and involvement in the mission.

Concurrent to RAF operations, the brigade started an early knowledge transfer with the relieving unit anticipated to assume the mission from the brigade. Staff-visit exchanges occurred at several points during the mission and facilitated direct-counterpart communication, product-sharing and information exchange. Furthermore, the brigade maintained the intent to ensure that the following unit would be equipped with lessons-learned and advanced-planning timelines to ensure mission success. The aim behind developing an early dialogue and a shared understanding of the mission-set conditions was to maintain momentum of the progress the RAF had gained.

Ultimately, the cultivation of a comprehensive shared understanding among multiple headquarters enabled the brigade to manage competing requirements, maximize accomplishment of training objectives and maintain momentum that fully supported the NORTHCOM commander.

Manage priorities

The brigade faced several challenges balancing competing requirements from multiple headquarters. The brigade's assigned mission was the NORTHCOM RAF, focused on providing three QRF/RRFs to rapidly deploy within the NORTHCOM area of operation and support security-cooperation missions with Mexico and Canada. However, while assigned, FORSCOM expected the brigade to maintain proficiency in decisive action (DA), including opportunities to participate in DA National Training Center rotations and for the brigade to reorganize to the Army 2020 force structure while executing the RAF mission.

The RAF concept, by design, requires a balance of training priorities between DA and mission-specific training. The ongoing reprioritization of DA focus creates the potential for a force to degrade or forget the lessons of counter-insurgency from recent conflicts. The RAF mission provides an opportunity

Figure 2. U.S. Marine Corps CPT Adam J. Birchenough (squatting), RRF company commander with the Chemical-Biological Incident Response Force (CBIRF), II Marine Expeditionary Force, explains points of entrance into Guardian City, a simulated contaminated urban area, during Exercise Scarlet Response July 23, 2014. Soldiers from 3rd Brigade, 3rd Infantry Division, assisted Marines and Sailors with the CBIRF as part of the exercise, which 3rd Brigade took part in to ensure it was trained to operate in a joint environment in support of NORTHCOM QRF/RFF missions. "The 3rd Infantry Division Soldiers did a fantastic job or cordoning the sensitive environment," said Birchenough. "They took the initiative to not just secure the buildings but, once secured, [helped] bring people out of those buildings and [supplemented] the forces we already had on ground. They were a huge force multiplier for this exercise."

to manage both to meet a shared end-state and an adaptable force. Both TSC and RRF/QRF missions require tactically and technically proficient formations to be trained and ready with respect to executing DA mission-essential task list (METL) tasks and training. Beyond DA training, these operations require the ability to interact with populations, demonstrate cultural respect and understanding, and maintain the ability to conduct non-lethal/non-kinetic targeting – key tenants of counterinsurgency doctrine. An effective RAF must manage both elements to achieve mission success.

The 3/3 Infantry Division established platoon-level proficiency as the qualification standard with respect to DA METL. Beyond platoon-level DA training, the brigade prioritized mission-specific individual training for key leaders and collective-training events focused on supporting NORTHCOM RAF requirements (Defense Support of Civil Authorities II, Mexico cultural/language training, EDREs, Vibrant Response/Vigilant Shield). The brigade's mindset on training events became one of identifying and maximizing the overlap of DA-skills training within ARNORTH and RAF training events to maintain leader proficiency in essential tasks supporting unified land operations.

The level of balance required is ultimately determined by the type and scope of the assigned mission. Achieving that balance of priorities in the correct proportions results in "retention of tactical competence and technical proficiency while cultivating strategic perspective and leadership … educating and developing all Soldiers to grow the intellectual capacity to understand the complex contemporary security environment," as the Army's Chief of Staff envisioned with adaptive Army leaders and a globally responsive and regionally engaged force.[2] The importance of managing priorities and projecting emerging tasks is critical to ensure a unit's training readiness and effectiveness meet the RAF concept.

Systems approach

The rapid-response nature of the QRF/RRF and emerging TSC missions required a planning approach that was adaptable to different situations and readily employable on a reoccurring basis. The brigade developed a milestone-based systems approach focused on leveraging brigade and installation resources to support small-unit deployments and exercises.

- **Develop the plan.** The brigade developed simple and flexible D-Day/N-Hour models to ensure critical synchronization of administrative and logistical requirements with RAF missions. The development of modular-force packages to provide a menu of options to ARNORTH provided NORTHCOM a tailored capability while maintaining simplicity for unit readiness. Moreover, the brigade established a positive relationship with the installation that allowed the brigade to become more adaptable to the broad range of potential missions and essential tasks.

- **Build the team.** QRF/RRF elements required task-organization changes to meet force-package requirements. Multinational TSC missions represent a commitment by unit commanders to assume risk in routine operations to employ their best Soldiers in partnership. The QRF/RRF force packages are prescribed in ARNORTH Pamphlet 380-1, but with respect to mission command, the brigade was able to offer the COCOM mission-command packages scaled to fit the diversity of missions facing the RAF at the battalion and brigade level.

- **Train the team.** Each unit was required to execute platoon-level DA proficiency qualifications in addition to training RAF-specific skills. To train TSC missions, the brigade established Sledgehammer Academy to train all TSC personnel on critical skills (use of an interpreter, Mexican culture, Spanish-language training, etc.) by leveraging internal and external assets – specifically 162nd Infantry and the Western Hemisphere Institute for Security Cooperation. Subordinate units within the brigade conducted trained QRF/RRF collective training at the company level, focusing on RAF mission sets as a means to validate mission readiness and Soldier-level understanding of the mission. Leader-specific training events were conducted to maximize small-unit leader and staff-planner understanding of the NORTHCOM mission through Federal Emergency Management Agency (FEMA) Region IV defense-coordinating-officer visits and Defense Support of Civil Authorities Phase I and II training, as well as the required FEMA distance-learning course.

- **Equip the team.** QRF/RRF missions required equipment consolidation and contingency-stock management of materials, as well as transfers from external agencies to assemble mission-essential equipment lists (MEEL) to support the force packages. The brigade provided bottom-up refinement of the MEEL and identified shortfalls in requirements. The largest identified shortages outside of modified table of organization and equipment authorizations required sourcing from ARNORTH for TSC missions and external requests to division headquarters for communications systems. Situational awareness within NORTHCOM and the small team/company elements deployed away from battalion and brigade required vastly different communication systems from traditional tactical systems available to these small units.

- **Maintain the team.** No-notice/prepare-to-deploy orders and emerging TSC events required consistent monitoring and maintenance of deployment and training readiness; quarterly Soldier-readiness processing and EDRE events were critical to sustaining a viable force. By participating in ARNORTH training events and conducting quarterly EDRE exercises to off-site locations, the brigade was able to consistently refine and revalidate the state of readiness at the QRF level. To prepare for emerging and future TSC missions, the brigade maintained routine Sledgehammer Academy training to build

capacity for future TSC missions as well as to maintain and improve critical skills.

The brigade received the NORTHCOM RAF mission a few months before mission assumption. This required the staff to develop a flexible plan promoting continued bottom-up refinement and improvement through coordination with higher headquarters. By establishing the plan early, subordinate units continued to refine the NORTHCOM RAF plan with each execution of a QRF/RRF or TSC mission over the course of a year. The comprehensive but generic approach allowed the planning and execution systems to be applied to most situations as well as passed on to the relieving organization for easy implementation and further refinement.

Conclusion

As the first BCT to be regionally aligned to NORTHCOM, 3/3 Infantry Division was faced with the problem of determining how a single unit should apply its efforts to best support the COCOM and achieve the endstate envisioned for an RAF.

The 3/3 Infantry Division achieved that endstate by generating Soldiers and organizations that are better trained for specific regions and providing the COCOM agile, adaptable and regionally focused general-purpose forces. The force alignment allowed strengthened relationships with other nations through partnered initiatives such as humanitarian, peacekeeping, border security, counternarcotics and counterterrorism efforts.

The brigade achieved this endstate by developing a shared understanding and clearly defined priorities at all levels. The culture of training within the Sledgehammer Brigade was one of developing true understanding of the requirements to conduct operations in the homeland, to the individual Soldier and small-unit leader level. This level of mission readiness was achieved by implementing a deliberate and systematic approach to executing every mission. Applying brigade- and battalion-level staff analysis and mission command to small-unit operations enabled these small-unit leaders to focus on the mission, knowing every echelon above was supporting their daily mission.

As future BCTs assume the RAF mission, provide refinement and conduct leader and unit training, the entire Army will develop into a more versatile and responsive force capable of *preventing, shaping and winning* in today's operational environment.

The 3/3 Infantry Division ultimately provided the ARNORTH and NORTHCOM staff with an unprecedented level of participation during their assigned year as the NORTHCOM RAF. As future BCTs assume the mission, provide refinement and conduct leader and unit training, the entire Army will develop into a more versatile and responsive force capable of *preventing, shaping and winning* in today's operational environment.

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Notes

[1] ***Sustaining U.S. Global Leadership: Priorities for 21st-Century Defense***, Washington, DC: Department of Defense, January 2012.

[2] ***Waypoint #2: Follow-up to CSA's Marching Orders***, Washington, DC: Headquarters Department of the Army, February 2014.

Figure 3. SSG Matthew Doty's crew prepares to execute a partnered gunnery run with Canadian LAV IIIs after the conclusion of Exercise Worthington Challenge Oct. 2, 2014. The gunnery run demonstrated the interoperability of American and Canadian crews, equipment and procedures as part of TSC training. Also manning the Bradley are SGT Brian Fales as gunner and SPC Ismael Silva as driver. The event was hosted by 5th Canadian Division Support Base Gagetown in New Brunswick, Canada. ***(Photo by CPL Nick Alonso, Canadian Public Affairs)***

Acronym Quick-Scan

ABCT – armored brigade combat team
ARNORTH – Army North
BCT – brigade combat team
CBIRF – Chemical-Biological Incident Response Force
COCOM – combatant commander
DA – decisive action
DIRLAUTH – direct-liaison authority
EDRE – emergency deployment readiness exercise
FEMA – Federal Emergency Management Agency
FORSCOM – (U.S. Army) Forces command
MEEL – mission-essential equipment list
METL – mission-essential task list
NORTHCOM – (U.S.) Northern Command
QRF – quick-reaction force
RAF – regionally aligned forces
RRF – rapid-response force
SBCT – Stryker brigade combat team
TSC – theater-security cooperation

Leveraging Sledgehammer Brigade to Build Enduring Partnerships in Shaping Tomorrow's Security

by MAJ Chris Manglicmot and CPT Liam Kozma

Regionally aligned forces (RAF) provide capabilities to combatant commanders with agile, adaptable and focused general-purpose forces that can *prevent, shape and win* in today's operational environment by generating Soldiers and organizations that are better trained for specific regions. Force alignment will allow strengthened relationships with other nations through partnered initiatives such as humanitarian, peacekeeping, border security, counter-narcotics and counterterrorism efforts.

The 3rd Armored Brigade Combat Team (ABCT), 3rd Infantry Division, regionally aligned to U.S. Northern Command (NORTHCOM) March 1, 2014, as the first brigade combat team (BCT) to assume the NORTHCOM RAF mission. The alignment focused the brigade to support the combatant commanders in two major efforts:

- Provide general-purpose quick-reaction force/rapid-reaction force.
- Provide support to theater-security cooperation (TSC) efforts. This was largely in the form of mobile-training-team (MTT) support in Mexico.

The TSC effort focuses on better shaping the NORTHCOM area of operations specific to Mexico, the Bahamas and Canada by strengthening ties with our allies through combined military training. The brigade supported the TSC effort through the deployment of multiple MTTs and unit exchanges. The NORTHCOM TSC effort fostered a cross-border relationship through sharing of tactics, techniques and procedures (TTPs), training methodology and lessons-learned in Iraq and Afghanistan to further improve each military for the collective security of North America.

As a North Atlantic Treaty Organization ally with a common language and having fought alongside each other in recent years, exchanges with Canada were largely focused on interoperability in the form of exercises or competition. This article will focus on the brigade's effort with Mexico.

After several iterations of MTTs in Mexico, several lessons were identified during the process of preparing each MTT and are highlighted in three key phases: team selection, preparation and execution. In addition to these lessons-learned, the relationship established between the brigade and Army North (ARNORTH)'s Security Cooperation Division created an environment that fully supported and enabled each team deployed.

Team selection

Determining the size and composition of the MTTs was critical to establishing a credible, adaptable and cohesive team achieving tactical success for each mission in a strategic-level operation. The objective of each MTT was to provide training within the subject matter and, more importantly, promote a positive relationship with the Mexican army, Secretaría de la Defensa Nacional (SEDENA). To accomplish this, the brigade manned, trained and equipped each team consisting of six to 10 competent and combat-experienced personnel. Size and composition were factors that ensured the brigade selected a professional team capable of representing the U.S. Army.

Each MTT consisted of six to 10 commissioned and noncommissioned officers (NCOs) selected specifically for each MTT mission program of instruction (PoI). The small-professional-team model allowed ARNORTH flexibility with a prepared team that could quickly respond based on political factors between Mexico and the United States.

Figure 1. MAJ Nathan Hubbard, 3-1 Cavalry, leads SEDENA officers on final mission planning for a raid at Camp 37C, San Miguel, Mexico, March 13, 2014. *(Photo by MAJ Reynaldo Rivera)*

An important component of the MTT went beyond the classroom instruction and involved personal relationships, which included SEDENA hosting our Soldiers at social events and touring local cultural sites near the training area, underpinning the cultural exchange portion of the mission.

Also, the instructor-to-trainee ratio was critical in shaping the environment for both the U.S. and SEDENA Soldiers to be successful. ARNORTH's Security Cooperation Division coordinated with SEDENA to manage class sizes specifically to the six to 10 Soldier MTTs to ensure quality training. The small team composition fostered a peer-to-peer training environment, allowing U.S. and SEDENA Soldiers to interact on a personal level. Smaller training teams also, as an added benefit, were less resource-intensive for both ARNORTH and SEDENA beyond providing the optimal instructor-student ratio.

The composition of each team required NCOs and officers whose understanding of their craft went beyond technical and tactical competence. MTT members needed to have a deep grasp of how to apply their skills outside U.S. Army doctrine. The ability to communicate these skills across language barriers and translation between national doctrinal differences requires a level of proficiency and understanding beyond rote memorization. SEDENA Soldiers showed interest in how U.S. Soldiers would apply their skills and techniques to threats in Mexico. Each MTT member required the expertise to credibly field questions and the capability to incorporate doctrine to a different operational environment throughout instruction. They also required the adaptability to answer unexpected and unorthodox questions inevitably asked by a force used to operating much differently than ours.

Selection of team personnel, through a unit interview process, required the identification of less tangible skills, including the interpersonal skills capable of connecting with host-nation Soldiers. Our goal of building professional relationships with our counterparts was accomplished by selecting individuals who had the ability to build these relationships quickly despite the obvious cultural and language differences.

Additional factors considered in team selection included previous deployment experience as well as language skills. SEDENA representatives had expressed interest in learning from our Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF) experiences and TTPs, so deployment experience was considered in team selection. Also, although not critical, a Soldier's language skills were considered due to the limited number of and high reliance on interpreters, and the ability to quickly develop a relationship formed by a common language.

Finally, cohesion and consistency among team members was crucial to the team's success. For this reason, the assigned team leadership provided some input over the team's composition to ensure a proper personal fit among team members. Early identification of team members also allowed maximum time to train and develop a shared vision and identity. Selecting and training alternate members for each team allowed for flexibility to change primary team members throughout the preparation phase. Each MTT was programmed to provide the same block of instruction through multiple iterations during the year. Consistency of team members provided the teams with several repetitions and personal experience, allowing improved quality of instruction and adaptive team members at the completion of each team deployment. The brigade assigned each specific MTT to a single battalion, where the subordinate commands could provide oversight of the teams and observe their progression through the required phases.

Figure 2. Dr. Edwin C. Roldan from WHINSEC's Department of Civil Military Studies instructs Soldiers from 3rd Brigade, 3rd Infantry Division, at Fort Benning, GA, March 2, 2014, as part of Sledgehammer Academy. The 3rd Brigade Special Troops Battalion (BSTB) of 3/3 Infantry Division created Sledgehammer Academy in partnership with WHINSEC, the TRADOC Cultural Center and TRADOC's Asymmetric Warfare Group to build capacity and understanding of Mexican culture in support of NORTHCOM's future TSC missions in Mexico. *(Photo by 3rd BSTB Public Affairs)*

Preparation

Preparation centered on developing credible and flexible teams able to interact effectively with our Mexican counterparts. Units built credibility in the teams through development and mastery of the specific PoIs. Each member understood the PoI to a level that allowed flexibility to change the agenda based on the situation in Mexico. Strong foundations in the PoI allowed individuals to increase flexibility, adaptability and cohesion while on an MTT mission.

The 3/3 Infantry Division established the "Sledgehammer Academy" to increase partnership capability and capacity within the brigade to support the TSC mission. The academy provided the brigade with more flexibility to conduct future NORTHCOM TSC missions. For Mexico TSC missions, this

training provided a background on SEDENA, rank structure and basic Mexican military doctrine, as well as common conversational and military Spanish vocabulary. The brigade collaborated with Western Hemisphere Institute for Security Cooperation (WHINSEC), Defense Language Institute and the U.S. Army Training and Doctrine Command (TRADOC) Culture Center to leverage expertise throughout the installation and Army.

Sledgehammer Academy training objectives included influences of culture, Mexican culture, building rapport, SEDENA overview, human rights in Latin America, countering transnational organized crime, embassy operations in Latin America, training foreign security forces and Spanish-language instruction.

Through each MTT and exchange, Sledgehammer Academy continued to revise and improve the PoI based on bottom-up refinement and individual-experience feedback. The brigade leveraged the experience of returning MTT members to further prepare future MTTs and exchanges. Their current understanding and interaction with SEDENA helped develop realistic and practical exercises that incorporated current trends and concerns among the Mexican forces. Their feedback not only affected changes to Sledgehammer Academy instruction, but also improved unit-level training to hone the skills taught at the academy to the point of deployment.

Lastly, the battalion and brigade leadership validated each MTT. Assessment of the teams, both at the individual and team level, was ongoing from member selection to deployment so commanders maintained an understanding of the strengths and weaknesses of individual team members. Command involvement was important in emphasizing to each Soldier the strategic impact of each mission.

Execution

The interaction and relationships between individual MTT members and their counterparts determine how successful each TSC deployment will be when it comes to fostering positive relationships between our Army and our host country.

An exchange requires both parties to provide something as part of the arrangement. ... While both partners took a lead in a specific area, both learned from one another.

The brigade established a peer-mentorship dynamic when instructing. Several MTT iterations began with a student/teacher dynamic but quickly transformed to the more effective method of peer mentorship. The credibility of our Army immediately gained the respect of the SEDENA soldiers to conduct a student/teach dynamic. However, MTTs learned that this dynamic did not promote the kind of relationship-fostering desired as an end-state. Instead, peer mentorship allowed U.S. Soldiers to share knowledge as well as reinforce the legitimacy and professionalism of SEDENA by learning from them. The mutual respect created an environment of a professional partnership between the U.S. Army and SEDENA.

Each MTT benefited from cultural and social events hosted by the Mexicans. U.S. Soldiers were invited to participate in soccer games, visits to local historical sites and dinners. These events fostered not only partnership but also friendship. During PoI development, each MTT created flexibility in the schedule to allow for these social events. An exchange requires both parties to provide something as part of the arrangement; where U.S. Soldiers took ownership of the training, SEDENA soldiers took ownership of the cultural events. While both partners took a lead in a specific area, both learned from one another. It was important that each team understood that these events, while not formal blocks of instruction, represented an integral part of the TSC mission.

Many participating SEDENA soldiers were NCOs and officers. The peer-to-peer dynamic of training teams was a paradigm shift for OIF/OEF veterans whose experiences were instructing new Iraqi and Afghani military recruits. This status was stressed during preparation and execution, but returning MTTs arrived home with a new appreciation for SEDENA as a peer professional force whose experience revolved around daily combating Mexican drug cartels in their country.

Conclusion

Regional alignment allows combatant commanders the capability to plan and support TSC efforts, operational missions and bilateral and multilateral exercises.[1] The 3/3 Infantry Division's regional alignment allowed NORTHCOM the capability to shape the NORTHCOM area of operation to further strengthen ties with our Mexican and Canadian neighbors.

The 3/3 Infantry Division's regional alignment offered U.S. Soldiers broader experiences in addition to their military-occupation skills through theater-focused language and cultural training required to rapidly and effectively meet the NORTHCOM commander's requirement. Each MTT promoted long-term partnership through enduring relations with Mexico's emerging military leaders in hopes of building partner capacity, gaining improved interoperability and building mutual respect and collaboration.

Now, the final step in assuring the continued success of this mission is the deliberate exchange of lessons-learned and experiences to successive NORTHCOM RAFs.

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General Staff College, Cavalry Leader's Course, Armor Maneuver Captain's Career Course, Armor Basic Leader's Course, Master Fitness Trainer Course and Air Assault Course. MAJ Manglicmot holds a bachelor's of science degree in engineering management from U.S. Military Academy and a master's of science degree in policy management from Georgetown University. He is the recipient of the three Bronze Star Medals and two Meritorious Service Medals. He was also a Joint Chiefs of Staff/Army Staff intern.

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Notes

[1] "Regionally Aligned Forces," ***Stand-To***, Dec. 20, 2012, http://www.army.mil/standto/archive/issue.php?issue=2012-12-20; accessed June 27, 2013.

Acronym Quick-Scan

ABCT – armored brigade combat team
ARNORTH – Army North
BCT – brigade combat team
BSTB – brigade special troops battalion
HHC – headquarters and headquarters company
MTT – mobile training team
NCO – noncommissioned officer
NORTHCOM – (U.S. Army) Northern Command
OEF – Operation Enduring Freedom
OIF – Operation Iraqi Freedom
PoI – program of instruction
RAF – regionally aligned force
SEDENA – Secretaría de la Defensa Nacional
TRADOC – (U.S. Army) Training and Doctrine Command
TSC – theater-security cooperation
TTP – **t**actics, techniques and procedures
WHINSEC – Western Hemisphere Institute for Security Cooperation

Canadian Exercise Worthington Challenge: Opportunities in Theater-Security Cooperation

by MAJ Chris Manglicmot and CPT David M. Kennedy

Theater-security-cooperation missions provide the opportunity for a renewed focus on competition and partnership as a means of assessing Soldier readiness, building *esprit de corps* and maintaining interoperability among units and countries. The 3rd Armored Brigade Combat Team (ABCT), 3rd Infantry Division, sent two M1A2 crews and two M2A3 crews to Canada's Exercise Worthington Challenge – hosted at 5th Canadian Division Support Base in Gagetown, New Brunswick, Sept. 29-Oct. 2, 2014. Worthington Challenge, similar to the U.S. Army's Sullivan and Gainey cups, is a competition among the best armored vehicle crews from across the Canadian Army.

The 3rd ABCT's regional alignment with U.S. Northern Command resulted in its selection to send teams to compete in the challenge. SFC James Grider, commander of the winning tank crew from the Sullivan Cup, 2-69 Armored Regiment, selected SFC Michael Deleon as wingman for the competition.

The 3-1 Cavalry hosted a gunnery shoot-off to select the two best M2A3 crews from the brigade. Each unit from within the brigade sent top-performing crews from gunnery that would best represent the United States during an international competition. Crews commanded by SSG Matthew Doty and SGT Aaron Savage from 3-1 Cavalry and 1-15 Infantry, respectively, were selected to participate in the competition's 25mm division.

Background

This year was the Royal Canadian Armoured Corps School's (RCACS) third iteration of the modern Exercise Worthington Challenge and the first time the U.S. Army sent teams to participate since 2001. In 2012, the exercise was purely a tank-gunnery competition in which Canadian Regular Force armored units sent one Leopard II section each. The competition was expanded in 2013 to include units from the Canadian Army Combat Training Center and 5th Canadian Division Support Base Gagetown. The 2013 challenge grew further to include a 25mm category for Canadian light armored vehicles (LAV); however, the exercise was still based entirely on armored-fighting-vehicle (AFV) gunnery.

This year's iteration of Worthington Challenge was a major departure from previous competitions in its expansion to include all four Canadian Army

Figure 1. The tank section led by tank commanders SFC Michael Deleon (foreground) and SFC James Grider (background) from 2-69 Armored Regiment, 3rd ABCT, 3rd Infantry Division, races to the first battle position during a gunnery run in Exercise Worthington Challenge Oct. 2, 2014. The event was hosted by 5th Canadian Division Support Base Gagetown in New Brunswick, Canada. *(Photo by Canadian Army Learning Support Center)*

divisions, teams from the U.S. Army and the 25mm category's opening to infantry and engineer LAV crews. The competition format also changed to include a variety of critical Soldier and AFV crew skill tasks in addition to direct-fire gunnery. In the spirit of expanding the competition to include other members of the American, British, Canadian, Australian and New Zealand armies' programs, observers from the U.S. Marine Corps, British and Australian armies also attended in hopes of sending teams to compete in the future.

The RCACS commandant, LTC John Andrews, wrote that his "primary intent in developing and executing Exercise Worthington Challenge is to enhance unit focus on AFV-mounted direct-fire gunnery, crew and individual soldier skills across the Canadian Army." Of particular note, among the competition's secondary goals were the attempt to promote *esprit de corps* and foster camaraderie; enable an assessment of the state of the army's gunnery skills; and "foster relations and interoperability with Allied partners." The U.S. 3rd Infantry Division crews who participated can attest to the accomplishment of the ancillary objectives through participation in thorough after-action reviews (AAR), shared field and social time with Canadian Soldiers, and execution of combined-gunnery runs with American and Canadian vehicles.

Stands

The competition itself spanned four days, during which teams, grouped by divisions, rotated through each of four separate daylong "stands" in a round-robin fashion. Tanks competed as sections, whereas the 25mm crews competed as single vehicles due to engineer and infantry task organization. The tank section from 2-69 Armored Regiment was paired with Canada's 12th Armoured Regiment; the M2A3 crew from 3-1 Cavalry was paired with the Royal Canadian Dragoons; and the M2A3 crew from 1-15 Infantry was paired with Princess Patricia's Canadian Light Infantry Regiment.

The four stands in which teams were assessed were AFV identification (AFVID)/range estimation/all-arms call for fire (AACFF), the driving and maintenance challenge, the "march and shoot" stand and live-fire gunnery.

Teams performed the AFVID/range estimation/AACFF stand by rotating through each of the three substations by crew. In a departure from the norm, crews did not test AFVID by watching a slide show. For the first portion of AFVID, crewmembers crawled into a simulated hide site and watched footage of vehicles on a screen while battle noise played in the background. Portions of the vehicles were blacked out to make identification more challenging. The second portion involved crews identifying vehicles from the turret of their vehicle.

Figure 2. SFC James Grider from 2-69 Armored Regiment, 3rd ABCT, 3rd Infantry Division, executes the Exercise Worthington Challenge live-fire range Oct. 2, 2014. Also manning the tank are SGT Kevin Luu as gunner, SPC Thomas Carter as loader and PFC Arturo Jimenez as driver. *(Photo by CPL Nick Alonso, Canadian Public Affairs)*

"It was nice to conduct vehicle identification in a setting other than a classroom," commented Grider. "[The Canadians] made it challenging. The test made you focus on something other than a gun tube or turret. You really had to look at the fine details to properly identify the vehicle."

Competitors tested range estimation with binoculars from a foxhole in the same stand; however, targets were not to scale. According to Grider, "The lack of scaled targets forced individuals to rely solely on pure estimation rather than formal means, such as the 'width over radians times mils' method."

Finally, the AACFF provided a standard test to ensure competitors knew the basic tasks. RCACS planners provided a breath of fresh air in a traditionally dry event by presenting unique challenges and testing formats not commonly seen in similar training today.

Crews started the driving and maintenance challenge by sprinting to a staged vehicle about 100 meters away while wearing their fighting-load carrier (FLC), Advanced Combat Helmet (ACH) and protective masks at their sides. For time, tank and Bradley crews changed a road wheel, while LAV crews changed a tire. Crews then continued to run to a first-aid station, where basic skills were tested, and they were required to carry a weighted litter. The stand finished with each crew negotiating a closed-circuit driving course that had a variety of challenging obstacles ranging from steep dropoffs to severe washboards.

"The driving and maintenance stand was particularly demanding, as it combined elements of fitness, application of first aid, conducting maintenance and obstacle driving on a closed circuit into one single event," said MAJ Sylvain Gagnon, RCACS' chief instructor. "This offered a variety of challenges, creating a complex environment where competitors were forced to adapt quickly."

The "march and shoot" tested crews' teamwork, physical fitness and mastery of small-arms marksmanship. Competitors began the day's stand by negotiating the RCACS obstacle course as crews. Soldiers executed a variety of high and low obstacles while wearing

FLC, ACH and protective mask on their hips, and while carrying a dummy rifle. The best crews used teamwork to get through challenging obstacles quickly.

Upon completion of the obstacle course, crews tested on the Canadian C6 machine gun (M240B equivalent). Soldiers demonstrated proficiency in clearing, disassembling and reassembling, then simulated loading and reducing stoppages on the C6.

Crews then immediately began a timed foot movement of more than four miles, largely over gravel roads, to a small-arms range. Individuals received their assigned rifle and pistol and were tested on proficiency in immediate-action drills before they received ammunition. Competitors then zeroed rifles and moved to the stress shoot. Crews conducted a controlled, but timed, run through a range requiring sprints, firing from a variety of positions, changing weapons from rifle to pistol and back again, and carrying a casualty.

Doty said he found the use of iron sights rather than optics to be particularly refreshing as a test of basic shooting skills. The variety of target shapes and sizes, coupled with a strict engagement order, proved to be a difficult test for even the best marksmen.

The fourth stand, live-fire gunnery, was constructed with two scenarios: one for a tank section and one for a single LAV/Bradley crew. Each section/crew executed the range twice during its assigned day. The range, executed in several bounds, presented unheated pop-up and moving-vehicle targets, as well as very small metal "falling plates" as troop targets.

"Our aim was to have a dynamic range that centered on fire team/crew skills," said CPT Michael Bastien about developing the gunnery scenario. Bastien serves as the Canadian Army's instructor-gunnery (master gunner) team leader. "We wanted to incorporate minimal supervision to enable communication among the fire team and offer a complex array that forced crews to use their skills. Targetry was aimed with multiple presentations and timed exposures focusing on acquisition skills and quick engagements, both main and secondary armament."

Figure 3. SPC Nolan Weigand (foreground) and SGT Aaron Savage (background) from 1-15 Infantry test on the Canadian C6 machinegun during the 'march and shoot' stand Sept. 29, 2014, during Exercise Worthington Challenge in Canada. *(Photo by CPT David M. Kennedy)*

The reliance on daysights and the naked eye rather than thermals, coupled with rapidly changing and varied targetry, presented an incredible challenge for all participants. "I really enjoyed the higher speeds needed during the runs; it helped challenge the crew and show the capabilities of the Bradley," said Doty.

After-action

While not part of the scoring, it was evident in the tower that crews with the best radio communication practices largely scored better than sections that did not use the radio. The tank sections representing 3rd Infantry Division and RCACS received high praise for working effectively as teams. Bastien and his Army instructor-gunnery (AIG) personnel conducted thorough AARs with sections and crews at the conclusion of their battle runs to ensure lessons-learned were both imparted on competitors and recorded for later use.

Event cadre updated the scoreboard as teams completed events; however, there was still no clear winner going into the final day, as the round-robin format meant that all four "stands" had teams executing them. The tank section from 2-69 Armored Regiment placed third out of five teams in the tank division, and 1-15 Infantry placed fourth and 3-1 Cavalry placed first out of 14 teams in the 25mm division. The competition was fierce, with teams having been thoroughly assessed on gunnery, physical fitness and a variety of Soldier skills.

Not wanting to let the opportunity pass by, American and Canadian crews executed a combined battle run immediately before the awards ceremony. Our M2A3s conducted a full battle run with Canadian LAVs with outstanding results. The 2-69 Armored Regiment's M1A2s then paired up with Leopard IIs in a devastating demonstration of Allied firepower.

"The last battle run we conducted with a Canadian-American troop was a perfect example of our two armies' ability to interoperate," Andrews commented.

RCACS capitalized on regimental attendance at Exercise Worthington Challenge by conducting an AIG conference the day after the competition's conclusion. AIGs came together to share information on a variety of topics, including their army's testing and fielding of future equipment, simulations programs and updates on the future military budget. The 3rd ABCT master gunners on the trip – SFC Patrick Smith, Grider, Deleon and Doty – attended the conference at RCACS' invitation. Smith, 3rd ABCT's master gunner, briefed attendees on the Bradley Fighting Vehicle and programs to develop replacements. The American noncommissioned officers' attendance led to arrangements for Deleon to attend the Canadian AIG course as part of our

Figure 4. The tank section from 2-69 Armored Regiment, 3rd ABCT, 3rd Infantry Division, conducts a joint gunnery run with a Canadian Leopard II section at the close of Exercise Worthington Challenge Oct. 2, 2014. SFC James Grider's tank is pictured with a Canadian Leopard C2 during combined-gunnery execution. Also manning the tank are SGT Kevin Luu as gunner, SPC Thomas Carter as loader and PFC Arturo Jimenez as driver. *(Photo by Canadian Army Learning Support Center)*

continued partnership.

As for the general experience of traveling to Canada, our allies treated our Soldiers as honored guests. RCACS personnel assisted 3rd ABCT, 3rd Infantry Division, in planning support for our reception, participation and return with the greatest of care. The planning began well before our arrival with detailed coordination for support requirements and ensuring 3rd Infantry Division had information about the competition itself. Most importantly, the Canadian Soldiers with whom our crews worked, competed and socialized were extremely welcoming.

"The entire exercise was extremely well thought out and professionally and smoothly run," summarized Grider. "The tasks we conducted related directly to the profession of mounted warfare. It was a challenging and thoroughly enjoyable competition that did an excellent job of pointing out strengths and weaknesses in our training while building international camaraderie."

The incredible detail RCACS invested in planning paid dividends in a truly first-class and highly challenging competition. American and Canadian Soldiers were afforded the opportunity to build relationships both on- and off-duty; put their skills to the test against each other; share tactics, techniques and procedures; and demonstrate our forces' interoperability in a tactical environment. In an environment of slowing deployments, TSC missions oriented on competition and partnered training will continue to provide our Soldiers with outstanding opportunities to work with partnered nations. We look forward to more exchanges with our close allies to the north in future Exercises Worthington Challenge and as they participate in the Sullivan and Gainey cups in the United States.

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Acronym Quick-Scan

AACFF – all-arms call for fire
AAR – after-action review
ABCT – armored brigade combat team
ACH – Advanced Combat Helmet
AFV – armored fighting vehicle
AFVID – armored-fighting-vehicle identification
AIG – Army instruction gunnery
FLC – fighting-load carrier
LAV – light armored vehicle
RCACS – Royal Canadian Armoured Corps School

Figure 1. Students prepare to conduct ready-up drills as part of an advanced rifle marksmanship mobile-training team exercise in the mountains outside Mexico City. *(Photo by CPT Alexander Barron)*

Theater-Security Cooperation as a Regionally Aligned Force: Lessons-Learned from a Combined-Arms Battalion Serving U.S. Northern Command

by CPT Alexander C. Barron and promotable 1LT Matthew P. Dixon

When 3rd Armored Brigade Combat Team (ABCT), 3rd Infantry Division, assumed its role as the first regionally aligned force (RAF) for U.S. Northern Command (NORTHCOM) in March 2014, the Sledgehammer Brigade's primary responsibilities were 1) to provide a rapid-response force to the NORTHCOM commander for emergency deployment anywhere within the continental United States (CONUS) and 2) to execute a range of theater-security-cooperation (TSC) missions with allied militaries throughout NORTHCOM's area of responsibility through the proponent agency, U.S. Army North (ARNORTH).[1]

This article will cover the experiences of 1st Battalion, 15th Infantry Regiment, through the preparation and execution of multiple mobile training teams (MTTs) in support of TSC operations in Mexico as part of the NORTHCOM RAF. Also, it will cover some basic background information pertaining to Mexico and its military, along with some key observations made by members of our various MTTs.

Background

The Mexican military is organized roughly like the U.S. military in that it is composed of an army, air force and navy, with a similarly functioning marine corps and coast guard. At macro level, the main difference is that Mexican forces are divided under two secretariats: the army and air force fall under the *Secretaría de la Defensa Nacional* (SEDENA), while the navy, naval infantry and coast guard fall under the *Secretaría de Marina*.

The second primary difference between our militaries is that Mexico's is entirely defensive in nature. They have no offensive expeditionary capability and are focused almost entirely on internal defense. While this planning contains some contingencies for threats posed by external state actors, it mostly concerns the flow of narcotics through their country and the various cartels this supports.

Geographically, Mexico is divided between two extremes: the dense jungles of the south and east and the arid, mountainous deserts of the north and west. Politically, the country is organized into 31 states with the capital of Mexico City falling within a federal district similar to Washington, DC. The Mexican army divided the states into 12 "military regions" that then break down into 45 subsidiary "military zones."[2] Most of Mexico's army is organized and dispersed across the country according to these zones.

Each region also contains a regional training center that units within that region use. A U.S.-equivalent National Training Center is located in the state of Durango. Most students receiving training from our first MTTs were instructors at these training centers, indicating that the Mexican army showed

interest in disseminating the techniques and lessons we provided.

The units and Soldiers of the Mexican army are divided into branches similar to those found in the United States. Combat-arms units like infantry, armor, cavalry (a completely separate designation), artillery, engineers, aviation and Special Forces are supported by quartermaster, transportation, communications, military police, intelligence, administrative and medical units. Other than the specific separation between cavalry and armor units, the only other major difference is that members of the army's single airborne brigade (called *paracaidistas*) are considered a branch separate from their infantry brethren.

Most military zones in Mexico are garrisoned by a regimental or battalion-sized (they are roughly the same) combat-arms unit that is determined mostly by which branch is more suited to the terrain in the zone. Some are assigned an additional artillery or motorized infantry or cavalry battalion.

In addition to their locally garrisoned forces, the Mexican army provides the federal government with a maneuver force in the form of nine independent infantry brigades and a number of independent battalions of various other branches that are stationed predominately around the federal district.[3] Also, the Mexican army's Special Forces provides nine battalions, organized into three brigades, along with two separate units dedicated to presidential security and counterterrorism operations that answer directly to the president.

The Mexican army has a rank structure composed of enlisted soldiers and officers that is only notionally similar to the U.S. armed forces. *Soldado*s (or privates) are eventually promoted to *cabo* (corporal), *sargento segundo* (sergeant) and then *sargento primero* (staff sergeant). While it is possible to branch out to other technical positions, there is no further promotion from there except for those soldiers selected for *subteniente* (second lieutenant) and schooling at a military academy. Most officers have a minimum of 12-15 years of active service. While it is possible to go straight into a military academy and receive a commission, the cases we witnessed all seemed to be the children of affluent and influential political and military leaders.

Figure 2. An MTT instructor gives instruction on making adjustments to a SEDENA student's rifle as part of the zeroing process. *(Photo by CPT Alexander Barron)*

Also, soldiers at all ranks may remain in their position for an indefinite amount of time. It is possible to encounter career corporals or lieutenants in the Mexican military.

Tenientes (first lieutenants) and *subtenientes* serve as section leaders and assistant section leaders, respectively, in what is equivalent to a U.S. platoon. In armor sections, every tank has a *teniente* or *subteniente* in command. Officer promotions past *teniente* were unique to our experience in that there are two grades of captain. *Capitan segundo* is a pre-command or current company commander, while a *capitan primero* is post-command or in a second or third command assignment. *Capitan segundo* is also the highest grade of the *oficiales* (equivalent to our company-grade officers), while a *capitan primero* through a *coronel* (colonel) is considered a *jefe* (or field-grade officer). General ranks consist of one through four stars, signifying a brigadier general, a general of a brigade, a general of a division and the SEDENA, who is the secretary of defense and the only four-star general in the Mexican military.

Building team

To build and support an 8-12 man MTT, the battalion leadership interviewed and approved a pool of 16-20 potential candidates. For the officer-in-charge (OIC) position, they decided to assign a company commander. The OIC would then build the team from the pool of candidates, liaise with TSC liaison officers (LNOs) at our brigade and ARNORTH, develop and refine the program of instruction (PoI) and coordinate for pre-deployment training and Soldier Readiness Processing (SRP).

From the execution of the first MTT, we transitioned from having a company commander as the OIC to appointing a permanent member of the S-3 shop to serve as the battalion TSC OIC for all MTTs. The new OIC was a former scout-platoon leader who had served as the assistant OIC for the initial MTT and was then transferred to the battalion operations shop to take over TSC duties full-time. While this took a company commander out of command for more than three weeks, it provided the first MTT with added influence, in terms of higher rank, for building relationships with key SEDENA personnel.[4] The individuals we indentified were crucial in arranging resources,

billeting, transportation and general coordination of the training events. Company commanders are considered to be very influential in SEDENA, and the presence of one during the first MTT helped cultivate relationships with battalion, brigade and post leadership that easily transferred to the new OIC for his return trips with future MTTs.

The MTT noncommissioned officer in charge (NCOIC) should preferably be at least a senior staff sergeant if not a platoon sergeant. Discipline is a vital component of this mission, and the NCOIC will need to hold fast to the concept that MTT members are all representatives of the United States, not just a specific battalion. For instructors, maturity and tact are the key traits. We recommend using squad leaders and up, with a few promising junior NCOs by exception.

Another thing to consider is that this mission is a developmental opportunity that should be open to every NCO in the battalion. After a successful first iteration, look at incorporating a mix of new instructors with a core of experienced ones. However, the vetting process must remain stringent. You will find that your students are more likely to be officers than enlisted men, and that – along with the many cultural differences you'll encounter – means tact will pay dividends in building a positive working relationship with your students. It doesn't help that the NCO Corps in SEDENA is afforded much less esteem than is institutionally shown in our Army.

Critical to overcoming these potential barriers will be the combat experience and extensive military training your instructors must collectively have under their belts. The majority should have some combat-deployment experience, as this will be the easiest and fastest way to build rapport with your students. Most students have spent the last several years fighting *narcotraficantes* (the most commonly used term for cartel soldiers), and many have experienced intense combat and have even been wounded.

Military schools will achieve a similar effect. Having multiple instructor and leader graduates of the Ranger, Air Assault, Airborne, Pathfinder or Sniper schools will also ensure you have a firm base of doctrinal knowledge with which to execute your PoI. Including a medic on your team will open up a range of training topics to cover for hip-pocket training, while also providing you with internal medical support and a layer of risk mitigation when working with a foreign military and unfamiliar live-fire training practices.

The last thing to consider in building a team will be your MTT's ability to communicate. Since most of your prospective students are likely to be officers, most of them have some level of education. However, unlike many other Latin American militaries, Mexico does not place a large emphasis on English-language training, so few of them will be ready to communicate with you in English. Interpreter support will be arranged through SEDENA in support of your MTT, but, as a subcontracted service, it will be subject to the same tribulations U.S. forces experienced for years in Iraq and Afghanistan. The interpreters will also most likely not be paid to work on weekends, and their support for after-hours social events will be entirely up to the individual interpreters. Because of this, and the general enhancement that it provides to the execution of your PoI, we highly recommend that you include two to three members on each MTT with some level of conversational Spanish-speaking ability. None need be fluent, for the Mexican students were receptive and appreciative of even the most novice use of their native language.

Most of your instructors shouldn't need any Spanish-speaking ability to be considered for the assignment. They only need to be outgoing and willing to learn. We embedded with our students for every meal, and most of our non-Spanish-speakers and SEDENA students picked up enough by the end of the rotation to be able to communicate fairly readily without an interpreter at the table. This turned into a critical component of our ability to develop rapport. We recommend that MTTs reach out to organizations like the Western Hemisphere Institute for Security Cooperation at Fort Benning, GA, or Defense Language Institute at Monterey, CA, for more language resources prior to deployment, and we encourage instructors to research free language-training applications on-line.[5]

Preparation

With a team identified, we moved on to the more concrete preparations required for deployment. The main aspects were administrative, resourcing and train-up. Of the administrative requirements that caused the most frustration, especially with MTT missions given on a condensed timeline, acquiring official passports was the most stressful. As the OIC for the first MTT, my official passport did not arrive at the post passport office until less than seven days before our flight.

To alleviate this, our battalion eventually decided to have the companies identify any NCO or officer who may qualify for the pool of instructors or MTT leaders, and have them put in their applications for official passports before an MTT mission was even assigned. If your brigade or battalion is assigned this mission, beginning the process as early as possible will save you some trouble and give you more options for possible instructors.

Once official passports have been completed, the only remaining administrative requirements are the completion of SRP, submission of Aircraft and Personnel Automated Clearance System requests through the unit S-2 shop, Isolated Personnel Report and a myriad of required on-line training and briefings covering anti-terrorism techniques; survival, evasion, resistance and escape; personnel recovery; human rights; and human trafficking. ARNORTH will brief you on documents required prior to deployment, reports due during deployment and close-out documents following redeployment. They will also have you forward your training documents, classes and other digital materials for translation into Spanish.

Resourcing also has the ability to make or break your deployment. ARNORTH will need a resource request in conjunction with your PoI so they can begin the request process through the military attaché at the U.S. Embassy to SEDENA leadership at your destination. This will be required weeks in advance of your training, but will most likely not

prevent some level of resourcing issue upon your arrival. The key is to maintain constant contact with ARNORTH and SEDENA LNOs throughout the process. Internal-resourcing requirements will consist of an equipment package from ARNORTH and the packing list you develop in support of your PoI.

ARNORTH representatives will arrive at your brigade a few days prior to deployment to conduct some briefings and pre-training and will sign over a package of communication and personnel-recovery products. The package will include blood chits and personnel-locator beacons to be issued to each instructor and a set of equipment for making and sending reports. For us, that equipment was a Common Access Card-enabled computer with a MiFi (a small cellular Internet receiver) and a Broadband Global Area Network (satellite Internet receiver for areas with no cell reception), along with an international cellphone and an Iridium satellite phone. These items are for official communications, but your MTT members may bring personal phones and computers with the understanding they must pay for international cell rates.

For other gear, we recommend that, in addition to your own PoI-specific packing list, you include medical gear (either your medic's equipment or a combat-lifesaver (CLS) bag), semi-formal civilian clothes for off-base social outings with your students, and lots of items for exchange as gifts or awards. We originally just brought marksman and sharpshooter badges for each of our students and nice paper stock for printing awards and certificates. By the end of the first iteration, however, our instructors had traded most of their personal badges, tabs and patches and given away anything they could think of as gifts for trade with the students. Planning for these ahead of time will make you seem more professional.

For our first MTT, we had roughly three weeks between the finalization of the instructor roster and the actual deployment. For train-up, we executed all the mandatory on-line training and briefings and received a series of classes given by ARNORTH representatives a few days before our flight. The best training we received was a set of cultural and language classes to help acclimate the instructors to Mexico's military and regional civilian cultures. The key here, as with everything in the military, is to maximize available time to conduct training and rehearsals specific to your expected mission.

Figure 3. An MTT instructor observes as a SEDENA student completes the barrier-shoot portion of the course's culminating stress-shoot event. *(Photo by CPT Alexander Barron)*

For an advanced-rifle-marksmanship (ARM) MTT, we sought out opportunities to conduct familiarization training with the weapon systems we were most likely to use in Mexico. Unfortunately, in the time allotted, we were unable to acquire H&K G3 rifles to conduct this training. We were able to alleviate this by using the flexibility in our PoI to conduct instructor training on the identified systems during our first week.

Regardless of your assigned topic, getting your instructors some hands-on experience with the material prior to deployment will allow a smoother execution. Having an assistant OIC or the NCOIC begin planning for this concurrently with development of the PoI will help increase efficiency. Our brigade formalized many training topics that were applicable to all the different PoIs in what we called the Sledgehammer Academy. It provided many resources and training opportunities we weren't able to coordinate for ourselves.

PoI development

Immediately following the identification of an OIC, and concurrent with all preparations, the next most important task for us was to develop a PoI for the MTT. The 1st Battalion, 15th Infantry Regiment – part of 3rd ABCT, 3rd Infantry Division[6] – was tasked with providing ARM training, but other topics covered by our brigade and battalion included tactical combat-casualty care, crisis action planning, motorized urban operations and air-assault operations. Regardless of the topic assigned, the easiest place to begin is to take the initial products given by ARNORTH and collect similar PoIs from U.S. Army proponent organizations for the given subject. We amassed training materials from the U.S. Army Infantry School's basic-rifle-marksmanship program from the infantry's basic training and advanced-individual-training courses, along with material from the Army Marksmanship Unit.

As you build a PoI specific to your MTT, your key task will be to maintain flexibility throughout the plan. We began with a few events designed to build rapport with the students prior to the official start of training. Introductions and some kind of social or sporting

event (we used soccer and basketball) will work to break the ice for your students and your instructors. We also had an in-depth discussion with the students to determine what they thought the training objectives should be and to begin to assess their level of capability.

Whether formal or informal, having an assessment period built into the beginning of your PoI, along with the flexibility to adapt to the outcome of your training, will be critical to your success. Soldiers who cannot zero their weapons will probably not gain anything from a 400-meter known-distance range, while a class of mostly Special Forces officers may be turned off by a week straight of zeroing at 25 meters.

After completing and proofing your initial PoI, consider drafting a second version that outlines your training plan into more broad terms and timelines. To ensure your plan's flexibility translates effectively when it's sent to the SEDENA LNOs, have it worded in terms of training topics per day, rather than specific tasks per hour. This will allow you more room to make changes without a SEDENA official believing that the previously communicated plan has been overruled.

What reinforced the importance of flexibility the most for us was the recurring issues we encountered across the different MTT iterations with resourcing. Ammunition, facilities, weapons and targetry are provided by SEDENA through a logistical system that is rife with administrative complexity and potential bottlenecks for supply and distribution. Our ammunition was delayed by five days from the arrival of our first MTT on the ground. We were able to leverage this delay into a valuable teaching event that reinforced the importance of maintaining a detailed hip-pocket training plan. In what seemed to be a completely new concept for our students, we conducted training on many tasks – like ready-up drills, dime-washer drills, individual movement techniques and range cards – that related to our PoI but for which we required no resources.

The two topics that generated the strongest positive response were medical training and combatives. Medical training at the team, squad or platoon level is not a major component of basic-soldier-skill or unit training in SEDENA, and the low-level casualty-care training we conducted generated an intense level of interest in our students. As a demonstration of the medical-support culture in SEDENA, the range medic support provided for our first MTT (when we had no medic of our own) consisted of a SEDENA major who was one of the post surgeons. He was also very helpful in supporting the medical-skill training we conducted due to the very specific medical vocabulary with which even our interpreters were unfamiliar.

The most popular hip-pocket training we conducted was in the Modern Army Combatives Program (MACP). Our first MTT NCOIC was MACP Level IV certified and, after the excitement shown by the students in just the first hour of hip-pocket training, we decided to incorporate an entire Level I certification class into the overall PoI. Even our Special Forces students had had little to no combatives training (even from similarly hosted training events with U.S. Special Forces). Through the rest of our three-week MTT, we included one to two hours of combatives into each day of training, with the only modification being the removal of strikes to prevent injuries among the students. With a more robust risk assessment conducted beforehand, and the inclusion of required safety equipment in the supply request, it would be entirely feasible to include the complete course in future MTTs.

The combatives training also reinforced with us the level of competitiveness our students displayed. We ultimately decided to rewrite the rest of our PoI to embed some type of competition throughout the training. We maintained running scores of all the students from their daily marksmanship exercises and built a culminating stress shoot for the final day of training. Buddy teams had to negotiate a lane that covered multiple shooting tasks over a 400-meter mountainside course that also included many of the hip-pocket tasks we trained on earlier. Also, we conducted a combatives tournament following the completion of Level I training. At the graduation of the class, we presented awards for the class top shot, the stress shoot's best team and the winners of the combatives tournament. We also developed a grading scheme for the marksmanship results that allowed us to identify and reward sharpshooters and experts in the class.

Execution

The actual deployment is a relatively painless process. ARNORTH does a good job of coordination to receive the MTT in Mexico City and transport them to the assigned camp. The only thing we were required to coordinate was transportation to the airport. The only issue worth addressing here is that the MTT NCOIC needs to maintain everyone's Form DD 1610 temporary-duty orders and walk everyone through the baggage-check process to ensure there is no confusion with airline personnel over baggage weight limits.

Typically, our flights out would take place on Sundays. Ideally, flying on Saturday would give the MTT an extra day (before the students arrive on Monday) with which to familiarize themselves with the post and to conduct rehearsals and pre-training with the equipment and facilities they will actually use.

The first day will begin with formalized introductions. All the MTTs that had deployed together to the same camp were collectively introduced to the students who had assembled to receive the various training courses. ARNORTH action officers and LNOs accompany the MTTs to the camps for the first day and ensure that each SEDENA student has been vetted for human-rights violations in accordance with the Leahy Amendment.[7]

A mandatory human-rights class must also be conducted with all the SEDENA students present. If ARNORTH personnel conduct the class, it allows the MTT instructors to sit in among the SEDENA students and show that the training is important for everyone. This will help begin the bonding process with the students and ensure they don't feel as if they're being looked down upon.

This will also be the first interaction between the MTTs and their assigned interpreters. As with all contracted interpreters, some are more proficient than others are.

The last, and arguably most important, thing to achieve on the first day is picking a class leader. The senior-most member of your class will be in charge of attendance and will help you with executing all sorts of day-to-day tasks. Typically, the students SEDENA chooses for these courses are the best their parent units can send and are correspondingly disciplined and highly motivated. You should find that whoever is identified as the senior student will readily step up to the job.

After the first day, your experience will vary based off your assigned topic and your PoI. While we conducted marksmanship training predominantly at the range and taught air-assault training at landing zones and rappelling towers, other MTTs consisted of mostly classroom training. There are a few common points of emphasis. Safety in training environments is much more heavily emphasized in the United States than in SEDENA, especially with range training. Ensure that you talk through tactics, techniques and procedures with students prior to execution so that everyone is on the same page and no one is surprised.

Seemingly insignificant aspects of training you may take for granted may be done in a completely different manner by SEDENA, so be cognizant. For example, we discovered early on that the SEDENA method for zeroing a rifle was for a shooter to fire three groups of three rounds at a target and adjust the point of aim to bring the point of impact closer to the center. Some units specifically forbade Soldiers from adjusting the sights of their rifles, while most others simply did not train it or even talk about it.

Every training topic has opportunities for similar discoveries. We discovered it was vital to keep an open dialogue as we progressed through the different gates of our PoI to see how students from different regions and zones would execute similar tasks. Gaining perspective into the different circumstances and limitations they face helped us modify some points of our PoI to better suit SEDENA units. For example, parts of the CLS training we conducted used equipment like tourniquets and Israeli dressings that SEDENA units usually don't possess. For this reason, we then put more emphasis on field-expedient medical techniques.

Figure 4. MTT instructors cover various pre-marksmanship instruction techniques, to include dime-washer drills, prior to a day at the range. *(Photo by CPT Alexander Barron)*

Throughout the execution of your PoI, pay attention to opportunities to build rapport between the instructors and students, especially outside of the training environment. Sports like soccer, basketball and American football are an excellent way for your students and instructors to find commonality in physical activity and competition. Mixing teams with both students and instructors is a must.

Weekends also provide you with some opportunities, as they will typically not be used for training. While the students and SEDENA LNOs are professionals and will execute training if asked, consider using weekends as opportunities for other activities. Our MTTs conducted hikes in the neighboring mountains, took our students and interpreters to dinner in local cities and visited national sites like Aztec pyramids and local volcanoes. Off-post activities will require thorough security consideration, but the SEDENA, ARNORTH and embassy representatives can easily provide input on local security situations. If you plan these events before deployment, your unit S-2 section can also build you initial situation briefs and provide you with intelligence updates in real time. Your only consideration in this case would be your lack of secure communications capabilities.

You will most likely have a few students in each class who are posted at the camp where you are conducting training and therefore will have in-depth knowledge of places to go and places to avoid. Our students also hosted several authentic Mexican barbeques (called *barbacoa*) that, while delicious, have a tendency to become rites of passage for U.S. instructors. Have your medics pack accordingly, as pharmacies may or may not be readily available.

Our instructors took full advantage of the high altitude around Mexico City with a robust physical-training (PT) schedule and, by the end of the first iteration, discovered that many of the students were interested in working out with the Americans. Follow-on MTTs successfully incorporated more formalized group PT into the PoI.

Another recommendation is that each member of the MTT, and especially the leadership, maintain a journal with brief daily entries cataloguing what events took place and observations about the students, facilities or anything that seemed of interest about

the culture of Mexico and of SEDENA. This will support several important tasks. First, it will support end-of-course after-action reviews (AARs) so the instructors won't forget as many of the observations they made that would be important to contribute. It will also help the MTT leadership when it comes time to consider instructors for awards after the successful completion of a rotation. It will also drive awards for the students by cataloguing performance at the various events along the way. Most importantly, it will help the MTT collectively refine the PoI throughout the course, develop the PoI between courses and maintain a record of student capabilities so each class can be compared to prior classes.

The last thing to consider during execution is planning for the graduation event. Begin building a plan with some formality almost as soon as you arrive. Our first ceremony was attended by several of the camp's senior leaders, and we also had a member of the U.S. Embassy Defense Attaché Office, all of whom arrived with no prior coordination or notification. The graduation program and script will also need to be translated which, depending on what you produce, may take some time. You'll also need to make certificates for the students. We brought some heavy stock paper with us and a certificate template, and then had the student leader make certificates for each student.

Depending on the subject of your training, there are many options for badges or awards you can bring with you. Each of our students walked away with certificates of completion for marksmanship and combatives training and a U.S. Army marksman or sharpshooter badge. Our top shot and best stress-shoot team received a sniper tab we'd made.

Finally, take some time to explore the camp and determine the best location for the ceremony. SEDENA camps are similar to U.S. Army forts in that they are covered with grand statues and heroic plaques and monuments. We conducted ours at a statue of a Mexican infantryman with the sun rising over the mountains and rifle ranges in the background.

Conclusion

In conclusion, the key to success with TSC missions is choosing intelligent and mature personnel who can operate with minimal guidance. None of the points of preparation or execution covered here are particularly difficult to accomplish. We moved from approving a pool of instructors to deployment for our first MTT in less than four weeks.

ARNORTH action officers and LNOs will be helpful throughout the process and will provide you with a wealth of experience. Maintaining constant communication with them will be vital.

Also, feel free to contact alexander.c.barron4.mil@mail.mil directly, or contact the S-3 of 1-15 Infantry, 3rd ABCT, 3rd Infantry Division, at Fort Benning, GA, for previous PoIs, storyboards, AARs or other historical data.

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Notes

[1] This includes principally Canada, CONUS, the Bahamas and Mexico.

[2] ***Country Profile: Mexico***, Library of Congress, Federal Research Division, July 2008.

[3] Ibid.

[4] Conversationally, we referred to the Mexican army, both collectively and individually, as SEDENA personnel.

[5] We also received some very useful products from the U.S. Military Academy's Department of Foreign Languages.

[6] Other units making up 3rd ABCT, 3rd Infantry Division, are 2nd Battalion, 69th Armor; 3rd Squadron, 1st U.S. Cavalry; 1st Battalion, 10th Field Artillery; 3rd Brigade, Special Troops Battalion; and 203rd Brigade Support Battalion.

[7] By law, the U.S. Department of State and Department of Defense may not provide military assistance or training to foreign units or individuals that have conducted human-rights violations.

Acronym Quick-Scan

AAR – after-action review
ABCT – armored brigade combat team
ARM – advanced rifle marksmanship
ARNORTH – U.S. Army North (Fifth Army)
CLS – combat lifesaver
CONUS – continental United States
HHC – headquarters and headquarters company
LNO – liaison officer
MACP – Modern Army Combatives Program
MTT – mobile training team
NCOIC – noncommissioned officer in charge
NORTHCOM – U.S. Northern Command
OIC – officer in charge
PoI – program of instruction
PT – physical training
RAF – regionally aligned force
SEDENA – Secretaría de la Defensa Nacional
SRP – Soldier Readiness Processing
TSC – theater-security cooperation

Reflections of a Blackhorse Commander

by CPT Jeffery W. Whittington

The operational environment has changed since we left Iraq and started drawing down in Afghanistan. National Training Center (NTC) scenario design adjusted accordingly from a majority of security-force assistance team mission-rehearsal exercises to decisive-action rotations in 2014. In addition, brigade combat teams (BCTs) are arriving under the BCT 20/20 concept with an additional combined-arms battalion and a brigade engineer battalion. It is important to note that these 20/20 BCTs outnumber the Blackhorse Regiment by about three to one.

Blackhorse is asked every rotation to challenge the BCT in rotation, which usually arrives with superior weapons, sights, optics, vehicles, air weapons teams (AWT), close air support and unmanned aircraft systems assets. After every battle period, the BCT contemplates a few things: How/why did the exercise go the way it did? What really happened vs. what we thought happened? What were our shortcomings?

Blackhorse is great at fighting the enemy, not the plan, using the information-collection and analysis capabilities at our disposal. I have broken down a few areas where I think Blackhorse is leading the way and how these areas contribute success to every rotation. This is not meant to be an all-inclusive list; this is my perspective after a year of being a mechanized-infantry commander. As the commander for the observers/controllers/trainers for Blackhorse, my job entails the following: make sure Blackhorse is following the exercise operating procedures, report to the squadron commanders (SCOs) and regimental commander on what happened during the battle period, and give my recommendations on improvements through after-action reviews.

These are what I believe to be key components for achieving success:

- Understand doctrine;
- Conduct full dress rehearsals;
- Implement mission command down to the lowest level;
- Maintain tempo and quickly transition from movement to maneuver;
- Find the point of penetration and violently exploit it; and
- Fight the enemy, not the plan.

Understanding doctrine

Every unit receives Soldiers with the same baseline understanding of doctrine. Our privates go to the same basic and advanced-individual-training courses; our lieutenants come from the same basic officer's leadership courses; and our captains come from the same career-development courses. In other words, all BCTs have roughly the same general knowledge.

However, it is one thing to read and understand doctrine, and another to implement it. Each month, Blackhorse executes three to four force-on-force operations. If our Soldiers were conducting a movement-to-contact, I would break open a field manual and read what the tasks associated with a movement-to-contact were. I would take out all the key points and make sure I covered them in my operations order (OPORD). Having the definition to key operational terms or graphics defined at the beginning of my OPORD is helpful in making sure everyone is on the same page.

When conducting any operation, it is important that everyone in your formation understands the plan down to the lowest level. The only way for this to happen is through full rehearsals. Practice the operation continuously until the commander knows everyone understands the plan and what part their adjacent elements are playing in case they are called to accept their role.

Full dress rehearsals

Mission orders are critical, but too much detail can come at the expense of time, which is one of your most limited resources. We would much rather have an OPORD that covers the key tasks and still have a large amount of time to rehearse. I don't think any extensive OPORD can replicate the type of comprehensive understanding that Soldiers at the lowest level receive by having your entire troop/company rehearse a plan several times. If time permits, the timeline should look like the following: issue the OPORD, go over it on a terrain model and use the land available to you to get all tracks or Soldiers out to rehearse your plans.

If we could conduct a full dress rehearsal three times, I always felt like we would be successful on the battlefield, and most of the time, we were. We might not always feel like taking the time to rehearse, especially after a battle period; however, the benefit of the rehearsal pays many dividends. Don't forget to cover actions on the objective and after the breach or decisive point during rehearsals. Leaders often forget to rehearse beyond the decisive point, resulting in confusion and loss of tempo when it is most important.

Mission command

Army Doctrinal Publication (ADP) 6-0 defines mission command as "the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander's intent to empower agile and adaptive leaders in the conduct of unified land operations."

I had read a lot on mission command in ADP 6-0 and in Army Doctrinal Reference Publication (ADRP) 3-0, but a briefing by a command sergeant major in Operations Group helped me better understand what mission command is and how important it is. He broke mission command down into two things:

- Shared vision (understanding the commander's intent/vision and understanding the outcome); and
- Mutual trust (trust up and down).

Blackhorse relies heavily on this concept. When our leaders at any level understand the commander's vision and gain mutual trust, that troop or company is an effective fighting machine with smart, thinking leaders. Success is earned when a commander can trust a team leader or tank commander to call up a fire mission on a target of opportunity, high-payoff target (HPT)/high-value target (HVT) or priority information requirement (PIR). The commander/fire-support officer (FSO) then verifies the accuracy of the grid and that fire mission is executed. This creates a rapid and streamlined process with only two checks, one with the commander and one with the FSO at battalion.

Enabling quick fires that will facilitate maneuver is how Blackhorse is able to get quick effect with fire missions. A shared vision and mutual trust makes for a more effective and efficient fighting force and saves many more lives than it will cost.

Transition and tempo

ADRP 3-0 covers the movement and maneuver warfighting function, but I am going to cover it in a more simplistic way. Many of the offensive operations we conduct at NTC cover a great deal of ground. We may move 20 to 30 kilometers before we expect contact. Once we make contact, we may have another 20 to 30 kilometers to move until we reach our final objective. Moving a mechanized infantry battalion (MIBN) in a file may not be the safest way to move a formation, but it is a lot more practical when you have time constraints.

For movements greater than 30 kilometers before expected contact, we use a high-speed avenue of approach such as a main supply route. We travel in a file (ensuring we maintain roughly 200-meters spacing between tracks) until we close to within two kilometers from the probable line of contact. This is where we will make contact, or are one terrain feature from possible contact. We are then able to transition to maneuver.

Mastering the transition from movement to maneuver is key. It's vital that mechanized-infantry companies or platoons make the transition quickly, giving the opposition as little time to react as possible. Elements that are able to make the transition while maintaining their tempo achieve greatest success on the battlefield. This can only be done through detailed rehearsals. We live and train here every month, but if we are not able to master the transition, we sustain heavy losses.

The biggest key to success is to maintain tempo! When troops/companies or platoons get bogged down with the initial contact – usually a screen or disruption force – that is when the fight is lost.

Whether it's Blackhorse or a BCT that's going through a rotation, it's naive to think you are not going to sustain any losses during a movement at NTC once you are close to the enemy. The biggest key to success is to maintain tempo! When troops/companies or platoons get bogged down with the initial contact – usually a screen or disruption force – that is when the fight is lost. Once a formation stops maneuvering, they become targets of opportunity.

I've watched a BCT bring a squadron or battalion through an area where I only had two Javelin teams; once the lead element was engaged, the lead platoon stopped, which halted the whole squadron. Once this happens, the lead platoon and company are as good as dead. I watched this one battle period and explained to my radio operator that if we hit them and they stop, we are going to win because they lose their tempo and it clogs up their whole formation. If we hit them and they keep maneuvering forward, set up a support-by-fire (SBF), call for fire and move on, then ***we*** are going to be overrun and lose the fight.

Maintaining your tempo is key, which ties in nicely with my next talking point.

Finding point of penetration

Finding a point of penetration is not just conducting a breach. It's also finding a weak spot in the enemy's defense or finding a route that bypasses the defense and enables you to maneuver behind enemy lines. In an offensive operation, you know you are going to attack a defense and are more likely to sustain causalities.

One of the biggest issues the BCT has is creating a point of penetration and exploiting it. Blackhorse excels at this. When a commander identifies a weakness in a defense, it is vital that we use all available assets to exploit it as lethally and violently as possible so the MIBN following doesn't get left out in the open. Once said weakness is identified, it's important to use AWT, fires and direct fires to open that gap, massing effects to achieve situational overmatch. Once that gap is opened, there is a small amount of time to get forces though it.

If you are able to get a few tracks though this gap, there are a few second- and third-order effects that challenge the enemy. There is so much radio traffic going to the commander that it clogs the nets, so Soldiers are afraid to fire at the tracks that made it through for fear of fratricide – they don't know whether the track is friendly or enemy (from a long distance, it can be very hard to tell), or is violating their safety danger zones. This is the time to exploit success and press on to the deep objectives. Losing tempo gives the enemy a chance to gather situational awareness and react, endan-

gering the success of the mission.

Once you are through, it is important to leave a security element behind to secure and improve the breach or to act as an SBF. The security element then assists in guiding follow-on forces. Once a company/troop-size element is through that gap, you have reached your decisive point, and victory is inevitable.

It is important to maintain your tempo and focus on the HPT/HVT, rather than be distracted by ground combat power. This will further diminish the enemy's ability to fight you and communicate within themselves.

Fight the enemy

The enemy has a vote in every fight. It's vital to have a well-rehearsed plan, but if the enemy is not adhering to your initial assessment, the plan must adapt. Fighting for key terrain is important and can be your objective, but remember there is more than one way to get there. Make sure you are using your S-6 to get line-of-sight analysis that tells you where there is dead space on certain avenues of approach, so you are able to choose the best route that gives you the most cover/concealment during movement.

Sometimes you have to breach to get to a certain area, but if the enemy has taken the time to put an obstacle there, you have to deal with mines, direct, indirect and observation. If the terrain allows it, look at using the land available and use a different direction.

Look for a weak spot to the north or south and move there. This is what reconnaissance is for; however, the scouts may miss certain PIR, and you may encounter an obstacle when you get there.

It's up to the commander on the ground to either execute the breach or make a suggestion to the SCO on a way to bypass. Tactical patience is hard to come by, but if you can practice tactical patience on the battlefield and move when the time is right, or once you have a good read on the enemy, your chance of successfully penetrating is much higher.

In nearly three years at NTC, I've had the opportunity to participate in 20 training rotations. In that time, I have learned a great deal about combined-arms maneuver and wide-area security. Maneuvering a MIBN or a company seems easy enough in theory, but it's vastly more difficult when you are executing it. It's important to ensure that your Soldiers have a mastery of maneuver tactics down to the lowest level and understand your plan. This facilitates a shared vision and mutual trust, allowing for disciplined initiative. Having a good OPORD is great, but it can't replace full dress rehearsals, so you need to be conscious of time.

Tempo is key, whether it is transitioning from movement to maneuver or maintaining momentum though a breach/point of penetration. Once you have penetrated the enemy's lines, exploit violently and make sure you have rehearsed your plan beyond the breach. The enemy always has a vote, so you need to be able to adapt to any situation. Wargaming definitely helps with this, but don't ever be too set in your ways that you can't adjust your plan. Tactical flexibility is as important to your success as a good plan.

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Acronym Quick-Scan

ACR – armored cavalry regiment
ADP – Army doctrinal publication
ADRP – Army doctrinal reference publication
AWT – air weapons team
BCT – brigade combat team
FSO – fire-support officer
HPT – high-payoff target
HVT – high-value target
MIBN – mechanized infantry battalion
NTC – National Training Center
OPORD – operations order
PIR – priority information requirement
SBF – support by fire
SCO – squadron commander

A Hybrid Solution for a Hybrid Threat: Implementing a Variation of the Regimental System

by MAJ Cory W. Wallace

In his Jan. 14, 2014, address to the students at National Defense University, Chairman of the Joint Chiefs of Staff GEN Martin Dempsey said, "We'll have to embrace change or risk irrelevance."[1] This brief, cautionary statement captures the challenges associated with maintaining an agile and effective ground force when combating an amorphous and technologically advanced hybrid threat[2] with an Army reduced in both size and available resources. In other words, the Army is getting smaller while its mission continues to grow in both scope and complexity.

As GEN Dempsey alluded to, the Army requires a fundamental change at the institutional level if it is to remain globally relevant while coping with the possibility of shrinking to the smallest fighting force since the beginning of World War II.[3] Simply stated, the Army needs to identify an approach to focus the limited available resources on optimizing the effectiveness of its brigade combat teams (BCTs). The best way to accomplish this goal is to improve platoon training and reduce the personnel turnover through a stabilized hybrid regimental system.

Army Regulation (AR) 525-29, ***Army Force Generation***, explains that Army Force Generation (ARFORGEN) is "the Army's core process and a key component of transformation" and cycles brigades through three force pools: reset, train/ready and available.[4] This process creates "brigade-based combat and support formations of common organizational designs that can be easily packaged to meet the varied demands of [commanders]." In this system during a steady-state rotation, units will spend 27 months in the reset and train/ready pool, followed by nine months in the available pool. If the unit does not deploy during those nine months, it returns to the reset pool and repeats the process.

During the reset phase, units experience a large emigration of Soldiers leaving to attend schools or to fill the needs of the other units further along in the ARFORGEN process. This personnel outflow degrades the unit cohesion built through the previous 27-month training process and requires money to train new Soldiers on mission-essential tasks and new equipment. Both the budget cuts proposed by the Pentagon to meet the 2015 spending cap and force reductions will decrease the resources and Soldiers available to train during this time. Further, 27 months is a relatively short amount of time when compared to other countries' approaches to building cohesive teams.

Compared to the Soldier rotation associated with the ARFORGEN system, the British regimental system keeps soldiers assigned to the same units and avoids the personnel turbulence associated with the ARFORGEN model. Following the Cardwell-Childress reforms of the 19th Century, the British army organized itself into regiments based in the regions from which they recruited their members.[5] Soldiers tended to stay within the same regiments for most of their careers. The regimental system built cohesive teams that enabled England to become a dominant global power up until the mid-20th Century and conduct expeditionary operations with a small, professional army to the current day.

Counterpoint to ARFORGEN

While a complete restructuring of the Army to implement an exact copy of the British regimental system would fail to yield a benefit that is proportional to the associated challenges, initiating a hybrid model within the current force structure is feasible and will foster unit cohesion, minimize the impact of the reduction of training resources and allow the Army to redirect the money saved in personnel costs to unit training funds. ARFORGEN provides a unit with 27 months to train for a deployment; however, budget cuts will decrease the resources available to build a cohesive team from new Soldiers replacing those former unit members who depart for schools and to meet the Army's needs. A hybrid regimental system will reduce personnel turbulence within a unit and allow it to maximize the training in a limited resource environment.

This hybrid regimental system will apply only to combat-arms military-occupational specialties. Sustainment and combat-service-support occupational specialties are too diverse and much too prolific throughout every Army duty station, thus making them difficult to arrange in a system such as the one proposed in this article. For example, the military police have the responsibilities of overseeing military correctional facilities, enforcing the law, investigating criminal cases and providing personal-security details. Accordingly, military-police command echelons range from a company to a brigade throughout Army posts, depending on that unit's mission.[6]

That being said, the hybrid regimental system will offer combat-support and sustainment Soldiers the opportunity to remain within the same BCT if their requests adhere to the Army's needs. Further, the hybrid regimental system dictates that Soldiers work within the same type of BCT for their entire career (armored, Stryker or infantry) to maximize the technical expertise yielded through constant training with the same type of equipment.

Essentially, the hybrid regimental system will keep a combat-arms Soldier within the same battalion or brigade for about seven to 10 years. Company-grade officers will remain in the same battalion until they complete their company command or key-development assignments. Combat-arms officers will attend their respective

captain's career course and return to their parent battalion following graduation. After completing both their post-command broadening assignment and Command and General Staff College, officers will follow a career path identical to current practices.

Enlisted combat-arms Soldiers will stay within the same battalion until they complete the Advanced Leader's Course. If possible, noncommissioned officers (NCOs) will have the option of returning to their original duty station following graduation. Upon arriving at their next assignment as a sergeant promotable or staff sergeant, NCOs will remain in that BCT until they retire. Also, NCOs and Soldiers will return to their parent brigade after completing any broadening assignments.

The platoon is a privileged echelon within this system because it provides the greatest level of flexibility in conducting decentralized stability operations or executing battalion-level decisive action. Also, training platoon collective tasks requires fewer resources than training those of larger echelons. In other words, while budget cuts may prevent certain brigades from training at a combat training center, platoons will be able to conduct some form of collective training in a resource-constrained environment at their home station.

Effective platoons also foster mission command because commanders become confident in trusting their subordinates to accomplish a particular mission.[7] Specifically, effective platoons provide commanders with "the ability to execute multiple related and mutually supporting tasks in different locations at the same time."[8] On both the contiguous and non-contiguous battlefield, commanders must be able to trust that their platoons can execute their intent if the Army is going to excel at conducting unified land operations.

For example, Army doctrine recommends that a commander task any element smaller than a platoon to secure a combat outpost.[9] The effective platoons produced by the hybrid regimental system will support the task-organization concept defined in Chapter 3 of Army Doctrinal Reference Publication (ADRP) 3-0, ***Unified Land Operations***, which allows the Army to "match unit capabilities to the priority assigned to offensive, defensive and stability or defense support of civil authorities task."[10] Simply stated, a smaller Army with fewer resources can execute the same mission of a larger Army as long as its platoons are effective.

Neuve Chapelle

Many historical examples provide compelling evidence of the regimental system's potential and justify a reinvestigation of implementing a permutation of the British model. Given the upcoming 100-year anniversary of World War I, it is useful to examine the 2nd Battalion of the Scottish Rifles Regiment's actions at Neuve Chapelle March 10-15, 1915, as described by John Baynes in ***Morale: A Study of Men and Courage***.[11] The unit cohesion and fighting spirit fostered through years of rigorous training as a team were crucial to the unit's success. In fact, Baynes believes that had 2nd Scottish Rifles not trained as an organic team within the regimental system for an extended period of time before Neuve Chapelle, the Germans would have destroyed the battalion within the first two hours of the battle.

In March 1915, Field Marshal Douglas Haig decided to conduct an offensive operation in France's Artois region to relieve the German pressure on the French army north of the Ypres. The 23rd Brigade, 2nd Scottish Rifles' higher headquarters, was to conduct a penetration to allow follow-on forces to exploit their success. The decisive point for this operation was the seizure of Neuve Chapelle, a critical German advance-supply depot.[12]

At 4 a.m. March 10, 1915, elements of the regiment moved into the forward trenches and waited for the initial field-artillery barrage to destroy the wire obstacles. Unfortunately, the British artillery failed to achieve this effect prior to the regiment's attack. During the operation's first minute, small-arms fire killed both the commander and command sergeant major of Company A and fixed the rest of the company in the wire obstacles. Meanwhile, Company B managed to seize a foothold in the German trenches despite suffering atrocious casualties. The battalion commander, LTC Wilfred Bliss, ordered the rest of the battalion to exploit Company B's success. Simultaneously, the Germans to the north of the battalion reconsolidated and engaged Companies C and D with enfilade fire. Within seconds of this advance, enemy fire killed both Bliss and his adjutant.

Baynes explains that by the time Companies C and D reached the German trenches at 9:30 a.m., "Practically every officer had been killed or wounded, and the NCOs who took their place had to go on memory [of the original operations order]." Worse, enemy fire had killed one out of every three enlisted men by this time. Only two officers, one being the battalion executive officer, were able to continue to lead the advance. Despite these horrendous losses, Baynes remarks, "Time and time again the [chain] of command changed as officers and NCOs were killed. The extraordinary thing is that in spite of all these elements of chaos, the attack continued and retained a certain cohesion."

By 6:30 p.m., the remaining element of the Scottish Rifles regiment reconsolidated at the brewery on the outskirts of Neuve Chapelle and was "in every way a viable military unit despite being low in strength." After enemy fire wounded him twice, then-MAJ George Carter-Campbell[13] continued to lead the attack until the evening of March 14, when the decimated battalion secured the last portion of Neuve Chapelle. They were relieved in place early in the morning of March 15.

Baynes clearly states that 2nd Scottish Rifles were able to continue the attack because of one key factor originating from the regimental system: trust forged through years of training with the same team. He explains that before Neuve Chapelle, every man spent at least seven years in 2nd Scottish Rifles. During this time, the men mastered platoon-level tasks through years of demanding training and forged an unbreakable bond of trust with each other. Baynes gives full credit to the regimental system, writing, "I am firmly convinced that if some magic power had been able to show everyone in the battalion what was going to happen to him, and had then given him the

option of going away or staying to see the battle through, that only a handful would have left." Every member of the regiment strove to perform at the maximum level – whether at a rugby match against a rival battalion or during company maneuvers in northern Scotland.

Goose Green

To validate the regimental system's contemporary relevance, this article will now investigate the Battle of Goose Green during the Falklands War. The 2nd Battalion of The Parachute Regiment, known as 2 PARA, a force consisting of 690 men, attacked a prepared defense occupied by a numerically superior Argentine force to seize the town of Goose Green May 27-28, 1982. Due to the distance to their objective, 2 PARA left behind their heavy mortars and other crucial equipment. They began their assault at 2:30 a.m. May 28 and seized their objectives spread widely throughout featureless terrain masked in pitch darkness. After the 36-hour battle that spanned 10 kilometers, 2 PARA achieved "a victory that defied all odds: 1,500 prisoners were taken in the battle for Goose Green, and some 55 Argentine personnel were recorded as having been killed with less than 100 wounded" (per the Royal Air Force). Similar to 2nd Scottish Rifles, 2 PARA lost their battalion commander, LTC Herbert H. Jones,[14] in the battle's early portion. Despite this loss, 2 PARA was able to maintain a ferocious operational tempo and defeated a numerically superior enemy in the dead of night. One cannot deny that the values of the regimental system as espoused by Baynes played a critical role in 2 PARA's success.

The 75th Ranger Regiment, arguably the most elite light-infantry unit in the world, is proof of the regimental system's effectiveness when instituted within the U.S. Army. Many examples of the Ranger regiment's effectiveness span from Grenada to Operation Anaconda in Afghanistan. The key to the Ranger regiment's success lies within its focus on the "The Big Five" (small-unit tactics, mobility, marksmanship, physical training and medical training). The small-unit tactics in this case correspond to the squad and platoon level. Once a Soldier is selected to become part of the Ranger regiment, he is able to stay within the organization until he either decides to leave or is removed by his chain of command. The absence of personnel turbulence allows the Ranger regiment to build a cohesive team that serves as the Army's premier light-infantry unit.

Figure 1. 2 PARA's victory at Goose Green is attributed to the values of the British regimental system. *(Photo by British Army photographer. United Kingdom Crown Copyright. Used by permission)*

Figure 2. 2 PARA Soldiers man artillery in the Falklands. *(Photo by British Army photographer. United Kingdom Crown Copyright. Used by permission)*

If the regimental system works so well for 75th Ranger Regiment, why not institute a more flexible version within the conventional forces of the U.S. Army?

When considering the effectiveness of the regimental system as demonstrated by 2nd Scottish Rifles during World War I, the reaffirmation of the system's

relevance in the Falkland Islands and the lethality of 75th Ranger Regiment, the regimental system's potential is undeniable and serves as a valid solution to maximizing the Army's effectiveness during these difficult financial times. By implementing a hybridization of the regimental system within the combat arms, the Army can use unit cohesion and effectiveness to mitigate budget cuts and strength reductions from eroding combat power. Just as 2nd Scottish Rifles was able to seize Neuve Chapelle after suffering 80-percent casualties, a variation of the regimental system will create effective maneuver elements capable of excelling in challenging operating environments by maximizing the available limited resources through cohesive teams built through mutual trust[15] and a mastery of platoon-level tasks. This result is much more beneficial to brigade combat teams than the end state currently offered by the 27-month training period associated with ARFORGEN.

Cohesion and agility

Similar to the difficult mission given to 2nd Scottish Rifles 99 years ago, the 2014 Quadrennial Defense Review demands that the Army of the future "will need to be capable of conducting prompt and sustained land combat as part of large-scale, multi-phase joint and multilateral operations, including post-conflict stability operations that transform battlefield victories into enduring security and prosperity."

As the Army continues to reduce its size and budget, its mission will continue to gain complexity and become more demanding. If the Army hopes to mitigate the tactical and strategic risks associated with executing the same mission with the smallest force since 1940, the institution must develop cost-effective approaches to maximize the effectiveness of training and developing cohesive teams or risk deploying unprepared units. The hybrid regimental system allows the Army to do exactly that. If something isn't done, we risk repeating Napoleon's mistakes during the Peninsular War, in which he reduced the size of the French Army in Spain but did not reduce the scope of the mission.[16]

In the Army's current force structure, combat-arms Soldiers often find themselves rotating between armored, Stryker and infantry BCTs. This transition creates the perpetual need of having to learn the necessary technical skills and unique tactics associated with a type of brigade. Naturally, this situation can degrade the perishable knowledge gained while working with different equipment from a previous organization. New-equipment training programs fail to yield the desired results if Soldiers spend three years in an armored BCT (ABCT) and ultimately move to a Stryker BCT, where they will have to undergo yet another period of instruction on their combat platform and still have the potential of moving to a light organization later in their careers.

In other words, the hybrid regimental system will stop Soldiers from being merely familiar with their equipment and afford them the time needed to master the technology available within a brigade. More importantly, they will become experts on how to use this technology before deployments. A piece of equipment is only as effective as its operator; and if its user only has 27 months and few resources to learn how to use it during operations, the equipment will yield mediocre results.

By remaining in the same organization for an extended time, both Soldiers and their leaders will master unit standard-operating procedures and battle drills. ADRP 7-0, ***Training Units and Developing Leaders***, states, "Effective training and leader development form the cornerstone of operational success. Through training, units, leaders and Soldiers achieve the tactical and technical competence that builds confidence and adaptability."[17] Echoing this point, Baynes believes that the amount of time 2nd Scottish Rifles spent training together was critical to their success. Each man served in the battalion's regimental system for at least seven years before Neuve Chapelle. These men trained on individual and collective tasks until they mastered how to work as a team. In other words, the regimental system developed them into a cohesive unit that refused to let a team member fail.

ADRP 7-0 goes farther to explain that when a unit repeatedly performs a task under varying conditions, it becomes able to "confidently adapt to a new mission or environment." When considering the trust gained from working as a cohesive unit and the confidence inspired by learning how to successfully complete a task under adverse conditions, we can conclude that the longer a cohesive unit trains together under a variety of conditions, the more efficient it becomes at executing mission orders. As Carl von Clausewitz said, "Constant practice leads to brisk, precise and reliable leadership, reducing natural friction and easing the working of the machine."[18] Thus, the hybrid regimental system will consistently stabilize combat-arms personnel within a BCT long enough for them to forge effective platoons, which will in turn allow the Army to meet the diverse requirements dictated in the 2014 Quadrennial Defense Review.

Yet another compelling reason to implement a hybrid regimental system is the recent regional-alignment-of-forces initiative. It is essential that Soldiers become familiar with the culture and language of their respective operating environments if they are to be successful while conducting unified land operations (ULO) when deployed. GEN Daniel B. Allyn, former commanding general of U.S. Army Forces Command (FORSCOM), states in his training guidance that "[ULO] challenge us to provide a realistic training environment that replicates the complex and uncertain conditions of future battlefields."[19]

By tailoring each division training area to replicate its assigned region with respect to architecture and human context,[20] Soldiers will become familiar with navigating a particular culture and build fundamental language skills. This follows the axiom of "training as you fight," an ingrained theme within the Army's culture. Furthermore, ADRP 7-0 states that realistic training allows a unit's leadership to "assess challenges and employ critical thinking to develop sound, create solutions rapidly." The longer units train in an environment consistent with that of their assigned region, the more effective they will be when they deploy.

Once units master platoon-level tasks and learn to apply them to a particular operating environment, they can provide the Army with cadres of

individuals who can train host-nation forces to a higher level of effectiveness.[21] The cadres' training will enable them to understand the cultural nuances of a particular host nation and build better relationships with their multinational partners. While conducting defensive support of civil authorities on American soil, these cadres can also impart their expertise to local law enforcement. Further, they will increase the effectiveness of their partnership by being able to share standard-operating procedures honed to perfection through years of training.[22]

The hybrid regimental system combats the problem of Soldiers serving in multiple divisions and developing only a cursory understanding of their assigned region before moving to a different organization and having to learn a new culture and language. This is a serious risk of the combination of the ARFORGEN process and the Regional Alignment of Forces Initiative. Understanding a language and culture is a perishable skill. Soldiers are often quick to learn phrases in a local dialect while conducting operations, yet this knowledge rapidly dissipates upon redeployment. By immersing a unit in the same culture in both training and deployment, the Army will benefit from an enhanced level of cultural understanding when units work with their host-nation partners.

Regarding finances, this system will reduce personnel costs and enable the Army to divert the savings into unit training funds. In the FY 2014 Department of Defense budget, the Army requested $1.8 billion to pay for Soldier relocations. This amount accounted for roughly 5 percent of all personnel costs within the Army's budget request. The hybrid regimental system will reduce the frequency in which Soldiers move during the course of their careers and thus reduce this financial requirement. The Army can redirect the money saved by reducing the number of Soldier moves into unit training budgets.

For example, a combined-arms battalion gunnery costs $2.5 million. Diverting even a portion of the $1.8 billion to training would provide greatly increased training options.[23]

Focusing training resources on platoon-level training also requires fewer resources to train than higher echelons and thus mitigates the effects of budget constraints. Units can maximize training time and resources by deploying small units (i.e., companies and below) to a training area while brigades and battalions use mission-command training programs (MCTPs) to streamline staff processes.[24] By providing the available training resources to small units, brigades and battalions can avoid the massive logistics and financial requirements needed to deploy entire battalion and brigade headquarters and to make the resource investment necessary for platoons to master their mission-essential tasks.

Finally, the hybrid regimental system not only benefits BCTs, it also provides Army families with a level of unheralded stability. Remaining in one location for large portions of an Army career will add a degree of normalcy to Army family life and enhance Soldier resiliency. Spouses will be no longer have to combat the persistent bias of employers who are hesitant to hire someone who will only work for them for a short time. Children will be able to attend the same schools for most of their primary education and not spend their formative years in a state of perpetual migration.

All these benefits are just a sample of how stability will benefit Soldiers' families and help them build upon this vital source of resiliency in their lives.

Why system will work

This is not the first argument for the implementation of a form of the regimental system within the Army. Chapter 3 of AR 600-82, ***The U.S. Army Regimental System***, stated that every Soldier must affiliate with a regiment in an attempt to harvest the best concepts of the British regimental system.[25] This affiliation served as a discriminator for a Soldier's future assignments.

However, it ranked ninth out of 10 assignment criteria. The first was the needs of the Army, while a Soldier's preference ranked tenth. This initiative quickly lost momentum for two reasons: the Army reduced its size in the late 1990s and the Human Resources Command rarely reached the ninth criterion before assigning a Soldier. Further contributing to the demise of changes dictated in AR 600-82 was the simple fact that regiments stationed at unattractive duty stations did not meet the required number of regimental affiliations, thus creating more assignment challenges for branch managers.[26]

It is important to elaborate on how the hybrid regimental system will not duplicate the failures of AR 600-82. First, it will only apply only to combat-arms Soldiers and not to the entire Army, thus making it more feasibly implemented. Next, the proposed changes would not take effect until the Army decides that it has reached the ideal size for its future mission, thus avoiding a large personnel fluctuation following this program's inception.

For a counterargument, some would cite David French's 2008 book, ***Military Identities: The Regimental System, the British Army and the British People c.1870-2000***, where French identifies several weaknesses of the regimental system. He believes that the regimental system produces leaders who are not "sufficiently intelligent and educated [to the extent] that they [can] solve the many unexpected problems that [confront] them on the battlefield." French argues that when a leader spends his or her entire career within one organization, he or she falls prey to the groupthink of his or her unit. This deficiency creates a bias when selecting solutions to problems by privileging approaches favored by the regiment over new ideas. Oftentimes, those favoring new solutions are considered mavericks, while those who uphold the status quo receive accolades for their loyalty.[27]

Unlike the British model, the hybrid regimental system would employ broadening assignments and schools to afford leaders a chance to mentally reset in a different environment. The Army's professional-education system takes place in centralized locations and exposes students to both a multitude of problem-solving techniques and current Army doctrine. This environment provides students with the knowledge necessary to consider different approaches to resolving challenges when they return to their units and will prevent the mental rigidity of unit-approved solutions.

Further preventing groupthink, the hybrid regimental system will relocate officers and NCOs at least once during their careers. They will arrive at their next unit with the knowledge gained from their previous assignment and be able to provide different approaches. This rotation will constantly influence the current unit standard-operating procedures and challenge the formation of group thought within a given organization.

Others would also argue against the regimental system because it lends itself to leaders forming cliques that inhibit fair and unbiased evaluations of their subordinates. A leader's personal relationship with both subordinates and peers created through years of working with them could create biased evaluations and sow discord throughout the ranks. The perception of the "chosen few" possessing a predestined mandate to lead would deteriorate the performance of those members who feel that they are outside of the elite social circles. Naturally, individuals would fail to see the benefit of pushing themselves or their subordinates to perform at a high level if they believe that a peer will receive a better evaluation given that person's personal relationship with their rater and senior rater.

The hybrid regimental system can rectify this problem in several ways. Leader rotation, both within and outside of a unit, will provide subordinates new raters and senior raters and will sever personal relationships endemic to the British regimental system. To further combat evaluation bias, broadening assignment and academic evaluations will play a greater role in command selection and promotion boards. These evaluations provide the best approach to combating rater prejudice by providing officers and NCOs an opportunity for a neutral party to evaluate their performance. Also, AR 623-3, ***The Evaluation Reporting System***, states that Soldiers have the right to appeal an evaluation they believe is "incorrect, inaccurate or in violation of the intent of [the] regulation."[28] Finally, the Army can use 360 evaluations of senior leaders within a unit to ensure that the hybrid regimental system avoids problems with cliques and toxic leaders.

Conclusion

In closing, the hybrid regimental system is the solution to maintain the Army's efficiency and effectiveness while providing for the common defense with a drastically reduced force. Granted, implementing such a system will be an extensive administrative task. The ripple effects of such an implementation will affect regulations, doctrine and policies. That being said, we as leaders have the responsibility to ask ourselves the following question: Would we rather face difficulty in the administrative realm, or prefer to face the challenges in combat when we send our nation's sons and daughters to fight without setting the conditions for mission accomplishment?

Recent arguments claim that our technological advantage will offset the reduction in force. This platitude abates our angst until we face one crucial fact — technology is only as effective as the Soldier who operates the equipment. The Army can provide Soldiers with the most advanced equipment possible; however, that equipment is worthless unless Soldiers have the training to maximize its use while their leaders understand how to implement it into an operation. Putting Soldiers in stable and cohesive units will give them the time and resources to conduct the training they need.

Restating GEN Dempsey's statement, we must embrace change or face becoming irrelevant in the world. While Army leaders cannot control what happens in the world, they can influence the quality of force they deploy to the modern operating environment. Technology will not ultimately decide future conflicts. Well-trained Soldiers and competent leaders in a hybrid regimental system will.

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Notes

[1] Jim Garamone, "Dempsey: Leaders Can Make a Difference in a Challenging World," Jan. 16, 2014, http://www.defense.gov/news/newsarticle.aspx?id=121493.

[2] ADRP 1-02, ***Terms and Military Symbols*** (Sept. 24, 2013), defines a hybrid threat as "the diverse and dynamic combination of regular forces, irregular forces and/or criminal elements all unified to achieve mutually benefiting effects." ADRP 1-02 is available from the Army Publishing Directorate (APD), http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adrp1_02.pdf.

[3] The Army had 269,023 Soldiers in 1940. The next smallest troop size was 479,426 Soldiers in 1999. With the proposed troop level of 420,000 Soldiers, the Army will become the smallest fighting force since 1940. For more information, refer to "Active-Duty Military Personnel, 1940-2011," Information Please Database, http://www.infoplease.com/ipa/A0004598.html.

[4] AR 525-29, March 14, 2011, http://www.apd.army.mil/pdffiles/r525_29.pdf.

[5] British Army Website, April 21, 2014, http://www.army.mod.uk/structure/structure.aspx.

[6] MAJ Dan Naab, a military-police officer, explained in an interview March 10, 2014, that the Army requires combat-support military-occupational specialties to serve in organizations other than BCTs. If the Army were to include combat-support Soldiers in the proposed hybrid regimental system, non-BCT organizations would suffer critical manning and equipment shortages. Differently stated, Naab believes that implementing such a system for combat-support Soldiers would fail to yield an adequate benefit in exchange for the massive requirement of necessary changes to regulations and doctrine.

[7] Army Doctrinal Publication (ADP) 6-0 defines mission command as "the exercise of authority and direction by the commander using mission orders to enable disciplined initiative within the commander's intent to empower agile and adaptive

leaders in the conduct of unified land operations." ADP 6-0 is available from APD, http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adp6_0_new.pdf.

[8] ADRP 3-0, http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adrp3_0.pdf.

[9] Field Manual 3-90-2, March 22, 2013, http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/fm3_90_2.pdf.

[10] ADRP 3-0, http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adrp3_0.pdf.

[11] John Baynes, ***Morale: A Study of Men and Courage***, Garden City Park, New York: Avery Group Publishing, 1987.

[12] The brigade headquarters tasked 2nd Scottish rifles with seizing a brewery in the outskirts of town to establish a foothold that would enable the battalion to defeat the German strongpoints located throughout the village. Standing between them and the brewery was 200 meters of wire obstacles, followed by a network of German trenches supported by a vast assortment of registered artillery and crew-served weapons. Companies A and B were to advance abreast of each other. Once they secured the first line of German trenches, Companies C and D would conduct forward-passage-of-lines and continue the attack (Baynes).

[13] Carter-Campbell, who rose in rank to major general, earned the Order of the Bath (CB) and Distinguished Service Order (DSO) for his actions at Neuve Chapelle.

[14] Jones earned the Victoria Cross (VC) Officer of the Most Excellent Order of the British Empire (OBE) for his valor at Goose Green.

[15] ADRP 6-0 explains that when exercising mission command, commanders must adhere to six principles. One of these principles is building cohesive teams through mutual trust. Further, ADRP 6-0 states, "Trust comes from successful shared experiences and training, usually gained incidental to operations but deliberately developed by the commander." ADRP 6-0 is available from APD, http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adrp6_0_new.pdf.

[16] In his essay "The Accursed Spanish War: The Peninsular War, 1807-1814," Richard Hart Sinnreich explains that the withdrawal of 20,000 veteran troops to fight in Russia, coupled with losses from battle and disease, decreased the French force in Spain from 300,000 to 200,000 in 1812. This massive troop reduction left the French unable to secure their lines of communications, thus leaving them vulnerable to attack from irregular forces. Duke Wellington was able to push the French out of Spain following the collapse of their logistic system. Sinnreich's essay is included in Peter R. Mansoor's and Williamson Murray's ***Hybrid Warfare: Fighting Complex Opponents from the Ancient World to the Present***, New York: Cambridge University Press, 2012.

[17] ADRP 7-0, Aug. 23, 2012, http://armypubs.army.mil/doctrine/DR_pubs/dr_a/pdf/adrp7_0.pdf.

[18] Carl von Clausewitz, ***On War***, New York City: Oxford University Press, 2007.

[19] GEN Daniel B. Allyn, ***FORSCOM Leader-Development Guidance***, electronic file, Washington, DC, 2014.

[20] In a draft concept paper regarding the "human context of Army operations" (2014), retired COL Clinton J. Ancker III, director of the Combined Arms Doctrine Directorate, Fort Leavenworth, KS, defines the human context as "[t]he totality of the physical, cultural, psychological and social aspects that influence human behavior during the conduct of operations in peace, conflict and war." Ancker further explains, "The ends of every operation possess a human objective to influence not just the attitudes, but the behavior of people who live in a cultural context, often very different from our own." One should note that the human context is not synonymous with the human domain. This latter entity concerns enemy forces, local populations or host-nation government forces.

[21] MAJ Joseph Byerly, a former CLC instructor, suggested that this article include the benefit of trained cadres in support of the regional alignment of forces during a telephone conversation March 9, 2014.

[22] In his essay "Small Wars and Great Games: The British Empire and Hybrid Warfare, 1700-1970," John Ferris explains how British cadres trained and organized local forces throughout the British empire in the 18th and 19th centuries to augment their deployed forces. In one example during 1817-1819, "120,000 Anglo-Indian soldiers crushed the Mahrattas and their irregular cavalry by using hybrid forces to master all of India outside the Punjab." What is remarkable is the fact that prior to 1817, only 56,000 British Soldiers occupied India. Their trained cadres were able to organize a combined force that more than doubled the initial troop levels in India. (Ferris' essay is included in Mansoor's and Murray's ***Hybrid Warfare: Fighting Complex Opponents from the Ancient World to the Present***.)

[23] According to Mark Weaver, an ABCT executive officer, in discussion with the author April 19, 2014.

[24] CPT Sean McEntee said in discussion with the author April 16, 2014, that the cost of MCTP cadre certifying an entire brigade headquarters in a standalone exercise is $700,000. Most divisions certify multiple brigades at the same time, thus drastically reducing the total cost.

[25] AR 600-82, Washington Headquarters Services, March 15, 2014.

[26] COL Scott Efflandt, executive officer to U.S. Army Training and Doctrine Command's commanding general, provided the background of the regimental initiative in an email conversation dated April 13, 2014.

[27] David French, ***Military Identities: The Regimental System, the British Army, and the British People c. 1870-2000***, New York: Oxford University Press, 2008.

[28] AR 623-3, March 31, 2014, http://www.apd.army.mil/pdffiles/r623_3.pdf.

Acronym Quick-Scan

ABCT – armored brigade combat team
ADP – Army doctrinal publication
ADRP – Army doctrinal reference publication
APD – Army Publishing Directorate
AR – Army regulation
ARFORGEN – Army Forces Generation
BCT – brigade combat team
CLC – Cavalry Leader's Course
FORSCOM – (U.S. Army) Forces Command
MCTP – mission-command training program
NCO – noncommissioned officer
ULO – unified land operations

Broadening from the Armor Branch Perspective

by LTC Jay Miseli

Over the past year, we at Armor Branch (Officer Personnel Directorate, Army Human Resources Command) have analyzed in detail the results from four promotion boards, four command selection boards, three schools boards and three separation boards. Without question, individual performance is the single most important factor in an officer's selection.

Beyond performance, two more trends emerged from these boards: the role of ***continuity*** over time and the ***balance*** of experiences in an officer's career. This combination (clearly demonstrated in the most recent command and senior-service-college boards) shows the increasing importance of officers' versatility to serve at any echelon and in any capacity in the Army.

The purpose of this article is to define these additional trends for Armor officers and share these insights with rating chains, mentors and individual officers to ensure we remain as competitive as possible.

Continuity

The first emerging principle from these boards is that an officer's career is a continuum – training, education and experience integrated and compounding over time – much like a retirement fund increases in value through recurring investment and interest accrual. A shortfall in one area or more can cause the officer to reach a professional point of diminishing returns at an earlier-than-necessary time, in essence reaching a glass ceiling where he is unprepared for his future responsibilities. While this ceiling can certainly be broken, the officer's contribution to the organization and individual performance may suffer initially as he defines the new environment and learns to operate in it.

Balance

The second principle is the balance of experiences we should achieve over the continuum of a career. To prepare officers to serve at the highest levels of the military, we must offset their leadership experiences in line formations with appropriate operational, institutional, joint and enterprise-level assignments. Besides exposing officers to various facets of the Army and joint force, this approach provides breadth and depth to their experience and invaluable understanding and context for subsequent assignments, including the perspective gained working with different leaders and staff from multiple branches, services and agencies across the government.

As an example, serving as a lieutenant or junior captain in a battalion staff before attending the career course balances the officer's experience as a platoon leader and executive officer with experience above the company level, well before he commands. In this example, the staff time provides two benefits. First, it better prepares the officer, through experience, for the education he will receive at the career course. Second, serving on staff also provides him a new perspective of battalion-level operations through daily interactions with subordinate commands, adjacent units, higher headquarters and multiple leaders across these formations. While no lieutenant or junior captain will claim to want staff time, and many will actively avoid it, this formative experience is essential to their future performance and utility in the Army. Career-course graduates familiar with staff processes are arguably much better prepared to immediately integrate into the staff and contribute when joining their new units.

As a branch, Armor leaders must be as equally capable of serving in strategic headquarters, running the enterprise Army and preparing to assume the mantle of national-level leadership in the decades ahead as they are of closing with and destroying our adversaries.

In the Jenkins Research Blog (https://jenkinsresearch.wordpress.com/), Dr. Richard W. Jenkins[1] offers the model (Figure 1) of work distribution vs. skills and experience, looking specifically at marketing firms and their ability to meet client needs. Jenkins' model illustrates the interaction between employee and client that most frequently occurs, with the highest work distribution at the least-experienced level. As employees gain experience and expand

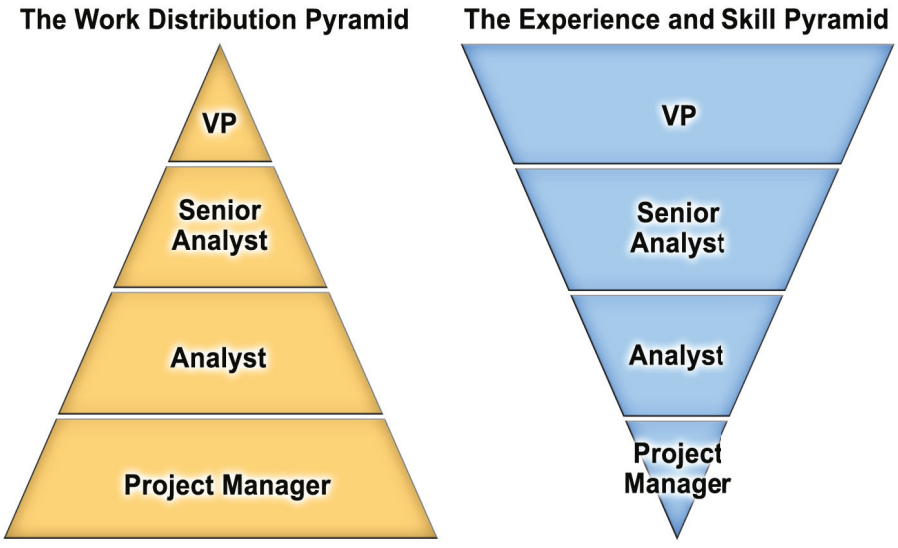

Figure 1. The Jenkins inverted pyramids of work distribution vs. experience and skill. *(Copyright Dr. Richard W. Jenkins; used by permission)*

their skills, they grow in capability for the benefit of the organization (depth), and they must have a corresponding increase in their breadth of perspective. Employees must develop from client level to corporate level over the duration of their career, although they are further removed from direct interaction with clients as they grow in experience and responsibility.

Using Jenkins' business model as a relevant example for an officer's career and professional growth, we propose the military corollary in Figure 2 – professional responsibility vs. leader development, using the Army leader-development model of training, education and experience as the three pillars of leader development. As an officer develops professionally, he gains more responsibility and has an increasing understanding of the impact of his actions as a leader. At the same time, his progression pulls him further away from line formations, and his methods of achieving results must transition from directly leading to influencing as the number of echelons between the officer and the line increases.

While this may appear to be divergent, it is actually a convergence of experience, leader development and supervisory responsibility that is codified in doctrine in two distinct but complementary ways. In mission-command doctrine, we clearly expect leaders to understand the mission and intent two echelons higher in their chain of command because of the potential impact of their actions higher in the organization. Meanwhile, our training doctrine directs that leaders are responsible for training and developing two echelons down in their formations, ensuring the senior leader's experience is best applied to preparing junior (direct and organizational) leaders to execute their requirements within the higher commander's intent.

While key developmental (KD) positions distinguish officers in a relatively universal and comparative manner (e.g., company command) and highlight officers' potential to selection boards as a frame of reference, every assignment counts over the duration of a career, KD or otherwise. To use a baseball analogy, every at-bat matters, whether scoring a run, getting on base or advancing a runner. Similarly, the sum of an officer's performance and experience tells a complete story about his ability to contribute where needed – whether in tactical formations, serving in an institutional assignment away from troops or in the Pentagon at the highest levels of the Department of Defense.

Generally, KD positions tie together, along with professional military education (PME), over time to prepare officers for subsequent KD and command positions. This compounding effect, where each future KD assignment builds on previous KD experience, thoroughly prepares our officers to lead within tactical formations by developing, refining and reinforcing their expertise and familiarity in these organizations. As officers progress beyond their captain KD time, however, we need to ensure they are prepared for service outside the familiar environment of the line. The logical progression of platoon leader, company executive officer, company commander, battalion or brigade S-3/executive officer, then battalion command, unequivocally ensures our battalion commanders are as prepared as they can be to effectively lead their battalions, develop their subordinate leaders and accomplish all missions.

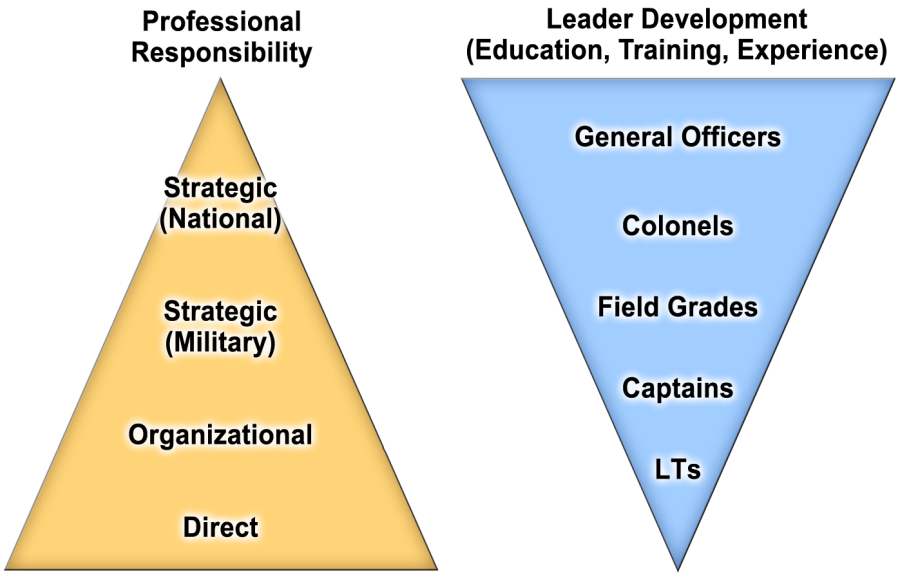

Figure 2. The military-construct version of Jenkins' inverted pyramids: professional responsibility vs. leader development.

However, KD positions do not explicitly prepare officers for service at the strategic level by taking them outside their comfort zone and providing an invaluable range of experiences, also over time, in those unfamiliar environments. Serving in lieutenant and captain KD positions builds the foundational basis for officers, post-command, to prepare for future organizational and strategic responsibilities. In his article for ***Foreign Policy*** titled "The Bend of Power," GEN Martin Dempsey assesses that "most problems around the world today do not have quick military fixes … [F]orce and diplomacy must work hand in hand."[2] And in the 2014 U.S. Army Forces Command (FORSCOM) commanding general's leader-development guidance, GEN Daniel Allyn states that "it is imperative that we get leader development right; we must develop and retain our very best leaders" to develop "critically thinking, adaptive leaders ready to excel at the next level."[3]

With the intent to fulfill KD time at the 18-month mark, plus or minus six months, we have the opportunity to place senior captains, majors and lieutenant colonels in multiple assignments (including joint positions) over their career after their company/troop command, field-grade KD or battalion/squadron command to achieve the developmental objectives of a broadened officer corps. In the proper context, most, if not all, the assignments available to KD captains, majors and lieutenant colonels afford these officers

the opportunity to achieve the desired outcome of a broad range of experiences. Unfortunately, there are multiple interpretations of "broadening" that tend to lead officers away from, rather than to, broadening assignments.

Broadening

Questions we frequently get at Armor Branch are, "What is broadening?" and "Why do I need a broadening assignment?" There are two predominant perceptions that drive this line of questioning. The first perception is that broadening is, in effect, very narrow in scope – that broadening translates into one of a few types of specific assignments. In this first perception, some of the more frequent interpretations are assignments that:

- Offer the opportunity to pursue a funded advanced degree;
- Involve working on a senior leader's personal staff; or
- Are joint, interagency, intergovernmental or multinational (JIIM).

While these types of assignments fall within the scope of broadening, they do not establish the limits of the broad range of experiences we are seeking for Armor officers.

The second perception is that broadening experiences do not prepare an officer for his next KD assignment and therefore do not contribute to his competitiveness for promotion or command. This second perception is amplified by the KD model applied, necessarily so, during the height of combat operations in Iraq and Afghanistan. As the Army focused on executing the current fight, officers were in KD assignments for multiple years, often stringing together KD in a continuous series of tactical assignments, sometimes even at the same installation and within the same formation. These officers, many now senior leaders, recognize their talent and leadership were directly applied to the current fight at the expense of shaping longer-term efforts at the strategic level.

This second perception does not stem from the leaders themselves, who executed magnificently to ensure success in current operations. Rather, this perception tends to come from junior officers who see their senior leaders as successful for lack of broadening – for their extended KD at multiple levels – and not the reality that they are successful despite their lack of broadening.

The benefit of these assignments may not be readily apparent to our junior officers as they look forward from their current duties to the different stages of a career. The paths that lead to lieutenant colonel, and potentially battalion command, don't clearly traverse broadening assignments the way they do the sequence of KD positions. The benefit is generally apparent to an officer only after the experience, when he first applies what he learned in subsequent duties. Rather than wait for this moment of clarity to occur through hindsight, we need to deliberately develop our officers in anticipation of the future responsibilities they will have – before they fully understand what they gain from the assignments. Our responsibility is to provide the experience ***before it is needed***.

To define the goal of broadening assignments, we start with the current definition (from Department of the Army (DA) Pamphlet 600-3, Paragraph 3-4b(2)(f)): "A purposeful expansion of a leader's capabilities and understanding provided through opportunities internal and external to the Army … accomplished across an officer's full career through experiences and/or education in different organizational cultures and environments ... to develop an officer's capability to see, work, learn and contribute outside each one's own perspective or individual level of understanding for the betterment of both the individual officer and the institution. The result of broadening is a continuum of leadership capability at direct, operational and strategic levels, which bridges diverse environments and organizational cultures."

Within Armor Branch, we are operationalizing this definition to apply it to the detailed execution of our recurring assignment process. Our internal objective for Armor Branch with respect to broadening, or assignments outside of officers' KD positions, is ***a broad range of experiences that provide officers fundamentally different perspectives of the Army as an element of strategic landpower.***

Through these assignments, we allow the officer to place his prior experiences in the Army, as an operating force, into the larger context of the enterprise-level Army and the joint force. The goal of these experiences is that the officer is better prepared to provide operational and strategic leadership because he has gained understanding and context of the Army's role in national strategy. Some examples of broadening assignments are listed in Figure 3.

Placing officers in assignments like those listed in Figure 3 will set conditions for the transition we seek to facilitate – the point at which an officer with exceptional expertise at the tactical level, honed through training and operational experience, understands Army-level systems and processes, as well as comprehends the role of the Army in national strategy and the joint force. This is to ensure the Army is not only accomplishing current missions

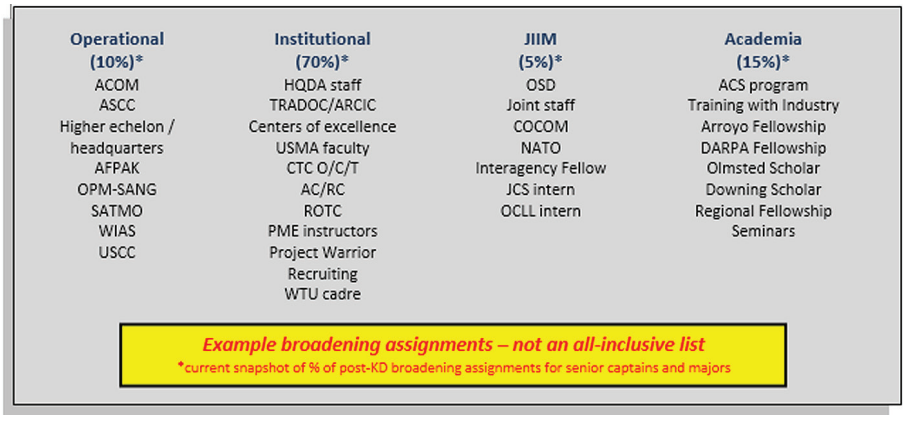

Figure 3. Examples of broadening assignments.

but is prepared for future requirements in a rapidly changing world. Figure 4 illustrates the transition point between professional responsibility and growth, where an officer leads and acts at the strategic level. This transition is our critical leader-development objective – that we actively prepare officers with sufficient breadth and depth of experience to meet the challenges of a highly uncertain and complex world.

Applying this framework to provide a broad range of experiences, we have implemented the assignment strategy depicted in Figure 5 for Armor Branch, with several key elements. First, as a branch, Armor will meet our mission – the Army requirements established by DA manning guidance and translated into assignments by the Human Resources Command's Officer Readiness Division for each distribution cycle. Second, with officer, rater and senior-rater involvement, we will pursue assignments that professionally grow officers and prepare them for their

Figure 4. The challenge and opportunity available.

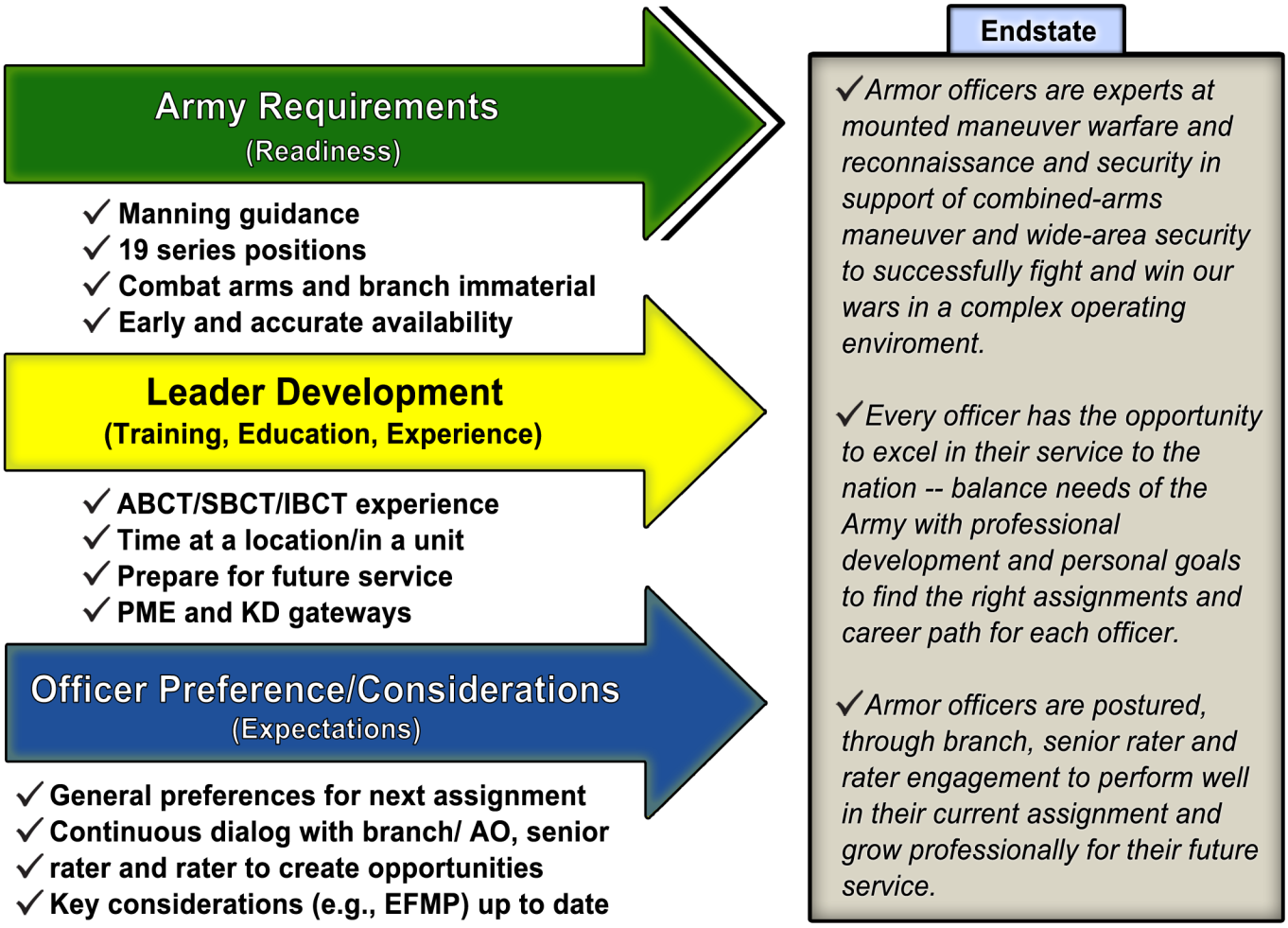

Figure 5. Armor Branch assignment strategy.

future service. Third, we continue to work with Armor officers to balance Army requirements with leader-development opportunities and the individual's preferences and personal considerations.

Together, these three lines of effort allow Armor Branch, rating chains, mentors and individual officers to achieve the endstate of the strategy. Besides working within the constraints depicted in Figure 5, we must remain responsive to changes to requirements due to unforeseen circumstances – a fact of life serving in the Army. Equally important in this strategy is individual-officer dialogue with his rater and senior rater – engagement that may result in disagreement as to the best developmental path for the officer. In the end, the officer himself is the only continuity in his career, and it is his individual responsibility to define and articulate his goals and preferences to both Armor Branch and his rating chain. Our collective goal in this strategy is to set conditions for the officer to perform in his next assignment while continuing his growth for future service.

Armor officers are highly sought throughout the Army and joint force because of our demonstrated versatility and effectiveness in tactical, operational and strategic positions. To meet the current and expected demand for Armor officers and ensure continuous professional growth, we will assign officers to the right opportunities, following the parameters outlined in this article. The familiar environment of line formations is highly rewarding but relatively comfortable compared to working in the C-Ring of the Pentagon as a member of the joint or Army staff; optimal developmental growth occurs not when the officer is comfortable in a familiar environment but when the officer is challenged in a complex and uncomfortable situation. To facilitate this continuous growth, our goal is to place Armor officers in multiple formations and echelons throughout the operating, generating and joint force, balancing their experience and training among tactical, operational and strategic organizations. These organizations will clearly benefit from having Armor officers in their ranks, and service in these assignments will increase the breadth and depth of experience in Armor branch for future requirements.

Close with and destroy. …

Key points

1. An officer's career must be a continuum – training, education and experience integrated and compounding over time.
2. Balance experiences over the continuum of a career and ensure every assignment counts.
3. Leaders must be as equally capable of serving in strategic headquarters, running the enterprise Army and preparing to assume the mantle of national-level leadership in the decades ahead as they are of closing with and destroying our adversaries.
4. As officers progress, we need to ensure they are prepared for service outside the familiar environment of the line. We must develop expertise before it is needed.
5. Our internal objective for Armor Branch with respect to broadening, or assignments outside of officers' KD positions, is a broad range of experiences that provide officers fundamentally different perspectives of the Army as an element of strategic landpower.
6. Place Armor officers in multiple formations and echelons throughout the operating, generating and joint force; balance their experience and training among tactical, operational and strategic organizations.

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Acronym Quick-Scan

AC/RC - Active Component/ Reserve Component
ACOM – Army command
ACS – Advanced Civil Schooling
AFPAK – Afghanistan-Pakistan
ARCIC – Army Capabilities Integration Center
ASCC – Army service-component command
COCOM – combatant command(er)
CTC – combat training center
DA – Department of the Army
DARPA – Defense Advanced Research Projects Agency
FORSCOM – (U.S. Army) Forces Command
HHC – headquarters and headquarters company
HQ – headquarters
JCS – Joint Chiefs of Staff
JIIM – joint, interagency, intergovernmental or multinational
KD – key developmental
NATO – North Atlantic Treaty Organization
OCLL – Office of the Chief Legislative Liaison
O/C/T – observer/controller/ trainer
OPM-SANG – Office of the Program Manager for the Saudi Arabian National Guard
OSD – Office of the Secretary of Defense
PME – professional military education
ROTC – Reserve Officers Training Corps
SATMO – Security Assistance Training Management Organization
TRADOC – (U.S. Army) Training and Doctrine Command
USMA – U.S. Military Academy
USCC – U.S. Corps of Cadets
WIAS – Worldwide Individual Augmentation System
WTU – Warrior Transition Unit

New Armor Branch column to start next edition

In ***ARMOR***'s next edition, the Enlisted and Officer Personnel Directorates of Armor Branch, Human Resources Command, are slated to begin providing regularly scheduled information via a column called "Armor Branch Update." CPT Adam Taliaferro begins by writing on "Understanding the Army Selection-Board Process." It is ***ARMOR'***s hope that this column will assist Armor Branch members in their careers.

The Brigade Support Battalion: Providing Support to the Armored Brigade Combat Team

by LTC Steven A. Erickson and LTC William O. Kepley Jr.

During previous National Training Center (NTC) rotations, the U.S. Army Training and Doctrine Command's capability manager (TCM) for the armored brigade combat team (ABCT) observed that ABCTs are struggling with how to resupply an ABCT in the field and not from a forward operating base (FOB). Sure, fuel and ammunition get delivered, no Soldier goes hungry and health-service support takes place; however, it requires almost superhuman efforts to make it happen. At times, we are our own worst enemy and make sustainment much harder than it should be. ABCTs appear to have forgotten the mechanics of conducting sustainment operations in a field environment.

The brigade support battalion (BSB) in the ABCT is the modular organization that supports the BCT. It is organized with a supply-distribution company, maintenance company, health-services company and headquarters company. Typically, the forward-support company (FSC) is attached to each of the maneuver battalions in the ABCT (the combined-arms battalions (CAB), field-artillery battalion, Cavalry squadron and brigade engineer battalion). These companies provide the direct support to the ABCT.

How do I support my ABCT?

This is a simple answer, as the BSB provides distributive logistics and health-service support in any operational environment; on order, it redeploys and prepares for follow-on operations. The BSB provides mission command for tactical logistics and synchronizes operations among the sustainment brigade, the BSB base companies and the FSC.

Why was supporting an ABCT difficult during our last brigade field exercise? Granted, no mission failed due to a lack of supply or maintenance, and no Soldier went hungry or without rations; however, we did cut it close on more than one occasion. We were short on personnel and did not have all the enablers we should have had, but tactical logistics support should not have been this hard.

Coauthor LTC Steve Erickson quickly found that the support-operations officer (SPO) and his base company commanders were constantly in reaction mode and unable to adequately forecast or synchronize logistics across the brigade. He had a young and inexperienced staff. When he was an SPO, he knew he had to step in quickly to help get support flowing in the right direction. Unfortunately, in this case, he discovered there was not a thing he could do, as the systemic problems were interwoven with each other. The problem was not a lack of supply or failure on the part of a young staff or young commanders; it was ineffective communication among the end-user, the customer and the customer-service representative (the SPO).

What he discovered was the SPO was unable to forecast because he was not receiving logistics-status (LOGSTAT) reports that listed the supported battalion's requirements. Not knowing what the requirements were, the SPO dispatched the distribution company to provide multi-class logistics support, but the platoon leaders on the ground (at the logistics-resupply point (LRP) or in the base-support area (BSA) would decide among themselves what needed to be provided.

"Sure, my staff may have pulled from historical documents or prediction analysis and computer models, but the brigade had been executing Red Cycle taskings for nine months and had not gone to the field as a brigade since the last NTC rotation," Erickson recalled. "During this field exercise, we essentially got the job done through the desperate determination not to fail."

How can the BSB support the ABCT?

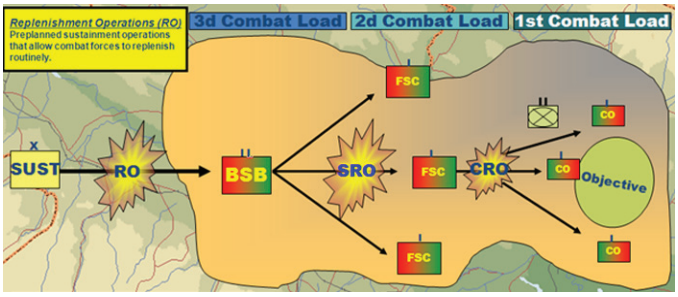

Figure 1. An example sketch of replenishment operations (RO). RO are deliberate, time-sensitive logistics operations the BSB conducts to replenish FSCs (RO may be augmented with echelons-above-brigade assets), as well as quick, in-stride RO the FSC conducts. Sustainment-replenishment operations (SRO) are quick sustainment operations that are conducted within a unit's battle rhythm and last three to seven hours. Combat-replenishment operations (CRO) are brief or pitstop-like events to rearm, refuel, fix and provide supplies; they last up to three hours. *(Original is Figure 2-4 in Field Manual (FM) Interim 4-93.2,* ***The Sustainment Brigade*** *(September 2009))*

Help me help you!

Logistics is a requirements-based business. Requirements drive distribution and the issue of goods and supplies. What Erickson's BSB was missing were the requirements. "Rational people would not walk into a restaurant and just expect to be served a meal, would they? Of course not; they would order from a menu provided by the restaurant," said Erickson. "I needed the supported (maneuver) battalions to 'order from my menu.' I needed them to let us know what they wanted to order off the menu with their LOGSTAT report."

Reporting

The best way to impact any mission is for the staff to be prepared. All units in the ABCT must conduct logistics estimates and, when available, use their last-known historical data. Even with the best estimate or historical data, reporting will always be required – for nothing else than to confirm the estimate.

Reports should be based on the last 24 hours and should serve as a projection of consumption. Using the unit LOGSTAT report generated by every battalion S-4, the staff essentially reports on levels of supply that are between actual consumption and what the maximum unit capacity is. This report does two things for the supporting logistician: first, it develops a consumption history and, second, it is realistic to what the unit's true needs are. This information also assists the logistician in determining what amounts/assets to push to the requesting unit based on asset availability and the higher commander's priorities (similar to required supply rates and controlled supply rates).

Terminology and defining requirements

Units need to request what they require, not the manner in which they would like it to be provided. For example, units will request four fuel trucks or state they want to execute refuel-on-the-move (ROM) operations before they cross the line of departure (LD). Words have meaning; if they are used incorrectly, the mission may fail. There is a difference between a final coordination line and a final protective line, and there is a difference between a tactical refuel and ROM.

What the logistician needs to know are the facts so he/she can determine the best way to provide support while maintaining economy-of-force as it relates to logistics capacity. For example, the customer should request 6,000 gallons of fuel, and the logistician will figure out how to fulfill the request. If the operation requires any special considerations, update the operational picture thus: request 6,000 gallons of fuel, say it will be spread out among four locations and, based on the operational timeline, all four locations must be serviced at the same time.

If fuel is required just before crossing the LD, the customer does not want a ROM. A ROM is an administrative operation typically conducted in the brigade rear area of operations (AO) or in

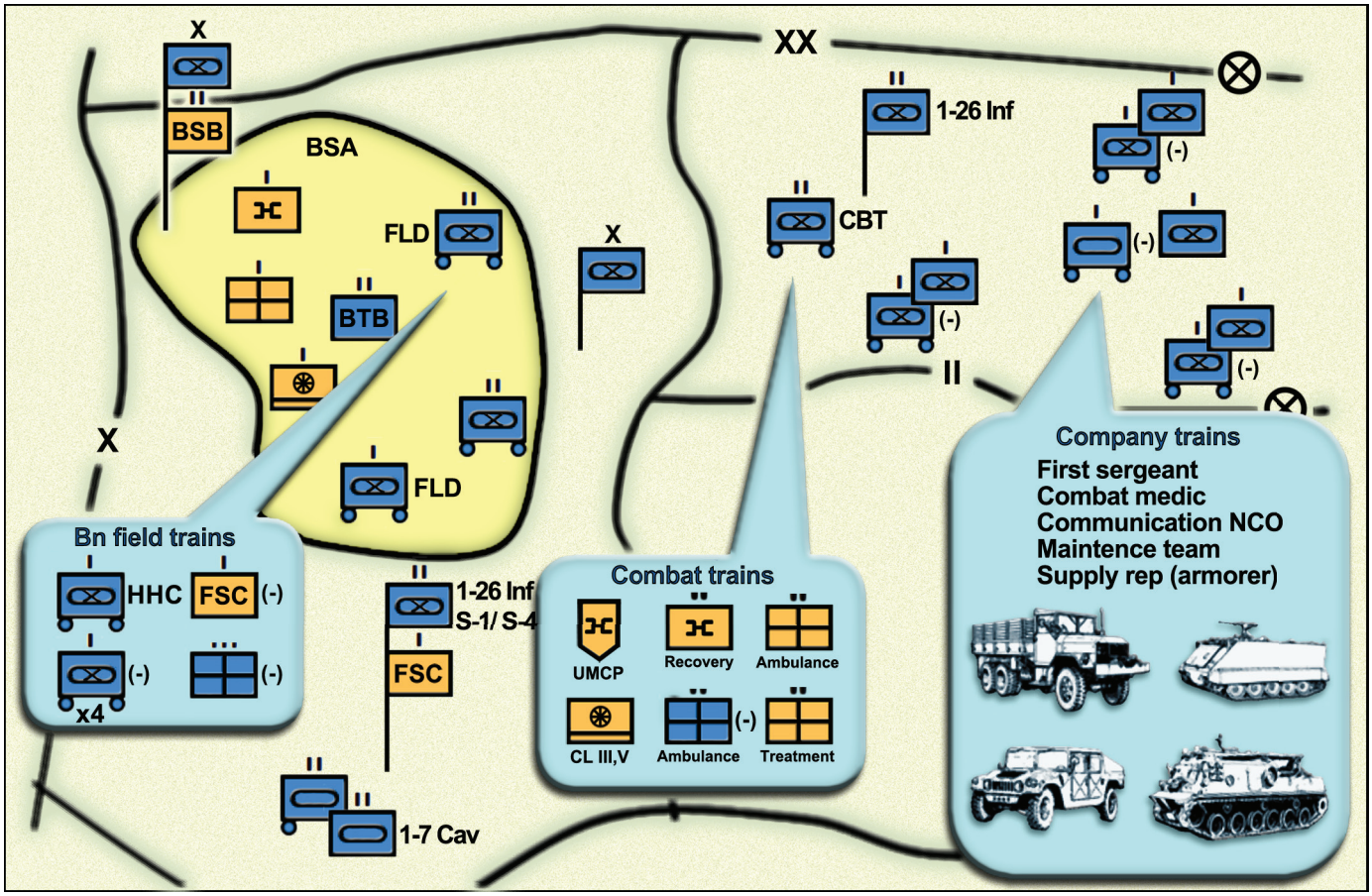

Figure 2. Location of the FSC on the battlefield. *(Based on Figure 9-2 in FM 3-90.6,* ***Brigade Combat Team*** *(September 2010)*

the division AO. What the customer probably wants is to have tactical fuel trucks (M978s) on line with both fuel nozzles available for a quick splash of fuel as the unit departs its assembly area. By being specific in its requirement (logistically and tactically), the supported battalion can receive exactly what it needs.

How to provide requirements in a typical ABCT

Always provide requirements via your local standard operating procedures (SOPs). Regardless of the method used, reporting will always follow this methodology:

1. A platoon sergeant consolidates platoon requirements and reports to the company executive officer/first sergeant.
2. The executive officer/first sergeant consolidates the company requirements and reports to two locations: the battalion supply sergeant (S-4) and the FSC executive officer/distro-platoon leader.
3. The FSC starts consolidating requirements for its next mission and provides requirements to the BSB SPO.
4. The battalion S-4 consolidates information into a battalion logistics common operating picture (LOGCOP) and provides it to the brigade S-4. These first four steps are the responsibility of the battalion-level executive officer.
5. The BSB SPO consolidates the FSC requirements, develops the plan to support all the battalion requirements at the next brigade resupply via supply-point distribution or unit distribution (LRP operations) and requests resupply to the supporting-sustainment-brigade SPO.
6. The brigade S-4 consolidates information into a brigade LOGCOP, provides the division G-4 awareness and updates the BSB SPO on the brigade commander's priorities for support and maintenance.

However the flow of reporting goes, constant communication between the company executive officer/first sergeant and the FSC, and communication between the FSC and the BSB SPO, are the keys to success. The secret to mission command of tactical logistics starts with knowing the requirements of supported customers. The rest is leadership and the determination of leaders on the ground to support the mission.

The FSC is the executor of the supported battalion's sustainment plan. In layman's terms, the FSC commander is the CAB's SPO. The FSC needs to be part of the CAB's military decision-making process (MDMP), and the FSC headquarters track should be co-located with the combat-trains command post (CTCP), where the CAB S-4 and S-1 reside for operations. This co-location of vehicles allows the CAB to have access to the mission-command systems in the FSC track, and the FSC to have access to the mission-command systems installed in the S-4 track.

Figure 3. Abrams maintenance in the field.

The logistics planner (the S-4) and the executor (FSC commander or executive officer) are next door to each other. Based on the CAB SOP, the S-4 receives the LOGSTAT reports from the down-range companies, and he consolidates them into a CAB LOGSTAT for the ABCT S-4 and walks a copy to the FSC headquarters track.

Now the FSC commander can predict when and where his assets need to be on the battlefield to support the concept of the operation. Logistics are requirements-based, so the FSC commander must determine how to best support the plan based on available capabilities (enablers), limitations and restrictions. At the end of MDMP, the battalion commander must know that the FSC concept of support is doctrinally based and the plan is feasible, suitable and acceptable.

The FSC executes logistics in a distributive manner. The company is typically split into three or more locations. The combat repair teams (CRTs) are normally forward with the supported company trains; the CRT(-); FSC Rear; the FSC's recovery section; and a refuel/rearm package at the unit-maintenance collection point (UMCP) and/or the CTCP. The FSC Rear can either be completely in the BSA with the BSB base companies or split between the BSA and operating in the battalion rear area in a task-force support area (TSFA).

Company assets from the FSC that are forward usually consist of the maintenance-control section

(maintenance-control officer and technician), recovery section and portions of the line-company CRT. These are in the UMCP and are often co-located with the CTCP. The individual CRT is forward with its supported companies.

Security of the UMCP is the maintenance platoon's responsibility using the recovery section's M88s and other crew-served weapons.

The CRT's forward-repair system is also located in the UMCP, and the CRT M88s are forward with the companies.

Besides the maintenance platoon, the FSC company headquarters track (M1068 currently on the modified table of organization and equipment; it is often manned by the FSC executive officer) and an on-call resupply of fuel and ammunition are located in the CTCP with the CAB S-4 track (M1068) and the battalion's main aid station. This on-call resupply is controlled by the FSC's executive officer but can be under the release authority of the CAB's executive officer or S-4.

This location can become the first ambulance exchange point the evacuation platoon from "Charlie Med" uses (when coordinated through the SPO) as part of the brigade casualty-evacuation plan. The "Charlie Med" company knows to send its wheeled ambulances for casualty evacuation.

The company assets in the rear are directly tied to the BSB in the BSA. This is the case whether the rest of the FSC is completely in the BSA or split between the BSA and the TFSA. In this location, the FSC prepares and organizes the supported battalion's sustainment and RO, commonly known as logistical packages (LOGPACs). Through LOGSTAT reports and constant communication between the FSC and the SPO, RO are either configured for the FSC to pick up using supply-point distribution (if the FSC is in the BSA), or RO are pushed (using unit distribution) via LRPs on brigade graphics for the transfer of supplies from the distribution company in the BSB to the FSC. In either case, the FSC then prepares and organizes convoy operations/march serials for LOGPAC operations.

The convoy will consist of FSC distribution assets (cargo/Load-Handling System and fuel trucks) as well as each company supply truck operated by the supply sergeant/clerk. The distribution-platoon leader or platoon sergeant leads the LOGPAC

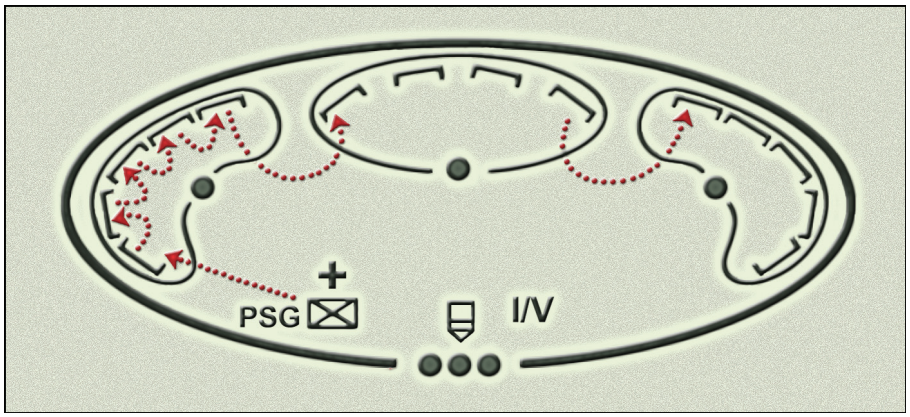

Figure 4. Three typical in-position FSC/company-train resupply methods. *(Based on an illustration from FM 3-21.8, **The Infantry Rifle Platoon and Squad** (March 2007))*

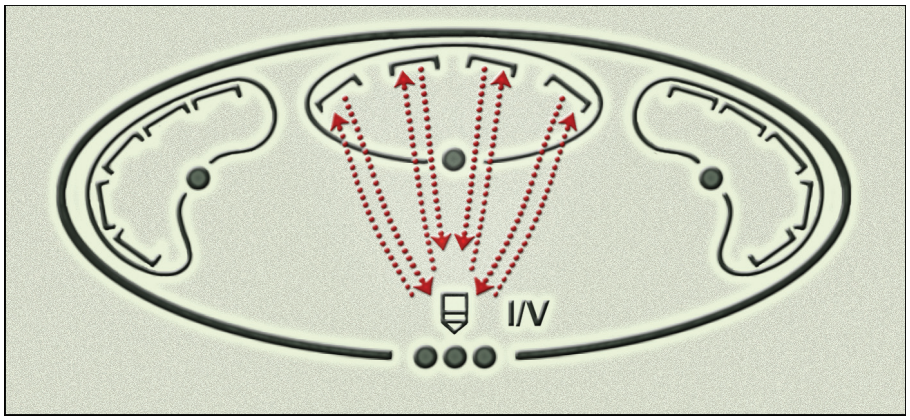

Figure 5. Service-station resupply method. *(Based on a diagram from FM 3-21.8)*

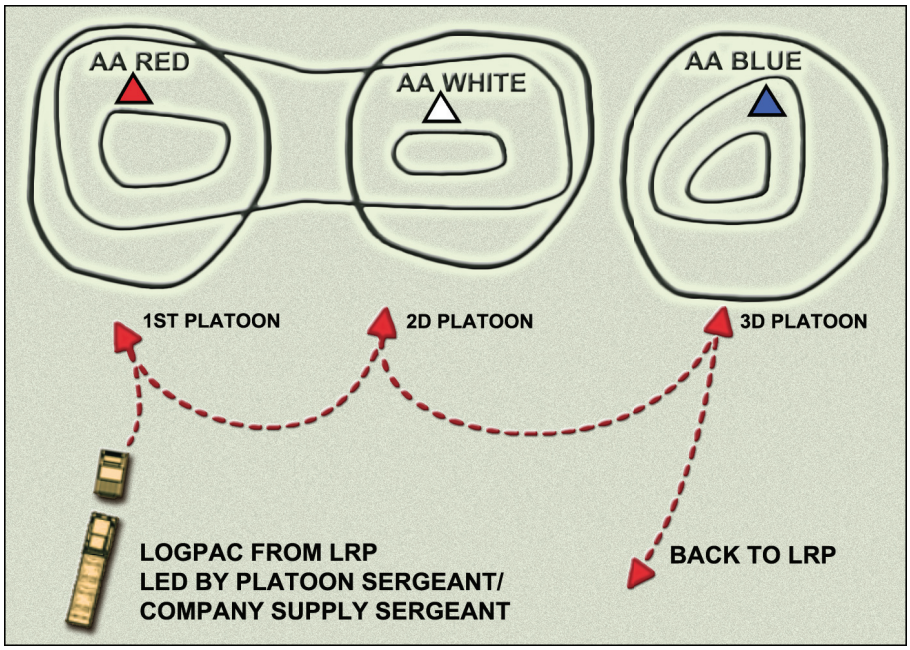

Figure 6. Tailgate resupply. *(Based on an illustration from FM 3-21.8)*

forward into the battalion area to an LRP where the company first sergeants, S-4 noncommissioned officer in charge and scout and mortar platoon sergeants are waiting to receive their LOGPAC. Each unit first sergeant or platoon sergeant will have a specified amount of time to distribute their supplies by one of, or a combination of, methods that include in-position, tailgate resupply or service-station resupply methods – then return to the LRP so the distribution platoon can return and start organizing the next RO.

Final thoughts

Remember, logistics is requirements-based. Units need to provide the actual requirements, and the logistician will fill the requirement. Do not forget that the formula for filling requirements is based on capability, assets on hand, restrictions and limitations.

Logisticians are nested with the higher commander's plan and will follow the priority of support (restrictions). Customers should not overinflate their requirements; doing so will take away from the commander's intent and potentially take away from the ability to complete the mission.

Units should report accurately and often, and maintain an open line of communication with their supporting unit.

LTC Steve Erickson commands 215th BSB, 3rd ABCT, 1st Cavalry Division, Fort Hood, TX. His past duty assignments include lieutenant-colonel assignments officer, Logistics Branch, Human Resources Command; commander, Ordnance Detachment, 194th Armored Brigade, U.S. Army Armor School, Fort Benning, GA; battalion executive officer, 203rd BSB, 3rd Heavy Brigade Combat Team (HBCT), 3rd Infantry Division; SPO, 203rd BSB, 3rd HBCT, 3rd Infantry Division; and BCT S-4, 3rd HBCT, 3rd Infantry Division. His military schooling includes Armor Officer Basic Course, Supply-and-Service Manager Officer Course, Combined Logistics Captain's Career Course, Aerial Delivery Management Officer's Course, Combined-Arms Services Staff School, Support Operations Course, Command and General Staff College and Airborne School. LTC Erickson holds a bachelor's of science degree in criminal justice from North Georgia College and a master's of science degree in education from Kansas State University. He stood up one of the first FSCs in 1st Cavalry Division in 2002 as part of the Army conversion to Force XXI. He served as an FSC commander, division logistics planner, SPO and battalion executive officer while deployed in support of Operation Iraqi Freedom.

LTC Will Kepley is now retired. When he co-authored this article, he was Systems Branch chief in TCM-ABCT at Fort Benning. His past duty assignments include chief, Concepts Development Branch, Capabilities Development and Integration Directorate, Maneuver Center of Excellence, Fort Benning; logistics adviser, 3/3 Infantry Division, FOB Echo, Iraq; squadron executive officer, 2/11 Armored Cavalry Regiment, Fort Irwin, CA; and operations officer, U.S. Army Forces, U.S. Central Command-Qatar, Camp As Saliyah, Qatar. His military schooling includes Armor Officer Basic Course, Armor Officer Advanced Course, Combined Arms Services Staff School, Intermediate Level Education and Airborne School. LTC Kepley holds a bachelor's of arts degree in mathematics from the University of Louisville.

Acronym Quick-Scan

ABCT – armored brigade combat team
AO – area of operations
BCT – brigade combat team
BSA – base-support area
BSB – brigade support battalion
CAB – combined-arms battalion
CRO – combat-replenishment operations
CRT – combat repair team
CTCP – combat-trains command post
FM – field manual
FOB – forward operating base
FSC – forward-support company
LD – line of departure
LRP – logistics-resupply point
HBCT – heavy brigade combat team
LOGCOP – logistical common operating picture
LOGPAC – logistical package
LOGSTAT – logistics status
LRP – logistical resupply point
MDMP – military decision-making process
NTC – National Training Center
RO – replenishment operations
ROM – refuel-on-the-move
SOP – standard operating procedure
SPO – support-operations officer
SRO – sustainment-replenishment operations
TCM-ABCT – (U.S. Army) Training and Doctrine Command Capability Manager-Armored Brigade Combat Team
TFSA – task-force support area
UMCP – unit-maintenance collection point

Transformation of the Duties and Responsibilities of a Headquarters Troop Commander

(Counterinsurgency / Security-Force Assistance to Decisive-Action Training Environment)

by CPT Gary M. Klein

The headquarters and headquarters troop (HHT) commander has few defined duties and responsibilities. The line troops' missions are directly nested with the squadron's primary missions – reconnaissance and security operations – while the forward-support company (FSC) is focused on sustainment operations.[1] Meanwhile, the HHT is predominantly composed of the squadron staff, which is responsible for enabling mission command and is led by the squadron executive officer (XO).[2] So what are the duties and responsibilities of the HHT commander?

Over the last decade, in an environment focused on counterinsurgency and security-force assistance, a trend has been for HHT commanders to manage the troop's administrative systems in garrison and lead the Base Defense Operations Center (BDOC) and/or Mayor Cell while deployed. These missions were largely the product of our environment – fixed-site mission command in a forward operating base (FOB). However, with the Army shifting its focus toward the decisive-action training environment and expeditionary environments, what should the HHT commander's role be now?

At the most basic level, the HHT commander is responsible for the troop's readiness and the regulatory responsibilities inherent to command.[3] He must provide administrative support to the Soldiers under his command – including leave, military schooling and readiness – as well as enforce military discipline, the Uniform Code of Military Justice and programs such as Sexual Harassment/Assault Response and Prevention and Equal Opportunity. Also, along with his troop XO and supply sergeant, the commander must create and enforce a command supply-discipline program that emphasizes systems such as property accountability, equipment maintenance and services. Finally, the commander must ensure his Soldiers achieve and maintain basic Army standards, including Army Physical-Fitness Test standards, height and weight and weapons qualification.

These three broad areas demand a significant amount of time; however, they are largely managerial in scope and should leave a commander desirous for opportunities to provide a more active leadership role.

Field Manual (FM) 6-22, ***Army Leadership***, defines a leader as anyone who by virtue of assumed role or assigned responsibility inspires and influences people to accomplish the mission and improve the organization.[4] Army leaders – both formal and informal – motivate people both inside and outside the chain of command to pursue actions, focus thinking and shape decisions for the greater good of the organization. The managerial responsibilities presented thus far focus on building and maintaining systems, but they offer minimal opportunities to influence Soldiers toward organizational goals.[5] To advance into the realm of a leader, the HHT commander must expand his duties and responsibilities to becoming a trainer, coordinator and mentor.

Trainer

The vast majority of HHT Soldiers are on the squadron staff, and the squadron XO is responsible for training the staff.[6] However, the squadron XO's efforts are typically focused on staff-officer development and collective mission-command systems that enable the squadron commander's understanding and visualization of the operating environment. This leaves a number of significant training areas the HHT commander must provide to these same Soldiers. The HHT commander's mission-essential task list (METL) captures these training areas and responsibilities.

Chapter 3 of Army Doctrinal Reference Publication (ADRP) 7-0, ***Training Units and Developing Leaders***, details unit training management – a process that begins with the development of a unit METL to help the commander focus and guide his unit's training plan. This process is relatively straightforward for the line troops, whose mission-essential tasks (METs) are properly nested with their squadron METs (Figure 1).[7] Similarly, an HHT could translate the squadron's METs into its own METL in an effort to capture its responsibility for providing squadron-level mission-command functions, or it could select the staff-specific METs for its METL. Both of these options have reasonable justifications, but they fail to highlight the many implied tasks an HHT is responsible for in an expeditionary environment. The HHT must address both the staff METs and basic Soldier METs.

In an expeditionary environment, the HHT commander needs to prepare his Soldiers for tactical convoy operations, establishing the main command post (CP), combat-trains command

SQUADRON METL			
METL task	**Current assessment**	**Strategy**	**Projected assessment**
Conduct mission command (Army Tactical Task (ART) 5.0)	P	CPXs, platoon STX, BCT FTX, JRTC	T
Conduct battalion/squadron screen (17-TS-1053)	U	Platoon STX, BCT FTX, JRTC	T
Conduct a squadron zone reconnaissance (17-TS-1051)	P	Platoon STX, BCT FTX, JRTC	T
Execute air-assault operations (07-TS-1477)	P	Eagle Flights, platoon STX, BCT FTX, JRTC	T
Execute fires (Fires Cell) (06-TS-4662)	P	CPXs, platoon STX, BCT FTX, JRTC	T

Figure 1. Line-troop METL from squadron METL.

post (CTCP) and/or field-trains command post (FTCP),[8] and simultaneous employment of the main aid station and forward aid station – all in a threat environment. Specific tasks that HHT Soldiers must be capable of executing as part of these missions include crew-served weapons qualifications, establishing a tactical radio network – and not just S-6 Soldiers! – convoy procedures, assembly-area activities (including local security procedures and night drivers' qualifications using PVS-7/14s) and quartering-party activities. Add these HHT missions and tasks to those expected of the staff, and it becomes easier to see two distinct components of training within an HHT.

These two components were discussed in the now-obsolete FM 7-1, ***Battle-Focused Training***, but this discussion is absent from Doctrine 2015 (for example, ADRP 7-0).[9] The distinction between a staff METL and HHT METL (Figure 2)[10] lays out the requirements for each Soldier to be a competent member of the staff as well as having the basic Soldier skills to operate effectively in an expeditionary environment. Most importantly for the HHT commander, the delineation between a staff METL and HHT METL helps clarify his duties and responsibilities, empowers him to exercise initiative within the training and leader-development domains, and creates a tool to more accurately track training progress.

A METL is only a tool, though. The HHT commander needs to continually engage the squadron XO throughout the planning process to synchronize and mutually support each other's training plans. This is particularly important because the squadron XO and HHT commander are competing for the training time of the same Soldiers. The synchronization of these efforts represents the third role required of the HHT commander – that of a coordinator.

Coordinator

The squadron staff is charged with maintaining a high degree of coordination and cooperation among higher, adjacent and subordinate units,[11] and a number of leaders are involved with coordinating the staff itself. The squadron XO and operations sergeant major have authority over the staff, but there are other leaders who have informal responsibilities and the ability to exercise disciplined initiative to influence beyond the chain of command.[12] These informal relationships should complement the chain of command, and they have the potential to enable coordination and teamwork.

Common venues that enable HHT and staff coordination include daily HHT synchronization meetings, weekly HHT training meetings and weekly staff-synchronization meetings. One technique is for staff-section officers in charge (OICs) to attend the weekly staff-synchronization meeting run by the squadron XO and for staff-section NCOs in charge (NCOICs) to attend the daily HHT synchronization and weekly HHT training meetings. There are two benefits to this arrangement. First, much of the training the HHT commander is responsible for takes place at the individual, crew and small-team level, which lies primarily within the domain of the HHT NCOs.[13] Second, a division of labor between the OIC and NCOIC prevents overwhelming the staff-section leadership with excessive meetings. The HHT meetings should address the HHT METL, collective-training events and individual Soldier skills while coordinating troops to task between staff sections and low-density military-occupation specialty (MOS) Soldiers across the squadron.

One of the most important collective-training events the HHT commander should coordinate is the execution of a CP field-training exercise (FTX), which describes the exercise formerly referred to as a tactical-operations center exercise (TOCEX).[14] A CP FTX is an exercise in establishing and displacing the main CP and tactical (TAC) CP, and it is Step 1 in a typical mission-command crawl-walk-run training model. The CP FTX begins by establishing a TAC, followed by establishment of the main CP. Once the main CP is established, the TAC deploys forward again and re-establishes itself, followed by the main CP's movement forward, repeating the "jump" CP cycle. A CP FTX builds mission-command system proficiency and develops a shared understanding resulting in a CP standard operating procedure (SOP).

When the CP FTX is combined with a staff exercise (Step 2), this culminates in a command-post exercise (CPX) (Step 3), where the staff battle-tracks activities and maintains a common operating picture to help the commander understand, visualize, describe and direct operations. Although the squadron XO and operations sergeant major usually lead these training events, the HHT commander is in the best position to plan many aspects of the CP FTX because of his knowledge and tracking of the CP equipment during reset.

As equipment is returned to the unit,

SQUADRON METL			
METL task	**Current assessment**	**Strategy**	**Projected assessment**
Conduct mission command (ART 5.0)	P	Section STX, platoon STX, BCT FTX, JRTC	T
Conduct troop screen (17-TS-2104)	U	Section/platoon STX, BCT FTX, JRTC	T
Conduct a troop zone reconnaissance (17-TS-2103)	P	Section/platoon STX, BCT FTX, JRTC	T
Execute air-assault operations (07-TS-1477)	P	Cold/hot load training, platoon STX, BCT FTX	T
Provide mortar support (07-TS-3901)	P	Section STX, platoon STX, BCT FTX	T

STAFF METL			
METL task	**Current assessment**	**Strategy**	**Projected assessment**
Conduct human resources (S-1), legal and unit-ministry operations (71-TS-6236)	P	Low-density MOS training, CPXs, BCT FTX, JRTC	T
Perform intelligence (S-2) functions (17-TS-6235)	P	Low-density training, CPXs, platoon STX, BCT FTX, JRTC	T
Plan and coordinate movement and maneuver (S-3) functions (71-TS-6226)	P	LPD, CP FTXs, CPXs, BCT FTX, JRTC	T
Conduct sustainment (S-4) operations (71-TS-6233)	P	Low-density MOS training, CPXs, BCT FTX, JRTC	T
Conduct communications (S-6) operations (71-TS-6221)	P	CP FTXs, CPXs, platoon STX, BCT FTX, JRTC	T
Establish fire-support operations (Fires Cell) (06-TS-6400)	P	Section STX, platoon STX, CPXs, BCT FTX, JRTC	T

HHT METL			
METL task	**Current assessment**	**Strategy**	**Projected assessment**
Conduct mission command (ART 5.0)	P	CP FTXs, CPXs, platoon STXs, BCT FTX, JRTC	T
Conduct squadron deployment/redeployment operations (ART 1.1.2/71-TS-1203)	P	CP FTXs, platoon STX, BCT FTX, JRTC	T
Conduct operational area security (ART 6.5)	U	CPXs, BCT FTX, JRTC	T
Conduct tactical movement (07-1-1199)	P	CP FTXs, platoon STX, BCT FTX, JRTC	T
Conduct medical-platoon operations (71-TS-2124)	P	Platoon STX, BCT FTX, JRTC	T

Figure 2. A delineated staff METL and HHT METL for the staff officers, noncommissioned officers (NCOs) and Soldiers of HHT.

the HHT commander should incorporate technical training into command maintenance. Once most of the equipment is available, he should recommend and assist in planning the CP FTX. This initial CP FTX should familiarize each staff section with its contribution to the physical establishment of the main CP and TAC and train the staff in assembling and breaking down all the equipment and mission-command systems. Upon the completion of the CP FTX, the squadron XO and operations sergeant should expand this foundation in future CPXs and squadron and brigade FTXs.

Mentor

In addition to troop-wide training events, the HHT commander and first sergeant should mentor other subordinate leaders and their low-density MOS training as well. The HHT commander should mentor the medical-platoon leader and fire-support officer during their training-plan development – similar to how the HHC commander in a combined-arms battalion or an infantry battalion mentors the specialty-platoon leaders.

During the reset phase of the Army Force Generation cycle, the medics and forward observers are usually consolidated in HHT to allow them to focus on MOS-specific training. However, to avoid skills atrophy, MOS-specific training should not end once the unit enters the train/ready phase. A balance should be maintained between MOS-specific training and the integration of these Soldiers within their assigned units. The HHT

commander and first sergeant are in an ideal position to coordinate this consolidated training. Their understanding of the squadron and troop training plans, as well as their relationship with the line troops, is useful in synchronizing priorities and facilitating bottom-up refinement.

Other low-density MOS training includes supply (S-4), communications (S-6) and chemical, biological, radiological and nuclear training. The HHT commander's holistic understanding of the squadron's needs, as well as established relationships, can assist these section OIC/NCOICs in developing their plans. The OIC will ultimately present his plans to the squadron XO, who has the final decision in the training and distribution of these low-density MOS Soldiers, but the HHT commander's experience and mentorship is a great asset for these staff officers and NCOs.

Throughout their coordination with troop commanders and staff sections, the HHT commander and first sergeant gain valuable insight to identify problems and make assessments and recommendations. They are likely to witness cooperation and friction points between staff sections and/or the troops, which provides them an opportunity to suggest improvements and engender a culture of service. Simultaneously, these interactions provide the HHT commander an outstanding opportunity to motivate Soldiers with a shared understanding of the HHT's and the squadron's broader purpose.

The most important aspect to all the coordination and mentorship mentioned here is the need for the HHT commander to build relationships and influence beyond the traditional chain of command. This capacity requires a level of comfort and maturity most frequently obtained through experience in command, which is why a headquarters command is often viewed as a second command, and the HHT commander is often called a "mini" or "third" field grade. All the time the HHT commander spends coordinating and providing mentorship – to subordinates and peers alike – will bring about many collaborative benefits for the squadron's greater good.

Conclusions

The duties and responsibilities of the HHT commander are ill-defined in doctrine. However, after discussing the implied tasks, the HHT commander has a considerable amount of responsibilities that have been underused during the last decade. During Operation Enduring Freedom/Operation Iraqi Freedom/Operation New Dawn, the mission, enemy, terrain and weather, troops and support available, time available and civil considerations variables that an HHT commander typically faced were fixed to responsibility for managing mission-command nodes in an FOB. This situation is largely changing with the Army's shift toward decisive action. This adjustment will be challenging because the responsibilities are shared across many leaders without a doctrinal answer. Each HHT must develop its own SOP for who is responsible for what training and missions.

This article recommends a number of potential duties and responsibilities that may be assigned or assumed by the HHT commander using the perspectives of a trainer, coordinator and mentor. The HHT commander should not be constrained by these roles. The HHT commander should lead through whatever means enable him to influence his organization through purpose, direction and motivation toward mission accomplishment.

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Notes

[1] FM 3-20.96, ***Reconnaissance and Cavalry Squadron***, Washington, DC: U.S. Government Printing Office, March 2010.

[2] FM 6-0, ***Commander and Staff Organization and Operations***, Washington, DC: U.S. Government Printing Office, May 2014, Chapter 2.

[3] Army Regulation (AR) 600-20, ***Army Command Policy***, Washington, DC: U.S. Government Printing Office, September 2012; and AR 350-1, ***Army Training and Leader Development***, Washington, DC: U.S. Government Printing Office, August 2014.

[4] ADRP 6-22, ***Army Leadership***, Washington, DC: U.S. Government Printing Office, August 2012.

[5] For more discussion on the differences between a manager and a leader, read "CompanyCommand – Building Combat-Ready Teams: Do We Need Leaders or Managers?," ***ARMY Magazine***, Arlington, VA: Association of the United States Army, January 2011.

[6] FM 6-0.

[7] This was the squadron METL and an example line-troop METL of 1st Squadron, 33rd Cavalry, in Fall 2013 when the author was the HHT commander.

[8] HHT's role in the FTCP is a topic for another discussion, but the concept of the HHT commander running the FTCP – as specified in the outdated FM 17-95-10, ***The Armored Cavalry Regiment and Squadron*** (September 1993) – is likely obsolete now that brigades have reorganized into brigade combat teams (BCTs), which introduced an FSC to the Cavalry squadron.

[9] FM 7-1, ***Battle-Focused Training***, Washington, DC: U.S. Government Printing Office, September 2003. Additional note: ADRP 7-0 does not discuss the concept of a staff METL; however, staff tasks are found within the Combined Arms Training Strategy on the Army Training Network, https://atn.army.mil/dsp_CATS-viewer01.aspx, retrieved May 30, 2014.

[10] This staff METL was proposed by William Moeller, "Looking for an HHT/Headquarters and Headquarters Company METL Crosswalk," CompanyCommand.org, https://www.milsuite.mil/book/thread/112820 (Oct. 31, 2012), retrieved May 30, 2014. The HHT METL is a modified version of the author's METL when he was an HHT commander based on lessons-learned from his experience as an O/C/T at JRTC.

[11] FM 6-0.

[12] ADRP 6-22.

[13] ADRP 7-0, ***Training Units and Developing Leaders***, Washington, DC: U.S. Government Printing Office, August 2012.

[14] Doctrine 2015 rescinded the term *tactical-operations center* and replaced it with the term *command post*. Reference: U.S. Army Combined Arms Center, "U.S. Army Doctrine Comprehensive Guide," https://acc.dau.mil/adl/en-US/431909/file/56195/ArmyDoctrineCompGuide.pdf, retrieved Sept. 30, 2014. The term *TOCEX* was commonly understood to be an exercise in which the command group and staff practiced setting up and establishing the CPs.

Figure 3. SPC Keith Mackey at the HHT BDOC, Afghanistan, January 2013. *(Photo by CPT Gary M. Klein)*

Acronym Quick-Scan

ADRP – Army doctrinal reference publication
AR – Army regulation
ART – Army tactical task
BCT – brigade combat team
BDOC – Base Defense Operations Cell
CP – command post
CPX – command-post exercise
CTCP – combat-trains command post
FM – field manual
FOB – forward operating base
FSC – forward-support company
FTCP – field-trains combat post
FTX – field-training exercise
HHT – headquarters and headquarters troop
JRTC – Joint Readiness Training Center
LPD – leader professional development
MET – mission-essential task
METL – mission-essential task list
MOS – military-occupation specialty
NCO – noncommissioned officer
NCOIC – noncommissioned officer in charge
O/C/T – observer/coach/trainer
OIC – officer in charge
SOP – standard operating procedure
STX – situational-training exercise
TAC – tactical (command post)
TOC – tactical-operations center
TOCEX – tactical-operations center exercise
XO – executive officer

Figure 4. The 1st Squadron, 33rd Cavalry's main CP, Fort Campbell, KY, October 2013. *(Photo by CPT Gary M. Klein)*

The Cavalry Squadron of 2025

Starry Writing Competition 2014 runnerup

by CPT Kyle Trottier

There are two ways to fight the United States: "asymmetric and stupid";[1] therefore we are guaranteed that the operating environment (OE) of 2025 will be characterized as uncertain, decentralized and predominately urban. The U.S. Army needs to be prepared to fight near-peer nation-states as well as asymmetrical threats that look to avoid our strengths and exploit our weaknesses. We will certainly continue to encounter the hybrid threat, the diverse and dynamic combination of regular forces, irregular forces and/or criminal elements – all unified to achieve mutually benefitting effects.[2]

To be successful against both nation-state and hybrid threats in the OE of 2025, the U.S. Army brigade combat team (BCT) needs to resource and use the Cavalry squadron to conduct both reconnaissance and security operations in proximity to the enemy and the civil population.

OE and hybrid threat

Following a study of the 1973 Arab-Israeli War, GEN Donn Starry was convinced of three central points:

- Long-range anti-armor systems will play a dominant role on the future battlefield;
- Air-defense systems will directly threaten U.S. air superiority; and
- The United States must learn to fight and win outnumbered.[3]

The continuities of war (in other words, war is an extension of politics; war is a human endeavor; war is uncertain; war is a contest of wills[4]) guide our assessment of the future OE and indicate that multiple nation-states will continue to challenge U.S. interests and that non-state actors will have an ever-increasing regional and worldwide influence.[5] Non-state actors like Hezbollah successfully used hybrid-threat operational constructs in 2006 to overcome the military superiority of the Israeli Defense Force (IDF). They achieved success through the deployment of "myriad, small, dispersed, networked maneuver units"[6] that were armed with weapons previously only associated with nation-states. They employed anti-tank guided missiles (ATGM), man-portable air-defense systems, mortars and rockets, and fought among the civil populace within complex urban terrain to avoid IDF strengths and exploit its weaknesses.[7]

In the era of persistent conflict, the OE will be complex, but the U.S. Army must be able to fight and win our nation's wars against nation-states or non-nation-state actors in any geographical location. To be able to defeat any type of force we may face, Cavalry squadrons must be able to successfully conduct both reconnaissance and security operations.

Squadron's organizational history

The U.S. Army has fluctuated on how to properly organize and employ the Cavalry since its transition from horse to motorization. When the Army wants a force capable of performing both reconnaissance and security operations, it is labeled a "cavalry" organization. When the focus of that organization is reconnaissance and surveillance, it is labeled a "reconnaissance" organization. For the BCT of 2025 to be successful, the Army needs to evolve Cavalry squadrons capable of conducting both information-collection and security operations simultaneously to support unified land operations.

The March 1943 publication of Field Manual (FM) 2-30, ***Cavalry Mechanized Reconnaissance Squadron***, identified two main purposes for the organization. "The principal mission of the squadron is to obtain the information required by higher authority and get it back to the interested commander in time to be evaluated."[8] The second mission defines the Cavalry's ability to fight for information and provide a broad range of security operations for its parent formation.

The FM goes on to explain, "The squadron must expect to undertake the following types of tactical actions: marches; security (internal, for other elements, counter-reconnaissance); attack; pursuit; defend; delay; demolitions; withdrawals."[9]

U.S. Army doctrine writers understood the inherent nature of war and acknowledged there would be a high likelihood of contact for Cavalry organizations; as a result, they were organized, trained and equipped to appropriately accomplish this mission.

In 1944, the Army shifted, resulting in units being referred to as "reconnaissance troops." The organization was stripped of its robust capability in favor of light forces sufficient to support reconnaissance based on infiltration tactics. The FM went on to advise troops to engage in combat only to prevent destruction or capture, and if enemy contact was anticipated, the troop should be augmented with infantry, field artillery and tanks.[10] Thus, instead of preserving the combat

power of infantry and tank battalions, the reconnaissance troop depleted the combat power of the higher unit it was serving.

Following World War II, review boards found the "reconnaissance only" organization to be "unsound," arguing that security and combat operations were considered routine activities for Cavalry, and doctrine required appropriate adjustment.[11] From 1947 to 2009, the Army maintained a armored cavalry regiment (ACR) to support corps commanders and a division Cavalry squadron, whose task organization mirrored the ACR. The organization of these units provided commanders a robust set of capabilities, from reconnaissance and security to offense and defense to economy-of-force missions.

Beginning with a research-and-development study of Cavalry units performing at the National Training Center in 1985 through the present time, there has been a steady shift from a Cavalry organization capable of conducting reconnaissance and security to a reconnaissance squadron whose mission is reconnaissance and surveillance.[12] The fielding of a reconnaissance squadron within the BCT as part of modular transformation resulted in three task organizations – all equally unable to provide effective information collection and security for the BCT against current or projected threats of 2025.

Proposed Cavalry squadron of 2025

The proposed task organization in Figure 2 provides the brigade commander a robust organization capable of both reconnaissance and security operations. The 6x36 scout platoon provides six mounted platforms to deliver scouts onto the battlefield and enough dismounted scouts to establish four static observation posts (OPs) to conduct long-range surveillance operations.

The tank platoons then enable the troop commander to employ his scout platoons in a traditional "hunter-killer" format, where one section of tanks overwatch the platoon of Cavalry Fighting Vehicles (CFVs), then the CFVs deliver the scouts to a dismount point for the establishment of their OPs. The troop commander then has one tank platoon in reserve to employ upon unexpected contact with the enemy or for a target of opportunity.

This capability, going back to 1943, acknowledges the need to fight for information because, as we fight a thinking and adaptive enemy, we will not always be able to know the time or place of each engagement.

The troop is then supported by a platoon of 120mm mortars to provide responsive indirect fires even when dispersed across a wide front conducting a zone reconnaissance or security operations like a guard for the BCT.

The surveillance troop would further enhance the scout platoon's ability to conduct all-source information collections in support of the BCT commander. The surveillance troop would have the collection assets normally found within the military-intelligence company of the brigade special-troops battalion (BSTB). With the re-designation of the BSTB into the brigade engineer battalion, it is logical to place the

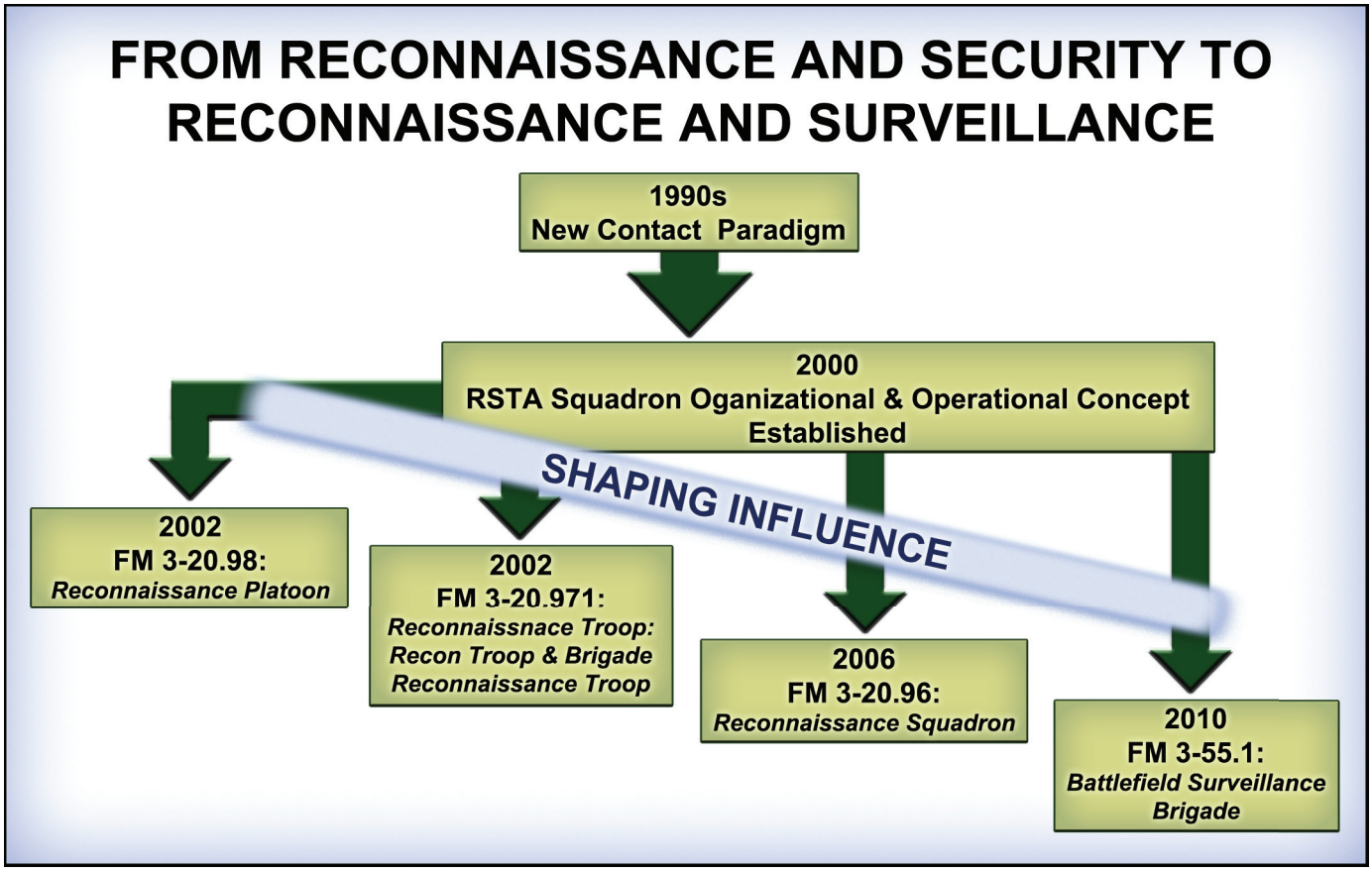

Figure 1. Doctrinal shift toward reconnaissance and surveillance.[13]

information-collection capabilities of the BCT under one headquarters, ensuring unity of command.

The surveillance troop's capabilities will enhance the squadron reconnaissance capability by providing human-intelligence (HUMINT) collection, signal-intelligence collection and an unmanned aerial surveillance (UAS) platoon. This complement of capabilities assists the squadron commander in the development of Annex L by having the full complement of collection assets for implementation within his scheme of cueing, mixing and redundancy on the battlefield.

The sniper platoon in the headquarters and headquarters troop is designed to provide sniper sections of two snipers and two spotters to the scout platoons. In reconnaissance, the snipers could be employed to infiltrate a particular location. In security operations, the snipers provide small-arms cover and can target key enemy personnel to provide depth and breadth to screen lines and the ability to harass enemy positions. This translates to greater flexibility and adaptability for troop and squadron commanders on the battlefield of 2025.

The "hunter-killer" task organization has proven its worth since World War II, but most notably at the Battle of 73 Easting in the Persian Gulf War. This proven concept is necessary, given that the United States will still face threats from near-peer nation-states in 2025 and beyond. Israel found this out the hard way when, in 2006, the IDF failed to employ its Cavalry formations. One of its tank battalions drove blindly into anti-tank ambushes, leading to casualties, confusion and delays at the beginning of its operation.[14]

The robust capabilities of the Cavalry squadron provide the BCT a formation that can fight for information and preserve combat power against full-spectrum threats. The mixture of mobile, protected, precision firepower and dismounted scouts provides security and operability within natural or manmade terrain.

Understanding that future conflict has a high likelihood of being within urban terrain, contact with populations will occur. The application of human collectors will remain critical on the battlefield of 2025, and the mixing of collection capabilities from human to signal to aerial under one command will greatly increase the BCT's information-collection capacity.

Finally, this task organization will unify doctrine for the Cavalry squadron, troop and platoon. The same basic organization and tactics will apply throughout; only the platform will change from a tank/CFV mix in the armored BCT, or a Stryker/Mobile Gun System or ATGM combination in the Stryker BCT, or a Light Reconnaissance Vehicle (LRV) / LRV gun-system mix in the infantry BCT.[15]

Equipping Cavalry squadron of 2025

The Cavalry squadron must be able to conduct information collection and provide security for the BCT. This

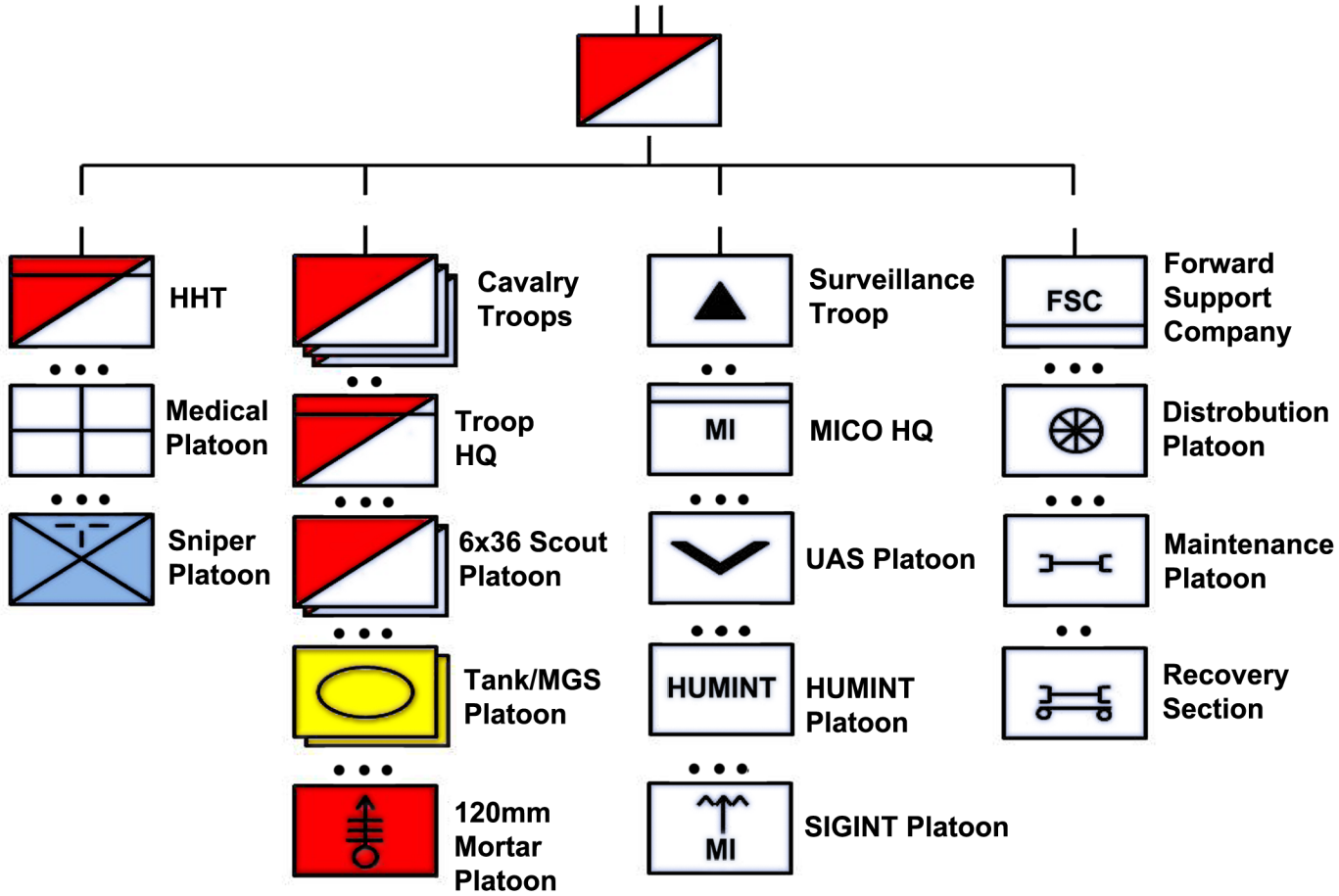

Figure 2. Proposed 2025 Cavalry-squadron task organization.

includes activities like observing at long ranges, using aerial reconnaissance assets, disseminating and reporting information across a wide and deep OE, collecting HUMINT when in contact with the local populace, cueing additional reconnaissance or offensive assets, and fighting for information in an effort to successfully shape the brigade fight. To do this, the Cavalry squadron of 2025 needs the right combination of communications capabilities; dismounted, mounted and aerial optics; HUMINT collection; and vehicle capabilities.

The most important asset Cavalry scouts have is the ability to communicate. During the Battle of 73 Easting, the continuous, detailed reporting from 2nd ACR's lead elements allowed follow-on forces to maintain and exploit the initiative. During the 2006 Israel/Hezbollah War, Hezbollah was able to intercept Israeli communications and exploit this advantage.[16]

The threat and OE of 2025 will demand the ability for scouts to communicate securely across a wide and deep front. They will also need to transmit data such as live feeds, pictures and sketches to their parent unit to answer the commander's priority information requirements (PIR). This will require a combination of long-range frequency modulation, high frequency, ultra-high frequency, tactical satellite and secure data systems. The continued use of Force XXI Battle Command Brigade and Below-Joint Capabilities Release and similar technology will allow the squadron commander to exercise secure mission command during reconnaissance and security operations.

To collect information in the future OE, Cavalry scouts must be able to observe named areas of interest. They will do this dismounted, mounted and aerially during daylight and hours of limited visibility. The 2nd ACR had this capability mounted on its tanks and CFVs during the Battle of 73 Easting, providing it a marked advantage over the threat. By comparison, the IDF relied too heavily on satellite and aerial surveillance against a decentralized threat that used overhead cover and camouflage to avoid this strength.[17]

Future Cavalry optics require a combination of infrared and thermal capability, as well as laser-rangefinder (LRF) and Global Positioning System (GPS) capabilities. The GPS and LRF capabilities will allow scouts to cue combined arms and joint assets such as artillery, close-combat attack helicopters and close-air-support aircraft. These optics need to be tied into communications systems to allow scouts to securely pass pictures and live feeds back to the parent unit. Dismounted scout teams need an optic that can observe and identify mounted targets at three to five kilometers and dismounted targets at two to three kilometers. This will allow them to retain standoff from the threat's direct-fire systems.

Scout vehicles should have a telescopically mounted optic system that can identify mounted targets at 20 to 25 kilometers and dismounted targets at 15 to 20 kilometers. This will maintain standoff and allow mounted scouts to observe from behind intervisibility lines without exposing their vehicles' thermal signatures.

For aerial information collection, scouts need an UAS system at every echelon – from the dismount team to the squadron. These UAS should be man-portable at the team level and scale up in size and capabilities. Ideally, these UAS should be vertical-takeoff capable to reduce exposure during takeoff and landing.

These optical capabilities will allow the Cavalry scout of 2025 to collect information during any conditions to succeed in reconnaissance and security missions.

For HUMINT collection, the scout of 2025 must understand the OE using the operational variables of political, military, economic, social, information, infrastructure, physical environment and time. The ability to communicate with the local populace can garner valuable information that answers the commander's PIR. This was a critical factor to the IDF's success during the Second Intifada, but a lack of local knowledge hindered its operations in southern Lebanon in 2006.[18]

To do this, the Cavalry squadron must leverage the surveillance troop's HUMINT-collection platoon and integrate those Soldiers into dismounted patrols. These HUMINT collectors should have a basic language capability and a firm understanding of how to employ local-national interpreters and be equipped with a technological capability that assists with communicating in different languages. This capability exists in commercial-off-the-shelf programs.

For the scout platoon conducting reconnaissance and security missions, there are four primary considerations: stealth, mobility, firepower and protection. Cavalry units often operate far forward of the parent organization in a non-permissive threat environment. To accomplish this undetected, Cavalry units need a vehicle that has a low visual, thermal and audio signature.

The next requirement is mobility. To collect information during reconnaissance and security operations, Cavalry units will be required to travel cross-country and identify mobility corridors for follow-on units. Therefore, they require a vehicle with all-terrain capability that leaves little noticeable trace on the terrain. For this reason, a wheeled all-terrain vehicle would be preferred over a tracked vehicle.

The third most important requirement is firepower. The ability to fight for information and destroy threat reconnaissance assets is critical when facing the hybrid threat. The proliferation of advanced armor will require a suitable direct-fire capability such as a 30-millimeter main gun and advanced ATGMs to allow Cavalry units to fight for information. The ATGM should have a range of five to seven kilometers, a dual-head warhead to penetrate reactive armor and a non-line-of-sight-capable sensor-shooter link.

The final, but certainly not least-considered, requirement is protection. Any Cavalry vehicle must be able to survive chance contact with the enemy and allow the unit to maintain contact while reporting timely and accurate information. Therefore, a vehicle with the ability to add more armored protection packages based on the mission variables would best meet this requirement and allow commanders to balance protection against the other competing requirements.

The communication, optical, HUMINT and vehicle capabilities outlined here

will no doubt evolve the Cavalry squadron of 2025 to allow them to more effectively observe the enemy more accurately at greater distances, use aerial reconnaissance assets, disseminate and securely report information across a large OE, collect HUMINT and fight for information when necessary.

Training Cavalry leaders of 2025

Training the Cavalry force of 2025 requires changes across the institutional, operational and self-development training domains. In the institutional domain, it requires linking career advancement to successful completion of reconnaissance and security schools. Operationally, Cavalry squadrons have to transition from a strictly reconnaissance focus to one that incorporates security operations simultaneously in the future OE. Also, Cavalry leaders need to read, think, discuss and write about historical reconnaissance and security operations as well as in the future OE.

The Maneuver Center of Excellence has consolidated the Reconnaissance and Surveillance Leaders Course (RSLC), Army Reconnaissance Course (ARC) and Cavalry Leader's Course (CLC) into the Department of Reconnaissance and Security. This provides a tiered system of reconnaissance and security training in the institutional domain.

To realize the full capability of this department, these schools need to be tied to the career advancement of enlisted and commissioned Cavalry leaders:

- The 19D sergeant is a graduate of RSLC;
- 19D staff sergeants and 19A second and first lieutenants are graduates of ARC;
- 19D sergeants first class and 19A captains are graduates of CLC.

Implementing these changes will provide an institutional glide path for Cavalry leaders and ensure they are prepared to conduct reconnaissance and security operations in 2025.

In 2006, the IDF shifted the Cavalry's focus from reconnaissance and security to primarily surveillance. When the IDF attempted to use ground forces, they lacked the skills necessary to use reconnaissance and security, resulting in a disastrous ambush on an armored battalion.[19] Therefore, Cavalry squadrons and BCTs must train for and conduct reconnaissance and security operations against the nation-state and hybrid threat.

Cavalry leaders must also undertake a concerted effort to self-develop their reconnaissance and security skills and to encourage their subordinate leaders to do the same. The Maneuver Self-Study Program provides a base from which to implement such a program in the Cavalry squadrons of 2025. Cavalry leaders at all levels must read, think, discuss and write about their profession, sharing lessons-learned and proactively preparing for future operations.

The second-order effect of such a program in Cavalry squadrons is to advocate for the appropriate use of the force and give BCT commanders the information needed to do so. The third-order effect will be bottom-up refinement of reconnaissance and security doctrine to reflect the lessons-learned from recent engagements and training exercises.

Conclusion

To be successful against nation-state and hybrid threats in the OE of 2025, the Army's BCT requires a fully capable Cavalry squadron that can conduct both reconnaissance and security operations in proximity to the enemy and civilians. The proposed organizational, equipment and training changes will better enable BCT commanders to conduct unified land operations in an era of persistent conflict.

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Notes

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[16] Johnson.

[17] Ibid.

[18] Ibid.

[19] Ibid.

Acronym Quick-Scan

ACR – armored cavalry regiment
ARC – Army Reconnaissance Course
ATGM – anti-tank guided missile
BCT – brigade combat team
BSTB – brigade special-troop battalion
CFV – Cavalry Fighting Vehicle
CLC – Cavalry Leader's Course
FM – field manual
GPS – Global Positioning System
HUMINT – human intelligence
IDF – Israeli Defense Force
LRF – laser rangefinder
LRV – Light Reconnaissance Vehicle
OE – operating environment
OP – observation post
PIR – priority information requirement
RSLC – Reconnaissance and Surveillance Leaders Course
UAS – unmanned aerial system

2015 Starry Writing Competition winner to be announced soon

The 2015 Starry writing competition winner will be announced soon but date to be determined — possibly about the time the Armored Force celebrates its 75th anniversary. (It was created July 10, 1940.) ***ARMOR*** plans to publish the winner's article in the July-September edition.

A Professional Warfighter for Any Platform

by CPT Luke C. Bowers

Commanders and units are often asked to accomplish more with less. It's a timeless request, but as leaders, we must be creative to overcome our finite resources and accomplish the mission in spite of the immediate difficulties. The purpose for this article is to discuss an approach to training an armor company for both traditional combat on tanks and as a motorized, or truck, configuration to create more versatility with the same personnel and different equipment.

Armor companies adapted wheeled configurations to execute counterinsurgency-focused operations for most of the war on terrorism; however, the transformation often didn't address supplemental tasks of wide-area security (WAS), stability and contingency missions. There are a number of challenges inherent in reconfiguring and reinventing an armor company, but the lessons are even more important now in an environment of fiscal and personnel constraints and challenges. The following emphases address themes of how to accomplish more with less, efficiency in training and generating versatility for an organization's capabilities in tactical and operational employment.

Efficiency for armor-company training

There is little doubt that armored forces, with their speed and shock effect, will become antiquated and unwanted in future conflicts. In the meantime, however, armored formations must certainly continue to train core mission-essential task list (CMETL) tasks to develop and sustain proficiency; this must occur with the best management of time and resources.

To this purpose, the combined-arms breach task remains the standard for armored-warfare maneuverists to train. This task is an excellent training objective; it incorporates many supporting and collective tasks for the maneuvering platoons, attachments and enablers. Commanders can develop platoon collective-training strategies that emphasize the supporting collective tasks of the breach and see great payoff and efficiency of time and resources that indirectly support other company and platoon mission-essential tasks (MET).

An efficient scenario of a company could look like:

- Company team conducts a movement-to-contact through an enemy disruption zone;
- Team destroys security forces to accomplish a react-to-contact;
- Team identifies a planned or suspected obstacle in the battle zone;
- Team initiates and controls fires in preparation of the breach;
- Team conducts the obstacle breach (augmented with engineer assets or not);
- Team conducts the attack through the remaining battle zone; and
- Team culminates with a defense established in the enemy support zone to defeat the counterattack.

This approach is linear on a training battlefield, progressive in difficulty and encompasses mostly all the standard armor-company METs, creating efficiency at the company level.

Also, the training concept can be exercised in digital environments and simulators during various phases of a training cycle. Commanders can prime platoons and sections with tactical scenarios from history and tactical-decision exercises to validate future company collective-training standards and forecast deficiencies in understanding early, possibly identifying necessary leader-development program topics. Revisiting the virtual environments (combat training centers or installation training areas) enables the certifying leadership to assess tactical understanding and mission-command proficiency while saving on unnecessary operational tempo (OPTEMPO), mileage and Class III, V and IX costs.

Understanding and using this approach allows development of a similarly efficient model for platoon training. Platoon training on *offense* tasks enables the best use of land and fuel resources. Collective tasks such as "conduct an attack" and movement-to-contact will test and develop the maneuver principles, such as tempo, that will pay off during company maneuver training or operational deployments. Platoons achieve high payoff with situational-training exercises (STX) that train land navigation, change-of-formations drills and transitions-of-movement techniques. These greatly support proficiency and can be increasingly effective with the integration of blank ammunition and the Multiple Integrated Laser Engagement System with a platoon force-on-force STX scenario.

Digital trainers like Virtual Battlespace 3 and Tactical Exercise Without Troops (TEWT), or integrating a terrain walk, are best for developing a platoon- and company-defense training strategy. The fundaments of engagement-area development, trigger-based decisions and engagement criteria/techniques are maximized with these tools. The capability to create multiple environments can be used to confirm strengths and test weaknesses of defense plans, and they have a number of instant and complementary after-action-review capabilities for assessment and teaching. Integrating a sister company or platoon into the virtual fight can provide objective feedback for the training as well. TEWTs are another method that support training important defense concepts without incurring the consumption of resources and vehicle OPTEMPO.

Commanders and training planners can also achieve efficiency and resource conservation by training movement and maneuver techniques in humvees. This is an excellent training option to execute concurrently with a tank focus but also as a transitioning and familiarization event if the unit must operate in a motorized configuration for future missions.

Develop assigned METL

Armor companies may conduct an operational deployment with a requirement to operate on wheeled platforms (humvees or mine-resistant, ambushed-protected vehicles) exclusively or in addition to other vehicles. This scenario is very common and increasingly necessary, as commanders demand more options and capabilities from a slimming force – especially in stability environments where the psychological or environmental impact of armor is not conducive to operations. Armor leaders and their formations are well equipped to provide more capabilities.

The unit's initial challenge is to identify the METL and collective tasks needed for its assigned mission or contingency requirements. A number of companies are motorized by an modified table of organization and equipment (MTOE), such as the infantry brigade combat team's (BCT) Cavalry squadron; however, these troops are equipped with more personnel, anti-armor and surveillance equipment that will likely be unavailable for an armor company and therefore are not suitable for comparison. Also, these units have METLs for reconnaissance, offense and defense missions that may not necessarily be required of an *ad hoc* motorized armor company.

The company commander will need to establish an assigned METL (AMETL) based on the higher headquarters' guidance. The AMETL crosswalks should build on the tasks that support WAS and stability operations.

Assuming proficiency is already achieved, or planned, through CMETL tasks, an example of WAS/stability METL and METs follows:

- Conduct an attack;
- Conduct area security;
- Conduct stability tasks;
- Perform basic tactical tasks;
- Conduct a movement-to-contact;
- Conduct a mounted roadmarch;
- Secure civilians during operations;
- Conduct a raid;
- Conduct a cordon and search;
- Secure a base camp;
- Defend in an urban area; and
- Secure routes.

Training and sustaining proficiency in the METs for platoons will likely require the same efficiency of time and conservation of resources as heavy-armor STXs. Initially, investing in high-quality training for individuals, small teams and sections will provide the greater return for platoons and companies' collective-task training and will prepare platoons for decentralized operations. Many of the tasks and missions of WAS/stability require greater decentralization of control and more independent action at the section and crew levels. This is best to develop

early for establishing confidence in junior leaders.

Close-quarters marksmanship and close-quarters battle are excellent primers that develop practical skills, lower-level teamwork and *espirit de corps*; instill confidence; and highlight talented junior leaders.

The next focus for progression and team/crew development is unstabilized gunnery. Unstabilized gunnery will enable more crew cohesion and confidence. If the material resources exist to field more than four guntrucks, a five-truck platoon configuration provides an opportunity to challenge upcoming leaders who have shown potential as vehicle commanders. Companies attempt to balance crew-served weapons, if resources permit, to achieve an even distribution of M2, MK-19 and M240B systems. This will provide greater options for escalating force and balancing ammunition's penetrating effects and surface danger zones in urban population centers.

Offensive collective tasks such as "conduct a raid" are excellent for building a training scenario with complexity and integrating other individual, supporting and collective tasks. An ideal scenario can build from a short-notice alert of a quick-reaction force, requiring hasty troop-leading procedures (TLP) and the fragmentary-order process; this can progress into tactical movement, integrating ambushes with improvised explosive devices enroute, and culminate in a cordon and search/raid. This efficient scenario challenges platoons and easily accepts supplemental tasks like "treat a casualty" and "process detainees" for efficiency and complexity.

Tank-unit task organization

Potentially, the greatest challenge to reorganizing the tank platoon and company is task organization and personnel management. Of immediate concern is adapting the 16-Soldier MTOE manning force of a tank platoon into a unit that can operate mounted and dismounted, and have enough combat power to accomplish tasks without sacrificing force protection and sustainment. Commanders and platoon leaders will need to continuously assess mission requirements and conduct task organization as appropriate.

During operations for Spartan Shield (Kuwait), two distinct platoon configurations were organized and tested using five humvees per platoon. The first model emphasizes the maximum number of personnel for vehicle-dismounted operations when the commander has a greater need for personnel to interact with civilians, search buildings or operate in vehicle-restricted terrain.

The commander achieves this capability by organizing two platoons with a five-truck configuration and cross-leveling the third platoon as an infantry platoon, with a section to each of the motorized platoons. The commander can attached these third-platoon sections as combat-power multipliers to the platoon, or he can use the platoons to move the sections onto an objective or dismount point, and enable the sections to consolidate for their mission tasks as a maneuvering element.

Clear establishment of authority and responsibility for mission accomplishment ought to be developed during this model, especially when two platoon leaders are organized in the same formation.

The second model is a platoon "pure" organization consisting of platoons organized with four or five humvees. Equipping the platoons with five humvees is ideal; this provides better adaptability for accepting attachments and enablers, and for retrograding detainees/enemy prisoners of war. The platoon-pure model mirrors tank-platoon manning but provides another crew from a mature noncommissioned officer (NCO) – possibly the platoon leader/platoon sergeant gunner and loaders. This configuration can also condense to four vehicles to create more capacity for dismounting Soldiers for special teams and tasks.

This model better supports decentralized platoon missions such as patrolling, key-leader engagements, route reconnaissance and security.

The need and assignment of special teams, in either configuration, will quickly commit the combat power at the platoon level. This element of troops-to-tasks must be carefully considered for platoons conducting decentralized missions. Many Soldiers or sections will have to own multiple responsibilities – for example, "aid and litter" and site exploitation – therefore, prioritizing efforts during TLPs will be essential. Since executing special-team efforts simultaneously will not be likely, platoons will have to conduct these sequentially.

Training proficiency on searching techniques, detainee processes and casualty-evacuation tasks, for example, will become high payoff training and rehearsal foci for platoons. Soldiers will require the capacity to perform and rapidly transition among the tasks during missions to mitigate the limited combat power available.

Manning and value of CoIST

In addition to the special teams that enable mission execution and force protection of platoons, the company must organize and appropriate personnel to a company intelligence-support team (CoIST) to support intelligence processing, planning and targeting during WAS/stability operations. The armor company can build this team using the best common practices and tactics, techniques and procedures of the Operation Enduring Freedom/Operating Iraqi Freedom periods.

The company fire-support officer (FSO) is best suited to serve as company lead for the CoIST. The company's targeting efforts and intelligence requirements will often be complementary or have commonality, and thus are well nested with the FSO.

The company's fire-support team is likewise naturally well nested with the FSO; however, the team should also be fielded from analytic talent within the company. A composite of members from the platoons, at least one per platoon, with demonstrated cognitive and problem-solving skills (it is also beneficial if they have strong social skills for dialogue and street side engagements) should be identified and selected for the CoIST as habitual members. The selection and assignment of these personnel should be treated like an additional duty or crew stabilization. The Soldiers should not transition often so

they can build familiarity with processes and analytical tools.

While wholly organic to the platoon, they become the primary candidates and recipients of specialized intelligence and language training. This approach allows the company to focus its efforts, resources and schooling allocations for building skills and proficiency at the level where the intelligence-collection effort will truly occur.

The platoon-developed approach also preserves the headquarters section's manning and capabilities instead of attaching these Soldiers for each mission. Once trained on the CoIST's principles and functions, these members become valuable assets to platoon leaders for analyzing missions, debriefing company and battalion intelligence estimates, and building platoon operations orders. Also, when selecting a NCO, this method develops a Soldier who can communicate priority intelligence requirements and interpret observations in an informal manner (common vernacular). This enhances "every Soldier a sensor" value and effectiveness.

Today's armored warriors and organizations must continue to evolve beyond dependency on a single vehicle platform – for instance, tanks – and practice prudence with resource usage. Currently, the nation and Army can't afford the luxury of a single-purpose tool; the need for multi-faceted and versatile units is great. Training and reconfiguration occur regularly across BCT formations; it is time to codify this in doctrine for application and common understanding for current and future leaders who will inherit our armored formations. The future U.S. Armor Corps should build doctrine and ethos for employing *armored warfighters* instead of *tankers*.

Cavalry scouts (19D military-occupation specialty (MOS)) who train using humvees, Strykers and Cavalry Fighting Vehicles (multiple platforms) serve as a model for versatility and capabilities. Broadening MOS 19K's skills will increase utility to the force and preserve the meaningful presence of armored warfighters in MTOE organizations.

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Acronym Quick-Scan

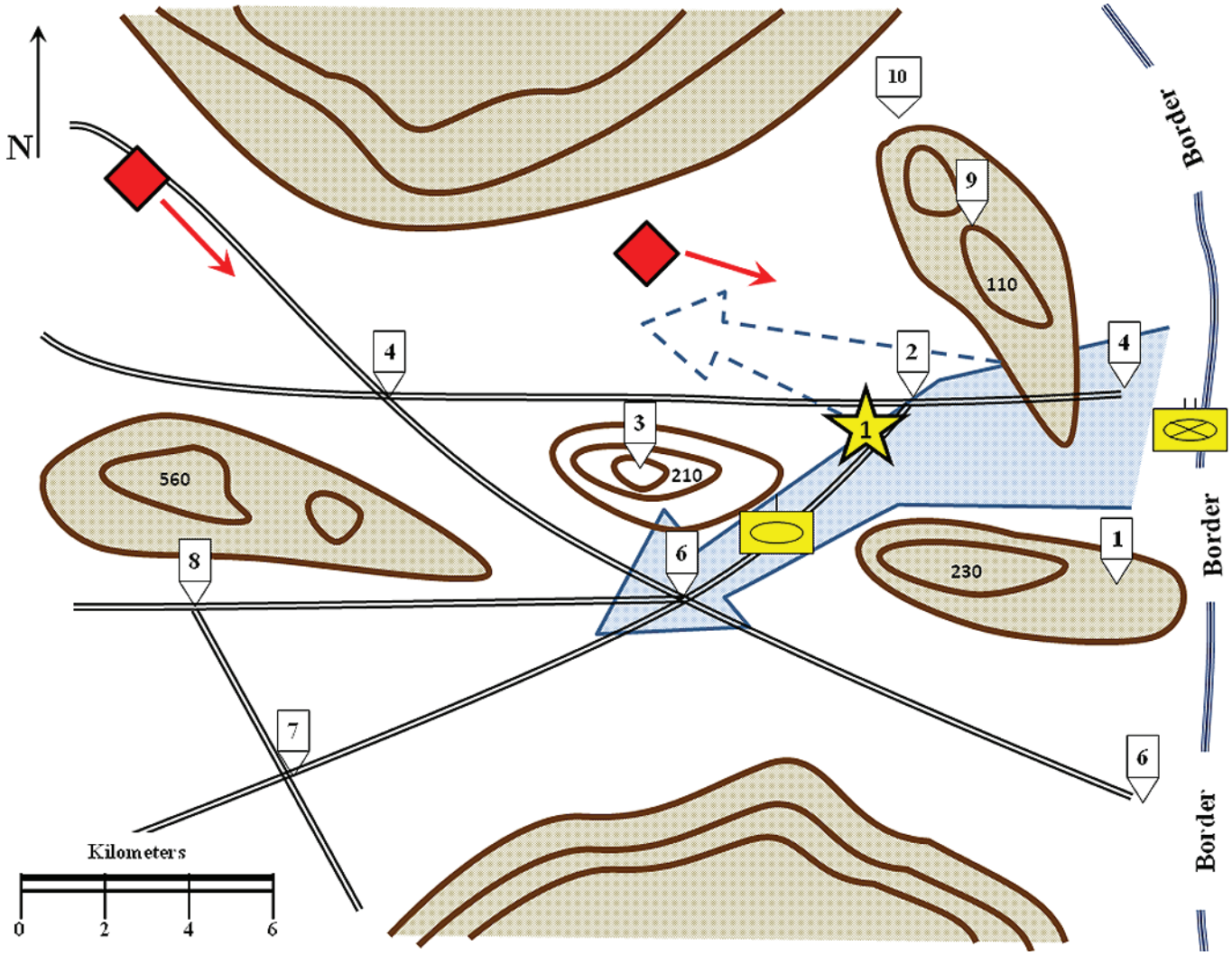
AMETL – assigned mission-essential task list
BCT – brigade combat team
CMETL – core mission-essential task list
CoIST – company intelligence-support team
FSO – fire-support officer
MET – mission-essential task
METL – mission-essential task list
MOS – military-occupation specialty
MTOE – modified table of organization and equipment
NCO – noncommissioned officer
OPTEMPO – operational tempo
STX – situational-training exercise
TEWT – Tactical Exercise Without Troops (digital trainer)
TLP – troop-leading procedures
WAS – wide-area security

In recognition of the U.S. Army's 240th anniversary June 14, 2015, the Government Publishing Office (GPO) Bookstore assembled a collection of new and popular publications focusing on military history. Browse GPO's U.S. Army Center of Military History collection at http://bookstore.gpo.gov/agency/1061?field_format_value_many_to_one=All&sort_by=created&sort_order=DESC&items_per_page=20.

Tactical Vignette 14-02: Author's Solution to 'Showdown in the Central Corridor'

When you take some time to think about it, every operation is in some form a movement-to-contact. Whether moving to position for a deliberate attack, conducting counter-reconnaissance during a defense or executing movement in stability operations, each possesses key elements of a movement-to-contact. Units conduct a movement-to-contact when the enemy situation is vague or not specific enough to conduct a deliberate attack, and even then, the approach to a deliberate attack should be organized around a movement-to-contact's guiding concepts. Consequently, it should be a standard operation for leaders to master.

Further, our responsibility as leaders at all levels is to manage transitions and, at its core, a movement-to-contact is simply a temporary state before a formation transitions to another



type of operation. When conditions are properly set, formations possess the capacity to quickly transition to the attack or defense, and leaders can identify opportunity to seize the initiative, a movement-to-contact facilitates accomplishing subsequent more-decisive operations.

Doctrinal analysis and interpretation

Field Manual (FM) 3-90-1 states "a movement-to-contact employs purposeful and aggressive movement, decentralized control and the hasty deployment of combined-arms formations from the march to conduct offensive, defensive or stability tasks."[1] Based on that definition, doctrine describes the fundamentals of a movement-to-contact as:

- Focus all efforts on finding the enemy.
- Make initial contact with the smallest force possible, consistent with protecting the force.
- Make initial contact with small, mobile, self-contained forces to avoid decisive engagement of the main body on ground chosen by the enemy. (This allows the commander maximum flexibility to develop the situation.)
- Task-organize the force and use movement formations to deploy and attack rapidly in any direction.
- Keep subordinate forces within supporting distances to facilitate a flexible response.
- Once in contact, maintain contact regardless of the course of action adopted.

While a thorough definition and account of fundamentals, perhaps we can restate them in simpler terms for our use. Restated, they could read:

- Find the enemy.
- Gain and maintain contact with the smallest force possible.
- Retain freedom of maneuver.
- Rapidly transition to attack, defense or retrograde operations.
- Finish decisively.

Tactical vignette task and purpose

2/1 Cavalry:

Task: Destroy the brigade tactical group (BTG).

Purpose: Prevent the motorized rifle division from crossing east of the international border.

1-8 Cavalry:

Task: Destroy the BTG's advance guard.

Purpose: Enable 2/1 Cav to destroy the main body.

Company A, 1-8 Cav:

Task: Fix and destroy the forward reconnaissance detachments.

Purpose: Enable 1-8 Cav to destroy the advance guard.

Basic organization and critical tasks

The ultimate purpose of a movement-to-contact is to gain contact with the enemy. As our fundamentals dictate, ideally, we make contact with the smallest force possible to allow us to preserve main-body combat power so it can deploy in a position of advantage. This allows us to seize and retain the initiative. The basic formation for a movement-to-contact consists of an advance guard, main body and flank- and rear-security elements. However, based on the formation's size, it is often problematic to generate forces to accomplish these associated tasks and purposes without substantially degrading the main body. Therefore, at a minimum, a movement-to-contact has an advance guard and main body, and the commander looks for other methods to gain flank and rear situational awareness. Before we get to a solution for the tactical vignette, let us look at the key components of a movement-to-contact.

ADVANCE GUARD. The advance guard ensures the uninterrupted advance of the main body. To do this, the advance guard moves ahead of the main body and works to 1) find the enemy, 2) develop the situation for the commander, but most importantly, 3) facilitate the main body's deployment at a time and place of the commander's choosing. As a result, the designated formation should possess a degree of mobility, firepower and survivability that enables these tasks. Ideally, the advance guard operates within supporting range of the main body's weapon systems, is often the initial priority of fires and possesses a mixture of combined-arms capabilities appropriate to the mission. It should be both lethal and mobile. Normally, the advance guard conducts the following critical tasks:

- **Gain and maintain contact.** Reconnaissance assets typically conduct zone or area reconnaissance focused on finding the enemy, obstacle identification and pulling the advance guard into a position of advantage to assist in developing the situation for the main body. Following reconnaissance handoff, the advance guard maneuvers to determine enemy weaknesses for further exploitation by the main body.
- **Disrupt the enemy.** Once the advance guard begins to maneuver on the enemy, it focuses effort on identifying enemy gaps and key terrain, along with destroying command-and-control (C2) elements that serve to disrupt the enemy effort. The intent is to set conditions for the main body to exploit the enemy's weaknesses.
- **Fix the enemy.** The advance guard then, within its capability, maneuvers to fix the enemy main body to prevent it from achieving a position of advantage over the friendly main body.

MAIN BODY. The main body is the element designated to conduct the decisive operation resulting from gaining contact. As such, its organization varies based on the amount of combat power the commander task-organizes to the various security elements supporting the main body. However, the main body typically transitions from an approach march to either a hasty attack or a defense ideally positioned to take advantage of an enemy's weakness through maneuver.[2] As such, its task-organization should reflect the ability to maneuver to conduct

decisive operations. The typical critical tasks the main body conducts are:

- **Maneuver.** Tempo is the key to successful maneuver and transition from the approach march into another type of operation. Ideally, the main body is capable of deploying faster than the enemy deploys and thereby forces the enemy to react to friendly maneuver. Critical to this concept is the successful battle handoff and passage of lines between the security forces (usually the advance guard) and the main body. The object is to place the main body's strength against the enemy's weaknesses as swiftly as possible, and the advance guard and reconnaissance elements serve to facilitate the commander's knowledge of those weaknesses. Effectively, this is what developing the situation means.

- **Follow-on actions.** This task accomplishes the overall task and purpose of the operation and typically serves as the decisive task. The subordinate formation's task and purpose nest within the higher headquarters to ensure complementary efforts. The result of the maneuver is ordinarily a transition to an attack, or depending on the terrain and enemy, transition to a defense.

Analysis of tactical problem

What we know. As we said earlier, we know we are in visual contact with 20 vehicles moving east and starting to deploy north of Checkpoint (CP) 3. (We suspect this is the reconnaissance detachment.) We also know that there are 35 vehicles moving rapidly toward CP 4. (We suspect this is the advance guard.) Our hasty time-distance analysis puts the suspected reconnaissance detachment in position to affect our main body before it reaches CP 2. With that, the most important fact we know is that we are in contact (visual only at this point). We are unable to receive battalion guidance. We also know that our task is to destroy the reconnaissance detachment so that our battalion can destroy the advance guard.[3] However, the developing situation causes some concern of whether that is still relevant.

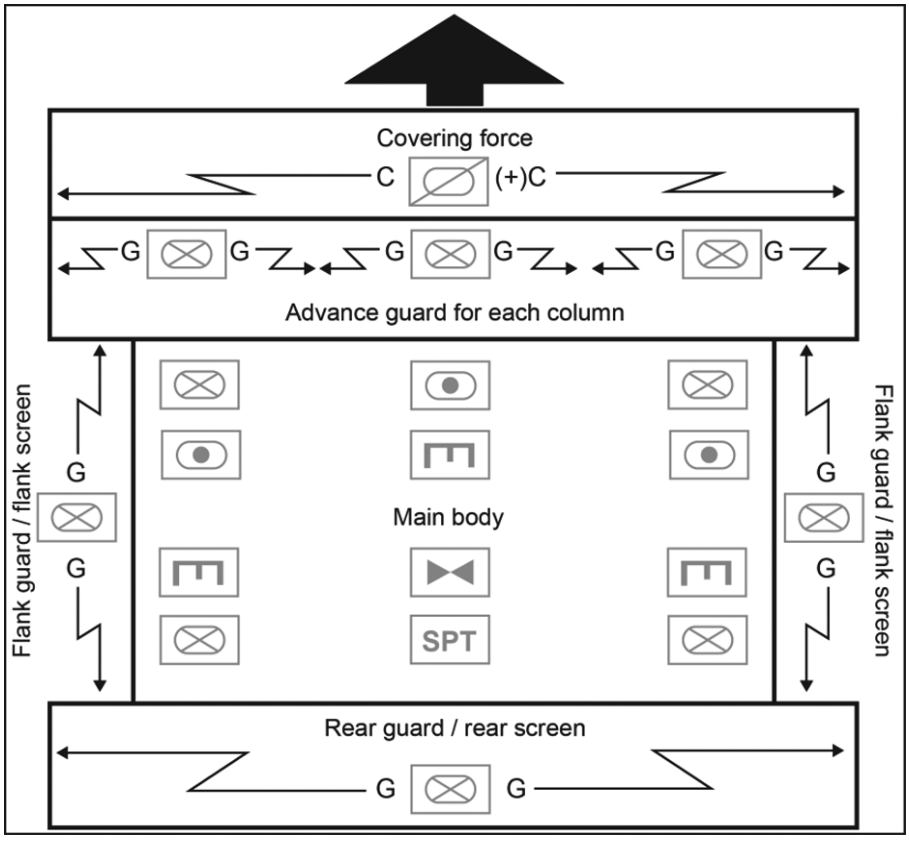


Figure 1. Force organized for a movement-to-contact. *(From FM 3-90-1, Page 2-2)*

What we think we know. We will assume that the enemy's organization consists of one to three combat reconnaissance patrols, a reconnaissance detachment, an advanced guard, a main body and a reserve. Further, we will also assume that the enemy will flow to success, meaning that where he finds the least resistance, he will move his follow-on echelons, rather than reinforcing failure. We can also assume that our separation from the main body is allowing the enemy unhindered deployment against our main body.

Given this information, we have several options. First: we are in contact and must begin developing the situation for the main body; however, our decision is complicated. Do we assume that the contact to our north is the reconnaissance detachment and "action right" to address it in accordance with our stated task and purpose? Alternatively, do we assume that we should ignore contact with the reconnaissance detachment, pass it off to our main body and attempt to gain contact with the expected enemy main body moving from our east? Are there other options?

Option 1: Engage reconnaissance detachment

Our task clearly states to destroy the reconnaissance detachment. However, how do we know if the contact to our north is the reconnaissance detachment? Normally, intelligence sections (S-2s) are best at classifying echelons in that they have a better situational understanding of often-conflicting spot reports.[4] In this case, based in some part on our inability to talk to battalion, we are unsure of our contact. Nevertheless, what we do have is a spot report of an element that meets the basic outline of what we expect of a reconnaissance detachment's composition (20 vehicles deploying to our north).

We have several other considerations. First, to stay true to our fundamentals, we must work to maintain contact (ideally with the smallest force

possible), and that dictates a transition from the march to maneuver against the suspected reconnaissance detachment. This action could disrupt or fix the reconnaissance detachment and, depending on how we capitalize on the terrain, we could destroy it. However, if we wait too long, the main body will pass through CP 2 and begin receiving direct fires – violating our overall purpose. Further, and perhaps most importantly, as we maneuver against the reconnaissance detachment, we expose our own flank to the oncoming advanced guard.

Option 2: Bypass reconnaissance detachment, engage advanced guard

Option 2 is to continue movement toward CP 6 and find suitable ground to establish a hasty defense between Hills 560 and 210 oriented on CP 4. The intent of this option is to turn the advanced guard toward CP 2, thereby forcing them toward our main body. The assumption is if we can effectively turn the advanced guard, then the main body would be in position to both destroy the reconnaissance detachment and disrupt the advanced guard. Many assumptions roll into this decision; however, we do address the battalion's overall task to destroy the advanced guard, but we also fail to meet our specified task to destroy the reconnaissance detachment.

That said, there are many permutations of dealing with the reconnaissance detachment (should we choose this course of action), but mostly they fall into either "maintain contact" or "report the reconnaissance detachment and continue mission."

Author's solution

"Apache, this is Apache 6. FRAGO follows.

"Blue has visual contact with approximately 20 vehicles moving north of CP 3. I don't know if that is the reconnaissance detachment or not, but we can't let something that large affect our main body; therefore, we are going to attack to destroy that formation before they reach CP 2 and are able to fix the battalion.

"My intent is to gain contact, develop the situation and then either attack or find good ground to defend. I expect that once we gain contact, they will try to fix us and bypass us to the east between CP 2 and Hill 110; we cannot let that happen. Bottom line, that formation cannot put direct fire on the main body.

"Tasks to subordinate units:

- Blue (tank). Reverse march and maintain visual contact on the lead enemy elements. Find good cover and wait for White to move on-line.
- White (tank). Move to Blue's left flank and establish a support-by-fire position overwatching Blue's movement. Once on-line, begin bounding overwatch with Blue to gain contact. If you do not get contact, press toward CP 2 as quickly as you can so we can establish a hasty defense protecting the main body's move south of CP 2.
- Red (mech). You are our reserve. Stay with me and be prepared to transition to hasty attack or defense.
- Apache Redleg. Priority of fires is Blue. I want to use fires to disrupt and assist in breaking contact.

"Coordinating instructions:

- Stay mobile; we cannot get fixed. The idea is to stay between our main body and their main effort.
- Engagement criteria. Engage C2 vehicles, armor and anti-tank systems.
- Bypass criteria. Bypass one to three vehicles. Focus efforts on greater than three vehicle formations."

Rationale and conclusion

Generally, this solution lines up with the first option based on the rationale that we must gain and maintain contact above almost all other considerations. Given this, there are still some concerns based on this decision.

First, the lack of comms, combined with the separation from the main body, presents the very real consideration that we have to deal with the gap in both guidance and supporting fires. This gap really drives our ultimate decision and outweighs the perceived benefits of moving toward the advance guard. Since the spot report came across Blue Force Tracker, you can assume the battalion and brigade commanders are working on how to deal with the advance guard, but you cannot assume that they know about the reconnaissance detachment moving into their flank; therefore, that has to be your priority.

Finally, what this scenario provides is reinforcement of units having well-practiced standing operating procedures, detailed engagement criteria and well-understood bypass criteria. In the lack of guidance, units and leaders make many decisions within the left and right limit of these types of coordinating instructions.

As units discuss this and other tactical scenarios, it is useful to take some time and discuss how current operating procedures would or could be used within the scenario. As always, the more we talk about these and other tactical problems, the better we are at solving the ones to come.

LTC Scott O'Neal is a lifelong student of the profession who believes in the detailed practice and study of tactics. He has had the privilege of leading Soldiers from platoon through battalion level and served on a variety of operational staffs throughout his career; his duty assignments have included squadron commander, 2/3 Cavalry Regiment, Fort Hood, Texas; regimental operations officer, 3rd Armored Cavalry Regiment, Fort Hood; operations officer, 1/3 Armored Cavalry Regiment, Fort Hood; commander, Headquarters and Headquarters Troop, 1-1 Cavalry, Budingen, Germany; and commander, Troop A, 1-1 Cavalry, Budingen. LTC O'Neal holds a bachelor's of science degree in international and strategic history from the U.S. Military Academy, West Point, and a master's of arts degree in military arts and science from Air University.

Notes

[1] FM 3-90-1, Page 2-3.

[2] An *approach march* is the advance of a combat unit when direct contact with

the enemy is intended (Army Doctrinal Reference Publication 3-90).

[3] *Destroy* is a tactical mission task that physically renders an enemy force combat-ineffective until it is reconstituted (FM 3-90-1, C1).

[4] The contemporary threat depicted in the combat training centers constantly adjusts based on the desired training objectives. However, there was a time that the timing of the various opposing-force elements moving through the National Training Center's Central Corridor was widely known. Combat-arms officers knew the composition and disposition of the threat better than intelligence officers did, and while that time has passed, mechanized or mobile movements still require the same basic echeloning of forces and should be discussed within the overall enemy order of battle.

Acronym Quick-Scan

C2 – command and control
CP – checkpoint
FM – field manual
FRAGO – fragmentary order

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Project Warrior: Bridging the Gap Between the Operational and Institutional Domains

by LTC Chris Budihas, promotable CPT Robert W. Humphrey and promotable CPT Ian C. Pitkin

"You haven't heard? Project Warrior is back!"

Because high operational tempo and officer timelines were not able to support this great initiative over the last decade of war, the Project Warrior Program was jumpstarted by GEN Raymond T. Odierno, the Army's Chief of Staff, in Spring 2013. At its foundation, the program is intended "to infuse observations and experiences gained from multiple, immersive combat training center (CTC) rotations back into the Army through select professional military education (PME) courses."[1]

Our Army rightly recognizes that through combat deployments to Iraq and Afghanistan, our core of company and field-grade officers has built a wealth of knowledge and experience during counterinsurgency operations abroad. However, while unit training and leader development evolves as we focus on the range of military operations associated with "unified land operations through decisive action,"[2] there is extreme value in placing hand-selected, successful, post-command company-grade officers at our CTCs to serve as observers/controllers/trainers (O/C/Ts) for upward of 18 months and then placing them in the various Army centers of excellence (CoEs) as small-group leaders/instructors (SGLs). This initiative fuses these officers' operational experiences with CTC institutional experiences so they can profitably coach, teach and mentor other junior company-grade

Figure 1. A Bradley commander from 1-10 Cavalry observes an NAI in the defense. Project Warrior infuses observations and experiences gained from multiple, immersive CTC rotations back into the Army through select PME courses such as MCCC. *(Photo by Cobra Team O/C in June 2013 during NTC Rotation 13-08)*

officers, not only at the CTCs but also, perhaps more importantly, at our various CoEs' captain's career courses.

From the field to the classroom – what are we seeing?

The comprehensive list of lessons-learned – both at the CTCs and in the Maneuver Captain's Career Course (MCCC) classrooms – could fill volumes, and as the Project Warrior Program matures, there will likely be a continuous flow of recommendations and best practices pushed back out to the operational forces. As learning organizations, the relationship between the CTCs' task forces and MCCC faculty continues to grow stronger so we can collectively have a shared vision of the challenges maneuver captains are having at the CTCs – and so we at Fort Benning can address those issues in our classroom instruction and practical application. Our Project Warrior SGLs at MCCC have been the connective tissue who have facilitated this blossoming relationship between the organizations.

That being said, this article is structured to provide the reader our observations on the most significant company-level challenges observed across multiple rotations and in the classroom, involving all types of brigade combat teams (BCTs) executing a variety of missions. A number of key observations and lessons-learned are centered on leaders' ability to effectively execute each step of the troop-leading procedures (TLPs).[3] Many of these trends have residual effects and carry over to the battalion and brigade levels. By identifying and overcoming these challenges at company level, there will likely be positive second- and third-order effects at higher echelons as well.

Following are major trends observed on company-level TLPs:

- **Step 1: Receive the mission.** Company-level leaders often wait for a complete, written operations order (OPORD) from their battalion before they begin planning. Instead, when possible, leaders should initiate their planning effort before receiving the higher headquarters' OPORD. An extremely common error that continues to exist is that leaders inadvertently set themselves up for failure by immediately getting behind on the 1/3 - 2/3 rule during the first step of TLPs, further contributing to their subordinates not having time to plan and, at times, leading to mission failure – or, at minimum, friction during execution. Leaders simply do not determine their time allocations for planning, preparation or execution within the TLP process.

Figure 2. Troopers from 7-10 Cavalry report enemy contact from their dismounted observation post. *(Photo by Cobra Team O/C in November 2012 during NTC Rotation 13-02)*

At MCCC, we have instituted in all planning blocks – and encourage other company-grade-officer PME courses to do the same – the issuing of a series of battalion warning orders (WARNOs) during the company-level practical application OPORD process. This forces students to correct this deficiency and thereby reinforces parallel planning as early as possible throughout the operations process. Units in the operational Army must reinforce and emphasize parallel planning, issuing WARNOs as more information becomes available during the planning process to reinforce this practice.

- **Step 2: Issue a WARNO.** To compound the issue with Step 1, company commanders routinely fail to issue timely WARNOs to facilitate subordinate parallel planning and preparation efforts. While trying to craft a near-perfect OPORD, commanders fail to relate information from their initial course-of-action (CoA) development into their subsequent WARNOs.

MCCC currently requires students to issue complete initial WARNOs but does not require them to issue subsequent WARNOs. The SGLs coach the students to issue a second WARNO, but it is not required at this time, and we find that it is an informal measure of effectiveness to see where and when in the program of instruction students start to "get it."

- **Step 3: Make a tentative plan.** When making a tentative plan, company-level leaders often conduct CoA development sufficiently but fail to conduct CoA analysis (wargaming) before selecting a CoA. As a result, the commander hinders his ability to make accurate decisions, identify friction points and mitigate risks, then synchronize a fully developed plan in time and space. Many of the holes or gaps in commanders' plans can be identified and mitigated before execution if only they took the precious time to wargame their plan.

A wargame will give company commanders the tools (decision-support matrix/template, synchronization matrix, execution checklist, etc.) they need to accurately synchronize the warfighting functions to accomplish the mission. Without going through the mental process of considering their unit's action, the enemy's counteraction and their reaction to the enemy, company commanders fail to plan for contingencies, develop branch or sequel plans and develop the tools needed to synchronize the entire operation.

MCCC SGLs are increasing their efforts to teach and coach maneuver captains through wargaming, as institutionally the Army has been challenged in this area for more than a decade in our planning processes at the company level and above. Also, students in the battalion phases are getting a healthy dose of wargaming to standard in an effort to better prepare them as future staff officers. This is currently an unfortunate shortcoming of many battalion-level staffs. To aid the overall improvement of CoA analysis as an Army, staffs must demonstrate the value of the wargames by conducting them to standard and thus setting the example for company commanders.

- **Step 4: Initiate movement.** Commanders understand the need to initiate necessary movement prior to the execution of their mission but often lack the trust or confidence in their subordinates to execute the movement without direct oversight. One recent example from the National Training Center (NTC) highlights a mission in which a commander postponed his reconnaissance of a defensive engagement area to oversee the movement of his company into an assembly area.[4] Failing to sufficiently account for movement during the conduct of TLPs can completely desynchronize a unit's timeline. It is imperative that both institutional and operational training place a focus on fostering a certain degree of trust in and delegating responsibility to subordinate leaders.
- **Step 5: Conduct reconnaissance.** Currently, companies are severely unpracticed in planning and conducting reconnaissance in support of their operations. All tactical leaders, not just those in Cavalry organizations, have to understand reconnaissance and information-collection (IC) planning. A common trend, if not epidemic, is that maneuver commanders at all levels rarely develop IC plans in enough detail and fail to issue commander's reconnaissance guidance, which informs their maneuver plan. Reconnaissance elements and organic unmanned aerial surveillance (UAS) platforms are not effectively used to answer priority intelligence requirements or to overwatch named areas of interest (NAI) or targeted areas of interest. The root cause behind this is that commanders rarely visualize nor understand how their portion of IC ties into the higher unit's IC plan and their own ground-maneuver plan. Companies need to fight for information to increase their chances for operational success by conducting leaders' reconnaissance, using organic UAS assets and deliberately planning reconnaissance in support of their operations.

Figure 3. An M1A2 Abrams waits camouflaged for action during JRTC Rotation 13-09 at Fort Polk, LA. *(U.S. Army photo)*

Over the last year, MCCC has made major strides to overcome this institutional gap in temporal understanding of IC planning and execution, and how it's directly tied to successful mission execution. During both company- and battalion-level practical application at MCCC, students are required to develop tactically executable IC plans that their SGLs thoroughly review and critique in an effort to coach students to become more proficient in this institutional deficiency.

While it would be developmental for all officers, leaders of specialized reconnaissance units (scout platoons/Cavalry troops) should, without exception, be afforded the opportunity to attend specialized courses such as the Army Reconnaissance Course, Reconnaissance and Surveillance Leader's Course (RSLC) and Cavalry Leader's Course (CLC) to further their understanding of IC planning and operations. Doing so would increase the effectiveness of those units but would also aid in reversing the widespread lack of understanding of IC.

- **Step 6: Complete the plan.** A reoccurring CTC observation is that companies often do not incorporate the requisite amount of tactical graphic or direct fire-control measures to control maneuver and fire. During a recent teleconference with O/C/Ts from Joint Readiness Training Center (JRTC), we learned that an estimated 33 percent of company commanders were assessed to use graphic control measures "sufficiently."[5] One reason contributing to this issue is that battalion OPORDs often do

not include enough operational graphics and/or only provide intent graphics. Leaders later in the execution phase see their failure to use graphics properly when their scheme of maneuver becomes completely desynchronized and/or when fratricide occurs.

Most students report to MCCC untrained or unpracticed – though they just came from the operational forces – in the use of control measures. Therefore, MCCC SGLs spend a great amount of time emphasizing the proper use of maneuver graphics and direct fire-control measures in all modules of instruction throughout the course. SGLs ensure students strike the right balance between a lack of control measures and too many, then ensure they are using the right type of control measure within their plan's construct. The doer does what the checker checks, so increased emphasis in the operational forces through backbriefs and leader checks on subordinate graphics will help all tactical leaders to properly apply the science of control to their operations successfully.

- **Step 7: Issue the order.** The CTCs routinely state that the MCCC OPORD format and course standards are an effective model to build future company commanders who can provide logical, succinct and complete orders to subordinates. At MCCC, we found that the operational Army through a decade of war has developed a "concept of operations (CONOP) generation" of officers. Officers have turned this originally intended briefing tool into a lazy man's way to plug and play tactical operations, leading officers to simply fill in the blanks on a preformatted PowerPoint slide that has no depth of thought and fails in execution. The O/C/Ts at JRTC have recently reported that about 66 percent of company commanders use the standard OPORD format they were taught during MCCC, while 33 percent revert to a CONOP format.[6] CTC observations have concluded that mapboards and other analog OPORD products work well, but digital OPORD templates often lead to a more incomplete brief because digital formats tend to be based on CONOP templates. To fix this issue, the operational force should increase emphasis on ensuring that company-level leaders brief complete OPORDs, which facilitate a deep and shared understanding of the plan.
- **Step 8: Supervise and refine.** The CTCs often report that company-level leaders do not perform effective and thorough rehearsals before mission execution. Rehearsal guidance is supposed to be issued in the initial WARNO and then executed to enforce tactical

Figure 4. Scouts from 6-1 Cavalry react to contact following an improvised-explosive-device attack. *(Photo by Cobra Team O/C in August 2012 during NTC Rotation 12-09)*

situational awareness prior to execution by all Soldiers in the formation – while ensuring all assets and enablers synchronized in the plan. Synchronization tools such as execution matrices, decision-support matrices, IC matrices and operational graphics developed through wargaming are used during these rehearsals.

MCCC currently provides instruction on the conduct of rehearsals, and students execute seminar-level rehearsals in each module of the company and most battalion phases. We also use virtual and gaming simulations to conduct execution of students' plans to reinforce the importance of proper wargaming and rehearsals. The operational forces' battalion-level leaders need to continue this effort, conducting realistic rehearsals by forcing company leaders to have solid standard operating procedures for rehearsals so they become well practiced in their conduct.

Road ahead

The Project Warrior Program has been instrumental in MCCC connecting with the CTCs – who are conducting evaluated tactical operations in a field environment – to purposefully refine our classroom instruction to produce a better maneuver captain upon graduation. Currently MCCC has two Project Warrior SGLs, but over the next year, we are projected to increase that number up to seven. No doubt their wealth of experience from not only their time as a successful company commander but as an O/C/T will contribute to our effort to teach and prepare our MCCC students to be well prepared for the challenges ahead as they lead Soldiers in a complex world.

For this project to be successful well into the future, brigade and battalion commanders throughout the operational force must identify and recommend their strongest-performing officers for this program to their Human Resource Command branch manager. Per Military Personnel Message 13-137, officers can be identified as early as senior lieutenants and must undergo several screenings through their progression to SGL. These officers not only require a high level of institutional knowledge but also a natural ability to develop other leaders. With the right officers, the Project Warrior Program will continue to serve as a conduit to incorporate observations and lessons-learned from the Army's operational force to its institutional instruction well into the future.

LTC Chris Budihas serves as the chief of tactics at MCCC. In his 27 years of military service, he has served in all forms of Army infantry formations, including service in the Marine Corps' marine expeditionary units (Special Operations capable) as an infantryman and officer. Most recently, he commanded a Stryker battalion in 2nd Cavalry Regiment in Germany and Afghanistan. He has also executed nine combat and stability operations during his career. LTC Budihas holds a bachelor's of science degree in political science from Jacksonville State University, a master's of science degree in management from Webster University and a master's of arts degree in military operational arts and science from the School of Advanced Military Studies.

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Promotable CPT Ian Pitkin is a Project Warrior SGL at MCCC. His past duty assignments include O/C/T, JRTC, Fort Polk, LA; commander, Headquarters and Headquarters Company, 1-22 Infantry, 1st BCT, 4th Infantry Division, Fort Carson, CO; commander, Company A, 1-22 Infantry, 1st BCT, 4th Infantry Division; and platoon leader, company executive officer, and assistant operations officer, 1-187 Infantry, 3rd BCT, 101st Airborne, Fort Campbell, KY. His military schooling includes MCCC. CPT Pitkin holds a bachelor's of arts degree in political science from Kenyon College. He will be attending CGSC.

Notes

[1] Military Personnel Message No. 13-137, "Project Warrior Program Eligibility Criteria and Selection Process," issued June 3, 2013.

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

[3] Field Manual 6-0, ***Commander and Staff Officer Organization and Operations***, Chapter 10, May 2014.

[4] Monthly CTC and MCCC lessons-learned conference call, June 13, 2014.

[5] Monthly CTC and MCCC lessons-learned conference call, dated Aug. 24, 2014.

[6] Ibid.

Acronym Quick-Scan

BCT – brigade combat team
CGSC – Command and General Staff College
CLC – Cavalry Leader's Course
CoA – course of action
CoE – center of excellence
CONOP – concept of operation
CTC – combat training center
IC – information collection
JRTC – Joint Readiness Training Center
MCCC – Maneuver Captain's Career Course
NAI – named area of interest
NTC – National Training Center
O/C/T – observer/controller/trainer
OPORD – operations order
PME – professional military education
RSLC – Reconnaissance and Surveillance Leader's Course
SGL – small-group leader
TLP – troop-leading procedures
UAS – unmanned aerial surveillance
WARNO – warning order

A Look at Officer Education at the Maneuver Center of Excellence

By MAJ Amos C. Fox

The Maneuver Center of Excellence's (MCoE) Armor Basic Officer Leadership Course (ABOLC) hosted a combined field-training exercise (FTX) that brought together ABOLC, Infantry Basic Officer Leadership Course (IBOLC) and Maneuver Captain's Career Course (MCCC) students for a three-day, multi-echelon leader-development (MELD), combined-arms FTX at Fort Benning's Good Hope Maneuver Training Area (GHMTA) in December 2013 and August 2014.

More than 360 officers from ABOLC, IBOLC and the MCCC participated in the events; the students participating in the combined FTXs were all in their final phase of their respective courses. Of the 360 officers, eight MCCC students and 32 BOLC students planned and briefed troop- and platoon-level operations orders (OPORDs). Following OPORD briefs, the students led company- and platoon-level operations as part of a combined-arms team.

The exercises illuminated multiple recurring trends that crossed school and branch boundaries. Officers from both branches and from each of the three schools displayed similar deficiencies across the board. While this article analyzes specific incidents from the training, these incidents are not isolated occurrences but rather are representative of repetitive shortcomings in student performance.

These incidents serve to illustrate shortcomings in education and training across the MCoE's officer-training courses. The primary shortcomings include:

- Students did not understand combined-arms theory and the subsequent application thereof;
- Students did not understand how to effectively employ scout platoons;
- Students were not familiar with how to effectively employ indirect fires in support of maneuver; and
- Students did not plan anti-armor considerations.

The purpose in pointing out these shortcomings is twofold: one, to help the MCoE see itself; and two, to provide the operational force with ideas to assist in constructing home-station leader-development programs.

Combined FTX

Each FTX consisted of two iterations of troop-leading procedures (TLPs), followed by force-on-force operations. The students were divided into two notional companies, each with a similar task organization. Both teams consisted of a humvee-based scout platoon, a tank platoon and two infantry platoons.

The difference between the two companies' task organizations was that the attacking force had a Bradley-equipped infantry platoon, while the defending company had only two dismounted infantry platoons (Figure 2). ABOLC students manned tank crews and scout trucks, while IBOLC students manned the infantry platoons (mounted and dismounted).

The notional companies were led by captains from MCCC. Before their arrival at GHMTA, the MCCC captains were given a written battalion OPORD. The captains developed a company OPORD, briefed their OPORD to their respective company and then led the company through mission execution.

ABOLC and IBOLC students served as the platoon leaders for each mission. As such, they too received an OPORD and were evaluated by their respective cadre on their ability to conduct TLPs and lead their respective platoons during mission execution.

The companies, platoons and crews conducting the combined FTX were not organic, trained teams and units, but rather were a group of students coalesced to meet training requirements. With this in mind, the cadre was not overly concerned with how effective each team was during battle. Instead, the cadre was more concerned with student planning, decision-making and eagerness to lead because it provided a better metric for assessing a student's level of understanding and proficiency with course concepts rather than who "won" a battle.

Combined-arms theory and application

The Army defines combined arms as

Figure 1. Cadre from 2-16 Cavalry (ABOLC) and 2-11 Infantry (IBOLC) conduct a pre-mission exercise meeting in Cherry Hall, located in the Harmony Church training area of Fort Benning, GA, Aug. 1, 2014, to ensure all cadre are tracking final coordination points. *(Photo by MAJ Amos C. Fox)*

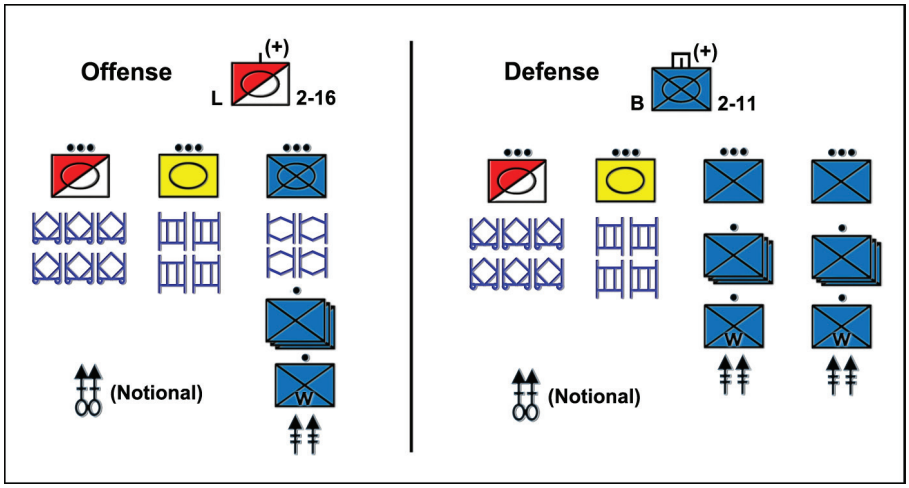

Figure 2. Task organization.

"[t]he synchronized and simultaneous application of arms to achieve an effect greater than if each arm was used separately or sequentially."[1] The Army defines combined-arms maneuver (CAM) as "[t]he application of the element of combat power in unified action to defeat enemy ground forces; to seize, occupy and defend land areas; and to achieve physical, temporal and psychological advantages over the enemy to seize and exploit the initiative."[2]

A more thorough definition of combined arms can be found in retired LTC Robert Leonhard's ***The Art of Maneuver: Maneuver-Warfare Theory and AirLand Battle***. Leonhard states, "By combining the various combat arms into a single organization, we can compensate for each arm's weakness through another arm's strength. … When employed correctly, the various combat arms serve to complement each other with respect to the enemy. In other words, for the enemy to successfully defend himself from one arm, he must become vulnerable to another. … It is for this reason we must conclude that it is generally wrong to attack an enemy system with a like system. Such a choice automatically presumes a fair fight in terrain favorable to the enemy. … Rather, we want to defeat enemy systems with unlike systems in terrain that maximizes our advantages and puts the enemy at a disadvantage."[3]

It was apparent during the combined FTXs that a preponderance of officers in leadership positions demonstrated a limited understanding of combined-arms theory. This lack of understanding became evident through the ineffective use of scout platoons and lack of anti-armor considerations, as well as poor planning and integration of indirect fires. In every case, leaders thought, planned and used each arm in isolation or sequentially, instead of in the synergistic manner called for by combined-arms doctrine and combined-arms theory. Examples to illustrate this statement will be examined on the pages that follow.

Anti-armor operations

Officers from ABOLC, IBOLC and MCCC demonstrated limited understanding of anti-armor doctrine, both in the offense as well as in the defense. Field Manual (FM) 3-21.91, ***Tactical Employment of Anti-Armor Platoons and Companies***, states that, "Anti-armor elements operate as part of a combined-arms team. [T]hey use long-range fires to destroy, suppress and/or fix enemy combined-arms forces, serve as a fixing force for other maneuver elements and employ massed fires and depth of position to achieve their desired effects."[4] FM 3-21.91 states that the fundamentals of anti-armor units include "[m]utual support, flank-shot engagement, standoff, cover and concealment, employment in depth and employment as part of the combined-arms team."[5]

Anti-armor companies and platoons were not employed during the combined FTX; however, the defending force used dismounted, anti-armor squads. The dismounted anti-armor squads achieved a small amount of success during the battles, but had the fundamentals of anti-armor employment been better understood and applied in conjunction with engagement-area development, the anti-armor

Figure 3. An MCCC captain briefs the mission to his company. Students from ABOLC and IBOLC served as platoon leaders, crewmen and infantry during the combined FTX at Patriot MOUT Site in Fort Benning's GHMTA Aug. 1, 2014. *(Photo by MAJ Amos C. Fox)*

elements could have achieved far greater, more rapid success. Conversely, tank platoons often played into the hands of the anti-armor squads by not thinking through potential anti-armor ambush locations.

To illustrate, during the combined FTX in August 2014, the defending force made good use of terrain by employing a blocking obstacle to the west of Patriot Military Operations in Urban Terrain (MOUT) Site, the MOUT site in Fort Benning's GHMTA the defenders were charged with retaining (Figure 4). The obstacle was at a bend in the road, which made it invisible to tanks as they moved down the road. The obstacle was effectively tied into terrain in such a way that a tank could not maneuver around the obstacle – to the east of the tank was untrafficable high ground, and to the west of it was terrain severely restricted to tank movement.

Because the tanks had no breaching or engineer assets, this left them with one option: turn around and depart along the path on which they came. Watching from the high ground adjacent to the obstacle, it became apparent how vulnerable the tank was at this point. Had the defending force better understood the fundamentals of anti-armor employment and synthesized those concepts with the steps of engagement-area development, they could have easily killed the tank section at the obstacle.

However, the commander for the defending force did not make that connection. Instead, he had to reposition his anti-armor squad from a position in the MOUT site to the elevated terrain adjacent to the obstacle in an attempt to kill the tank at the obstacle. This lapse in judgment allowed the tank to displace while the anti-armor squad was moving on foot from the MOUT site to the anti-armor ambush location.

Situations such as this one are easily transferable to an urban environment with an asymmetric threat. The scenario described could just have easily occurred in Afghanistan, Iraq, Syria or any number of contemporary battlefields. In a posting in ***Small Wars Journal***, Dennis Lowe states, "Since [the Islamic State in Iraq and Lebanon][6] began its conquest of Iraq earlier this year, it has

Figure 4. Obstacle position in relation to the MOUT site.

proved adept at employing a number of anti-tank [AT] systems such as 9K11 Kornet [anti-tank guided missiles], [rocket-propelled grenade] variants and the Yugoslavian M70 Osa rocket launcher. During these engagements, militants damaged at least 28 Iraqi M1A1 Abrams tanks, five of which suffered full armor penetration. Clearly, ISIL understands how to target our tanks' weak spots and accurately employ AT fires against them."[7]

Therefore, it is imperative that combat-arms officers remain cognizant of the anti-armor threat. To counter those threats, we must take a proactive approach to understanding anti-armor doctrine. More importantly, we must realize that the anti-armor threat is not solely a problem for tanks and Bradley Fighting Vehicles, but is easily transferable to any mounted platform the Army puts in the field.

Reconnaissance and security operations

Cavalry formations, including scout platoons, are fielded to serve as the eyes and ears of their higher headquarters. FM 3-20.96, ***Reconnaissance and Cavalry Squadron***, states, "Reconnaissance operations enhance the higher commander's ability to operate inside the enemy's decision cycle and allow him to maneuver his assets so they can take advantage of opportunities to exploit enemy weaknesses. Reconnaissance is key to retaining initiative and freedom to maneuver. It helps the squadron's higher commander and staff to determine which routes are suitable for maneuver and where the enemy is strong and weak. They provide a means to answer [information requirements] and fill gaps in existing intelligence. Timely intelligence allows the squadron's higher commander to concentrate appropriate combat power against decisive points at the time and place of his choosing."[8]

During the combined FTXs, most mission commanders (MCCC officers) were ineffective in employing their scout platoons. Many students appeared to lack true understanding of reconnaissance, which adversely affected their employment considerations and techniques during the exercise. Also, they could communicate the fundamentals of reconnaissance and security operations – ironically, while they did not have the breadth of experience or prerequisite training and education to transfer those concepts from the classroom to the battlefield.

Furthermore, they were unable to link their organic reconnaissance assets with their scheme of maneuver. The scout platoons were used as maneuver platoons instead of as a reconnaissance asset, thus negating their ability to answer priority intelligence

Figure 5. An attacking tank moves into the defending force's engagement area; the attacking force does not employ smoke or indirect fire to obscure or suppress its opponent, who is located just on the other side of the intervisibility line (which can be seen on the left side of the photo). *(Photo by MAJ Amos C. Fox)*

requirements and paint the picture of the operating environment for the mission commander. In almost every instance, scout platoons were given tasks such as "route reconnaissance" but were expected to drive down the road and engage all opposing elements in which they came into contact.

In improperly using the scout platoons, mission commanders continually found that their scouts were not oriented on the reconnaissance objective, were decisively engaged and were denied freedom of maneuver, thus violating many of the fundamentals of reconnaissance, negating their ability to conduct reconnaissance.

The lack of understanding and effective employment of reconnaissance assets can be directly attributed to the officers' inability to transition conceptual combined-arms doctrine, synthesize it with Cavalry doctrine and apply it during the planning and execution phases of training. This is a direct consequence of a lack of education, training and experience with reconnaissance and security operations – compounded by a parochial approach to training combat-arms officers – that negates the realities of the contemporary Army.

Indirect fires

A critical component of all combined-arms operations is the ability to effective employ indirect fires. During the combined FTXs, officers of both branches from all three schools showed an extremely limited understanding of offensive and defensive fire planning and of how indirect fires are employed during the reconnaissance/counter-reconnaissance fight.

Furthermore, the employment of indirect fire-delivered smoke was never employed on the battlefield to screen movement or obscure friendly forces from observation by the enemy. An example from the combined FTX involved a mission commander tasking his tank platoon to move across a 600-meter linear danger area without using anything to screen his movement.

The linear danger area was perpendicular to an intervisibility line 400 meters to the south (Figure 7). Employing artillery or mortar-delivered smoke at this point on the battlefield would have greatly increased the platoon's chances of success and survival in crossing the danger area (Figure 8).

The defending force had a tank section positioned behind the intervisibility line which, upon identifying the enemy moving uncovered 400 meters to their front, executed a berm drill: rapidly emerging from behind the intervisibility line, then engaging and destroying two of the opposing tanks before disappearing back behind the berm before the other tank section could identify its location (Figure 9).

To the observer of this scenario, it highlighted a lack of understanding of offensive fire planning. Also, the scenario highlighted a lack of understanding in how to effectively employ artillery or mortar-delivered smoke on the battlefield. A quick map reconnaissance had shown the area to be dangerous to maneuver without smoke to screen friendly movement; however,

Figure 6. A dismounted anti-tank ambush team from IBOLC establishes an attack-by-fire position overlooking Patriot MOUT Site Aug. 1, 2014. *(Photo by MAJ Amos C. Fox)*

Figure 7. Linear danger area.

Figure 8. Smoke would have been effective here.

during the planning process, neither the mission commander nor the tank-platoon leader planned for smoke or any other fires or obscuration to assist in crossing the danger area.

Both the mission commander and the platoon leader had planned fires, but their understanding of fires employment in support of the maneuver plan was insufficient. Their understanding of indirect-fire planning in support of offensive and defensive operations was limited to the point that it negatively affected their ability to effectively operate as a combined-arms team. Because of this, they failed to integrate indirect fires into the maneuver plan and, instead, developed a parallel fire plan that served its own ends and was disjointed from the operation's overall purpose.

This echoes the assessment in a September 2014 semi-annual report written by U.S. Army Training and Doctrine Command's capability manager for the armored brigade combat team (ABCT), which discussed rotational units' integration of fire and maneuver at the National Training Center (NTC): "[The units] demonstrate a lack of understanding on how to integrate fire support with maneuver."

Recommendations

Combat-arms officers must increase their understanding of combined-arms theory to better allow them to understand the combined-arms team and CAM. To do this, they must study.

- A great place for combat-arms officers to start is with Leonhard's book, which does a fantastic job of explaining CAM and maneuver-warfare theory to the reader.
- Combat-arms officers would also greatly benefit from reading retired COL Douglas MacGregor's ***Warriors Rage: The Great Tank Battle of 73 Easting***, which provides a great account of CAM and reconnaissance operations during the Battle of 73 Easting.
- Roy Appleman's ***East of Chosin, Entrapment and Breakout in Korea, 1950*** provides a great illustration of the destruction wrought upon 31st Infantry Regiment, 7th Infantry Division, during the Korean War, due in large part to their inability to effectively fight as a synchronized combined-arms team.
- Fort Benning's Maneuver Self-Study Program (MSSP) provides many other readings that can help solidify a combat-arms officer's foundational understanding of combined-arms operations. MSSP can be found in the Donovan Research Library in Bldg. 70 (beside the MCoE headquarters building) and on-line at http://www.benning.army.mil/mssp/.

The MCoE must also break down walls and build bridges; parochial approaches to officer training must cease. Infantry officers ***will*** serve in command-and-staff positions in Armor and Cavalry units; this is no longer an anomaly, and officer training and education at the MCoE must catch up with reality. Likewise, the existence of combined-arms battalions (CABs) creates the need for officers of both branches to understand the employment considerations for tank companies and mechanized-infantry companies.

Further, all CABs and infantry battalions across each of the Army's brigade combat teams (BCTs) contain a scout platoon. Officers serving on BCT staffs

Figure 9. Tank-kill spots.

must possess a baseline understanding of the role and employment considerations of those platoons.

Therefore, the MCoE must incorporate the Cavalry Leader's Course (CLC) into MCCC. Parochial outlooks on training – coupled with insufficient availability for 100-percent attendance in the course and the course's elective nature – make the CLC an antiquated approach to training and educating officers for troop-, squadron- and brigade-level reconnaissance and security operations. MCCC must allocate time in the program of instruction (POIs) for reconnaissance and security operations in the course's company and battalion phases. The MCoE must mandate that only officers and noncommissioned officers who have served in Cavalry formations can instruct reconnaissance and security modules to ensure students are receiving instruction from experienced leaders from relevant, applicable backgrounds.

Expanding on this idea, the MCoE must incorporate reconnaissance and security instruction into IBOLC to begin developing infantry officers for leadership and staff positions in reconnaissance and security formations. Instructors from ABOLC, Army Reconnaissance Course (ARC) and/or CLC must provide the instruction. Perhaps an instructor-exchange program within 199th Infantry Brigade[9] and between 199th Infantry Brigade and 316th Cavalry Brigade[10] could allow this program to take shape.

Figure 10. A tank occupies a defensive position behind an intervisibility line while scouts displace at Fort Benning's GHMTA Aug. 1, 2014. *(Photo by MAJ Amos C. Fox)*

The MCoE must ensure anti-armor employment considerations (friendly threat, offensive, defensive, open terrain, restrictive terrain, urban terrain) are taught to all officers. The benefits of this for combat-arms officers will include:

- More awareness of potential death traps;
- More awareness of how to negate the effects of armor on the battlefield; and
- More familiarity with how to employ their anti-armor assets in both offensive and defensive operations.

Also, all officers will better understand the vulnerabilities of tanks and Bradleys in urban areas and in restrictive terrain.

GEN George S. Patton wrote, "Our mortars and our artillery are great weapons when they are firing. When they are silent, they are junk. See that they keep firing!"[11] However, Soldiers cannot be expected to effectively employ mortars and artillery if they are not trained well enough on how to employ these weapons systems. What's more, employing indirect fires as part of counter-reconnaissance and security operations is a key component to Cavalry operations. As such, all combat-arms officers must maintain a moderate level of proficiency with indirect fires and for planning indirect fires. Therefore, it is imperative the MCoE ensures that courses are dedicating the necessary time in POIs to develop a working knowledge of how to employ fires on the battlefield as part of the combined-arms team.

Conclusion

In conclusion, the combined-arms MELD combined FTXs run by ABOLC provided the officers who participated great opportunities to plan and execute platoon- and troop-level combined-arms operations. During each combined FTX, a number of trends in officer training and education appeared. These trends include the lack of understanding of:

- Combined-arms operations;
- Effectively planning and integrating indirect fires;
- Effectively employing scout platoons; and
- Planning anti-armor operations.

The MCoE must aggressively address each deficiency to develop more adept combined-arms officers for the operational force.

Further, junior officers must be self-aware and identify their own shortcomings in CAM, and they must rigorously pursue self-development to address these deficiencies. Professional reading, learning through observation of peers and self-study – including the MCoE's MSSP – are great places to begin the journey.

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Notes

[1] Army Doctrinal Reference Publication 3-0, ***Unified Land Operations***, Washington, DC: Department of the Army, 2012.

[2] Army Doctrinal Publication 3-0, ***Unified Land Operations***, Washington, DC: Department of the Army, 2011.

[3] Robert Leonhard, ***The Art of Maneuver: Maneuver-Warfare Theory and AirLand Battle***, New York: Presidio Press, 1991.

[4] FM 3-21.91, ***Tactical Employment of Anti-armor Platoons and Companies***, Washington, DC: Department of the Army, 2002.

[5] Ibid.

[6] Also formerly known as ISIS (the Islamic State in Iraq and Syria) and currently called simply the Islamic State.

[7] Dennis A. Lowe, "Employing Armor Against the Islamic State: The Inevitable Urban Combined-Arms Fight," ***Small Wars Journal***, Sept. 26, 2014.

[8] FM 3-20.96, ***Reconnaissance and Cavalry Squadron***, Washington, DC: Department of the Army, 2010.

[9] 199th Infantry Brigade is headquarters for 2-16 Cavalry (ABOLC), 2-11 Infantry (IBOLC), MCCC and 3-11 Infantry (Officer Candidate School).

[10] 316th Cavalry Brigade is headquarters for ARC and CLC.

[11] GEN George S. Patton Jr., ***War As I Knew It***, New York: Houghton Mifflin Harcourt Publishing Company, 1947.

Acronym Quick-Scan

ABCT – armored brigade combat team
ABOLC – Armor Basic Officer Leadership Course
ARC – Army Reconnaissance Course
AT – anti-tank
BCT – brigade combat team
CAB – combined-arms battalion
CAM – combined-arms maneuver
CLC – Cavalry Leader's Course
FM – field manual
FTX – field-training exercise
GHMTA – Good Hope Maneuver Training Area
IBOLC – Infantry Basic Officer Leadership Course
ISIL – Islamic State in Iraq and Lebanon
MCCC – Maneuver Captain's Career Course
MCoE – Maneuver Center of Excellence
MELD – multi-echelon leader-development
MOUT – military operations in urban terrain
MSSP – Maneuver Self-Study Program
NTC – National Training Center
OPORD – operations orders
PoI – program of instruction
TLP – troop-leading procedures

Armor Branch Reinvigorates Developmental Programs

by CPT Francis A. Calimbas

The Armor Branch seeks to reinvigorate two of its core developmental programs. The Regimental Honorary System and Draper Leadership Award Program have proven over the years to be effective in enabling professional development in the leaders and Soldiers of implementing units. Professional organizations maintain a connection to the legacy of those who have gone before them and mentor their members through lessons-learned in past conflicts and world events. Recognition of excellence and positive competition further encourages leaders to develop their respective formations into more effective organizations.

Honorary system

The Armor and Cavalry Regimental Honorary System provides a link with history for today's Soldiers through honorary colonels and sergeants major of the regiment. The program instills esprit, morale and the traditions of our Armor and Cavalry regiments.

Distinguished and honorary members assist the colonel and sergeant major in their efforts to perpetuate the history of their regiment and impart Army values. Honorary position holders are nominated by their unit and approved by the Chief of Armor.

Draper Award

The Draper Armor Leadership Award promotes combat leadership in Armor Branch units. The award is given annually to promote, sustain and recognize excellence in leadership in Armor and Cavalry units, and is presented to a deserving unit selected by the unit's division/regimental commander according to Draper standard operating procedure.

The program was established in 1924 as a means to competitively test the leadership of small Cavalry units.

The 2014 annual unit Draper Armor Leadership Award winners:

- Troop C, 1-12 Cavalry, 3rd Armored Brigade Combat Team (ABCT), 1st Cavalry Division;
- Troop C, 6-9 Cavalry, 3rd ABCT, 1st Cavalry Division;
- Troop K, 4-3rd Cavalry Regiment;
- Company C, 2-69 Armor, 3rd ABCT, 3rd Infantry Division;
- Troop A, 5-73 Cavalry, 3rd Infantry Brigade Combat Team (IBCT), 82nd Airborne Division;
- Troop D, 1-509 Infantry, Joint Readiness Training Center Operations

Group, U.S. Army Forces Command;

- Troop B, 3-38 Cavalry, 525 Battlefield Surveillance Brigade, I Corps;
- Troop A, 1-14 Cavalry, 3rd Stryker Brigade Combat Team, 7th Infantry Division;
- Troop A, 1-16 Cavalry, 316th Cavalry Brigade, U.S. Army Armor School;
- Troop B, 2-106 Cavalry, 33rd IBCT, Illinois Army National Guard; and
- Troop A, 1-105 Cavalry, 32nd IBCT, Wisconsin Army National Guard.

For more information regarding the Regimental Honorary System and Draper Armor Leadership Award, contact the Office of the Chief of Armor (OCOA) at usarmy.benning.mcoe.mbx.armor-ocoa@mail.mil or visit the OCOA Website at http://www.benning.army.mil/armor/ocoa.

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Acronym Quick-Scan

ABCT – armored brigade combat team
HHC – headquarters and headquarters company
IBCT – infantry brigade combat team
OCOA – Office Chief of Armor

Figure 1. A scout humvee from 6-9 Cavalry uses the Long-Range Advance Scout Surveillance System to observe a named area of interest during National Training Center Rotation 13-03 in January 2013. Troop C, 6-9 Cavalry, won a unit Draper Award in 2014. *(Photo by Cobra O/C)*

Reforging the Saber

by MAJ Brett Matzenbacher, CPT Robert W. Humphrey and CPT Andrew Jenkins

"Change typifies the modern world. You can either deal with change, or it will deal with you." –GEN Gordon R. Sullivan

The military as a whole currently finds itself in a period of change. The Army is transitioning from a wartime force focused on its assigned missions in Iraq and Afghanistan to an Army posturing to execute unplanned contingency operations around the globe. Simultaneously, the Department of Defense is reducing the size and budget of the force. With these changes, the Army is seizing this opportunity to address a number of structural, organizational and systemic problems that have developed over the last decade-and-a-half of conflict.

An example is the addition of a third maneuver battalion to the armored and infantry brigade combat teams (BCTs). These changes are necessary and make the Army more capable of executing unified land operations. However, a number of issues remain unaddressed. Chief among these issues are the capability gaps that exist in Cavalry formations.

At present, the problem statement facing our Cavalry formations is as follows: Cavalry squadrons are not led, equipped or properly employed to be able to execute reconnaissance and security operations against a hybrid threat in the current or anticipated operating environment. Also, current Cavalry doctrine is fractured and lacks the detail required to offset the shortcomings of leadership and employment. Recently, a great deal of time, discussion and effort has focused on finding the right balance of manning and equipping for Cavalry organizations.

This article acknowledges the progress underway and proposes ways to augment that progress by ensuring that squadrons are led by experts; guided by clear, consolidated and nested doctrine; and properly employed as the BCT's proponent for information collection (IC).[1]

Expert leadership

Cavalry squadrons often lack leaders trained or familiar with the unique mission set inherent in Cavalry operations. At present, there is no forcing function to ensure that leaders assigned to key command-and-staff positions within Cavalry squadrons have the training, expertise or experience necessary for the job. Leaders assigned to Cavalry formations do not regularly attend available functional courses specializing in Cavalry tasks, and few receive mentorship in planning, preparing, executing and assessing Cavalry operations. This lack of institutional training is exacerbated by the shortage of senior leaders with experience gained from assignments in Cavalry formations.

Within the current divisional and BCT construct, no senior leader exists to serve as the primary adviser to the division commander for Cavalry operations or provide mentorship to Cavalry squadrons. Who fulfills this need in the absence of this subject-matter expert (SME)? Who supervises the training and mentors the leaders of the various BCT's Cavalry squadrons? Who coordinates with higher echelons for more support to conduct reconnaissance and security operations?

Similar shortcomings, with the resulting drop in proficiency among its battalions, were identified within the Field Artillery Branch after the dissolution of divisional artillery (DIVARTY). As such, a U.S. Army Forces Command (FORSCOM) implementation order published April 9, 2014, re-established DIVARTY in each of the Active Component divisions.[2] According to the supporting whitepaper published by the Field Artillery School at Fort Sill, OK, DIVARTY's role is to "coordinate, integrate, synchronize and employ fires," as well as to "provide training-certification standardization of all field-artillery units in the division." Ideally, the DIVARTY is stationed within the division headquarters to provide this supervision.[3]

We should resurrect the division cavalry (DIVCAV) but model it off the DIVARTY blueprint to address similar issues within the Cavalry squadrons. Like DIVARTY, this organization would be responsible for training and certifying the Cavalry squadrons within the division, while also providing SME on the employment of these organizations to division and BCT commanders. The Cavalry squadrons would still belong to the BCT commanders but would now receive the sorely missed mentorship from a seasoned Cavalry leader.

Also, the DIVCAV would act as the division's IC-planning proponent if augmented with additional collection assets to answer division priority-intelligence requirements (PIR). A command-select-list colonel would lead the DIVCAV, which would include a headquarters and headquarters troop (HHT) to operate with the division staff.

While acknowledging that the expansion of BCT- or division-level staffs may be an unpopular proposal during an era of drawdown and fiscal uncertainty, the resurrection of the DIVCAV as a component of the division staff would undoubtedly improve the training, management and employment of the Cavalry squadrons within the BCTs.

Secondly, many leaders within Cavalry squadrons have not attended the functional courses available to build the skills required to plan, prepare and execute reconnaissance and security operations. We need to align our various Cavalry functional courses with additional-skill identifiers (ASIs) and tie these to key leadership positions within the squadron by the modified table of organization and equipment (MTOE). For example, a lieutenant assigned to a Cavalry squadron should first attend the Army Reconnaissance Course (ARC), which is tied to the R7 ASI.

Tying these functional courses to ASIs, and subsequently tying these ASIs to

duty positions, is currently conducted in other specialized areas of the Army and has several benefits. It allows these skilled positions to be tracked; it drives funding for units to send leaders to their appropriate schools; and, lastly, it can assist Human Resource Command in the assignment process. Captains and majors assigned to Cavalry formations should attend the Cavalry Leader's Course (CLC), and their positions on the MTOE should reflect an associated ASI.

We cannot fail to address our enlisted leaders as well. Scout-platoon teamleader positions (sergeants) should be aligned with the Reconnaissance and Surveillance Leader Course (RSLC); section leaders (staff sergeants) and platoon sergeants (sergeants first class) should be aligned with ARC; and noncommissioned officers assigned to squadron staff positions (sergeants first class and sergeants major) should be aligned with CLC. This progression captures the spirit of the lifelong-learning model and ensures that the key leaders within these formations acquire, develop and master the skills required of them within Cavalry squadrons.

In addition to maximizing functional schools, we need to ensure that officer assignments to Cavalry formations are repetitive. Formalizing a Cavalry Branch may not be the answer; however, an officer's first assignment to a Cavalry squadron should not occur as a field-grade officer. Assigning field-grade officers without prior experience creates a lose-lose situation: the field-grade officers face a very steep learning curve, and we are denying junior leaders a vital mentor with experiential knowledge of how to execute reconnaissance and security operations.

Who serves as the senior mentor and trainer of a scout-platoon leader if his squadron commander has never served in a Cavalry unit? Who trains the squadron staff to conduct planning for reconnaissance and security operations if the squadron commander, executive officer and operations officer (S-3) have never been Cavalrymen or executed these types of operations before? They are the senior trainers of the unit, and only habitual, repetitive assignments to Cavalry formations will develop the experience with reconnaissance and security tasks these leaders need to truly develop the next generation of Cavalry leaders.

Nested doctrine

Developing competent and experienced leaders will systemically remedy many of the issues that exist within Cavalry organizations. To reinforce this position, the Army must also develop clear and concise Cavalry doctrine. Cavalry is an organization specifically designed to conduct reconnaissance and security, and while it possesses the capability to fight for information, it is not designed to close with and destroy the enemy. It bridges the gap between the maneuver and intelligence warfighting functions.

Current doctrine does not clearly state, in one manual, how IC should be planned, integrated and executed by the Cavalry squadron. To illustrate this, imagine for a moment that you are a newly assigned intelligence officer (S-2) or an Army source-selection-supplement in a Cavalry squadron, and you receive notification that you will be executing the military decision-making process (MDMP) for an upcoming mission. You decide to get yourself mentally prepared to execute planning for the Cavalry squadron by brushing up on your doctrine, but where to begin?

Field Manual (FM) 6-0 is the manual for staff operations,[4] so that sounds like a logical place to start. Although it doesn't directly address Cavalry operations, the FM says that the ninth step of mission analysis is to develop an initial IC plan. The manual explains that, together, the intelligence and operations staffs create the information-requirement management tools and IC plan.

From there, it says that more information can be found in FM 3-55, ***Information Collection*** (manual change #1).[5] FM 3-55 states that the staff must develop several key products to aid IC planning, including an enemy event template and matrix, and an updated intelligence estimate. It goes on to say that the event template helps develop the IC plan to answer the commander's PIR. Where do you find how to build an event template and then further refine that into information that units identify and report? You suppose it would be explained in detail here in the IC manual, right? Wrong. Instead it says, "See FM 2-01.3 for additional information" (manual change #2).[6]

FM 2-01.3 addresses how to identify initial IC requirements. This manual explains how to use an event template to further develop an event matrix. With an event matrix, you should be able to go on to refine PIRs into easily digestible information for units to answer. What page is that on? Well, it doesn't explain that process, so at this point you have hit a dead end.

Since the Cavalry squadron routinely executes this process, you assume that another place to look would be FM 3-20.96, ***The Reconnaissance and Cavalry Squadron*** (manual change #3).[7] For the sake of brevity, the rest of the story is that you open FM 3-20.96, which only has one page dedicated to IC planning but references FM 2-0 (manual change #4).[8] FM 2-0 provides you with no new information but references Army Tactics, Techniques and Procedures (ATTP) 2-01 (manual change #5).[9] After opening ATTP 2-01, it is apparent that this manual explains the details of how to plan IC requirements and describes the process of refining PIRs into manageable bits of information for collection assets to identify and report. Unfortunately this ATTP, while useful for planning the requirements, does very little to explain how to plan for the execution of collection by the Cavalry squadron, and it is here that we run into another problem with Cavalry doctrine (manual change #6).

Cavalry doctrine does a sufficient job of explaining what guidance every Cavalry commander needs to give to his units and considerations for planning; however, it does not provide the Cavalryman with a framework for reconnaissance or security.[10] In contrast, other maneuver manuals cover the sequence of events for different types of operations. For example, an urban attack has six steps: 1) recon the objective; 2) move to the objective; 3) isolate the objective; 4) secure a foothold; 5) clear the objective; 6) consolidate and reorganize.[11] Doctrine uses the same type of sequencing for offensive or defensive operations.[12] While there

will never be a one-size-fits-all solution, developing a basic framework would give Cavalry staffs a structured way to think through the execution of their plan.

For reconnaissance operations, it could look something like this: 1) plan collection; 2) move/infiltrate; 3) defeat/bypass counter-reconnaissance; 4) collect; 5) conduct handover; 6) transition (Figure 1).

Security sequencing could look something like this: 1) plan security; 2) move; 3) establish screen/guard/cover; 4) observe/defend; 5) conduct handover; 6) transition (Figure 2).

The Army's new method of developing doctrine, where SMEs from around the force come together in working groups to create draft manuals, shows a great deal of promise. With FM 3-98 currently undergoing vetting from the force, the Cavalry community is hopeful that it will remedy some of the ambiguity in current doctrine. The SMEs who develop the next generation of IC doctrine must ensure that IC planning is not unnecessarily complicated. Intel and Cavalry doctrine must be nested and clearly describe the IC process from start to finish and in enough de-

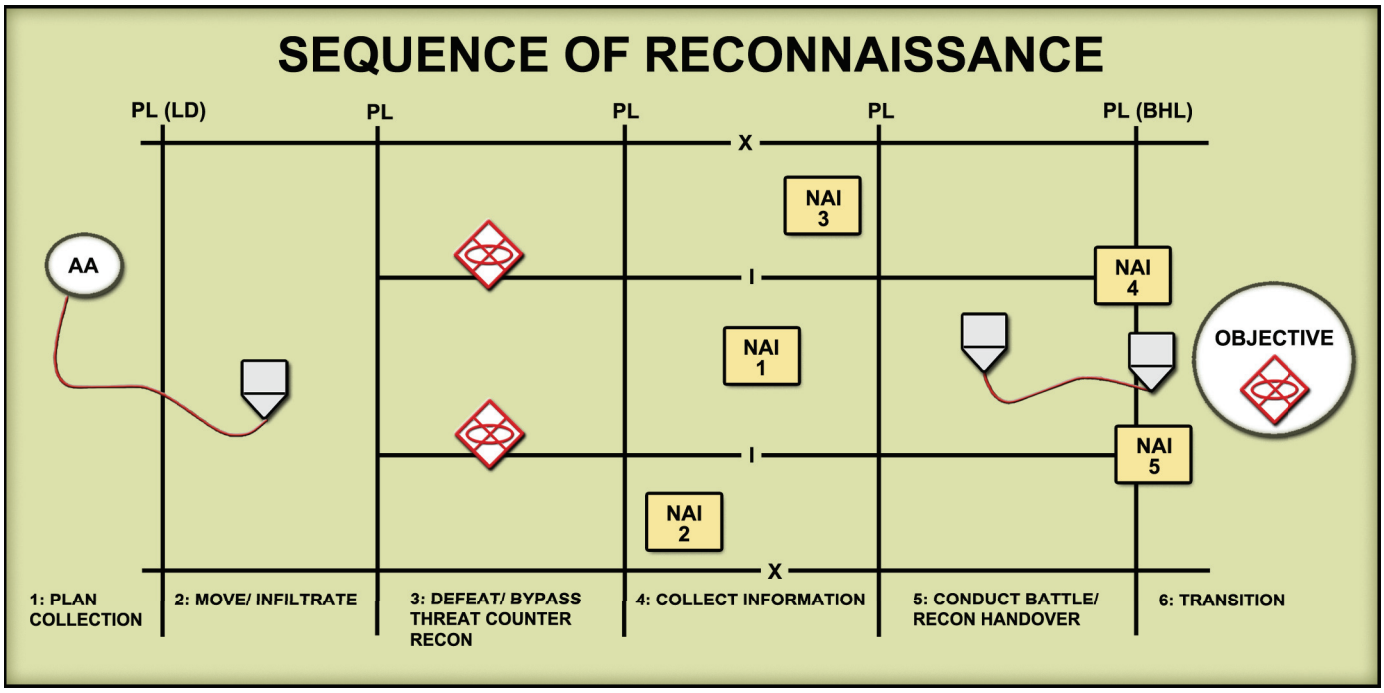

Figure 1. Sequence of reconnaissance.

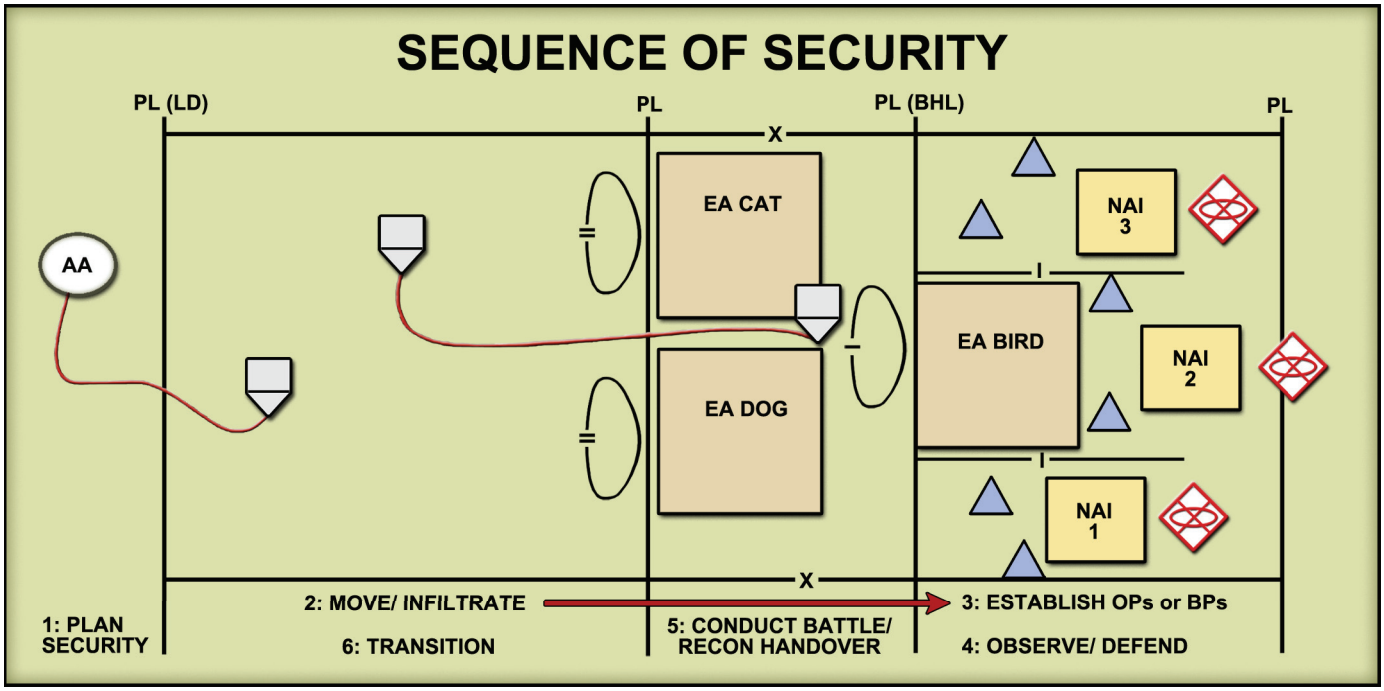

Figure 2. Sequence of security tasks.

tail without having to reference multiple manuals.

Cavalry squadron's role

After ensuring quality control for leaders and adequate doctrine, the Cavalry force will be postured to lead and control the IC process within the BCTs. Doctrine dictates that reconnaissance and surveillance activities support the BCT through four tasks: IC synchronization, IC integration, surveillance and reconnaissance. FM 3-90.6, ***The Brigade Combat Team***, attempts to clarify these processes by identifying how the staff conducts planning to support reconnaissance operations, but unfortunately, that system is complicated and lacks unity of effort.[13]

IC planning at the BCT-level is conducted by the IC working group. This working group is a temporary organization of designated staff representatives and subordinate units. Members include the BCT executive officer (who chairs the group); the BCT S-3 (or representative); the BCT S-2; the military-intelligence company (MICO) commander; the Cavalry squadron S-3; the BCT chemical, biological, radiological, nuclear and explosives (CBRNE) officer; and representatives from the remaining staff sections. This *ad hoc* team, while chaired by the BCT executive officer, relies on only two individuals who, by definition, are educated and trained at IC planning: the BCT S-2 and Cavalry squadron S-3.[14] The remaining members split their efforts between IC planning and their normal responsibilities during the BCT's MDMP.

In a time-constrained environment, the staff is accepting risk in either the IC plan or the rest of the BCT's MDMP. According to FM 3-90.6, the BCT S-2 synchronizes the collection effort in coordination with the operations officer, MICO officers and other staff elements as required. This effort includes recommending tasks for assets that the commander controls and submitting requests for more support. The BCT S-3 integrates the sensors and other capabilities of the BCT to accomplish this, while the Cavalry squadron's role is only to obtain information for the BCT commander.[15] This ignores a wealth of capability that exists within the Cavalry squadron staff, who are educated and trained to synchronize and integrate IC assets.

By keeping IC planning responsibility purely within the BCT staff, with only minimal augmentation from the Cavalry squadron, most of the BCT's IC experts are not involved in the process until execution. Two changes to doctrine would fully exploit the capabilities that exist within the squadron staff. First, replace the *ad hoc* BCT working group with a team from the squadron staff to directly collaborate with the BCT S-2 for IC synchronization. This team, or cell, would have a habitual relationship with the BCT S-2 and scalable capability based on mission variables. This method was used effectively by 2nd Armored BCT, 1st Infantry Division, during National Training Center (NTC) Rotation 13-04.[16]

Alternately, doctrine could be changed to show a different division of labor where the BCT S-2 is only responsible for developing information requirements, while the Cavalry squadron is entirely responsible for developing the synchronization and integration of all IC assets. This creates unity of effort in the process and allows the BCT S-2 to focus on the analysis of products – using that to support the BCT commander's decision-making.

Either option puts IC and reconnaissance experts in charge of developing the BCT's IC plan.

The BCT's organization further complicates the current process by dividing the four tasks that support its IC activities across the formation. The Cavalry squadron is responsible for combined-arms reconnaissance through synchronizing ground-reconnaissance elements. The MICO, part of the brigade engineer battalion (BEB), is responsible for synchronizing and analyzing unmanned air system, human-intelligence and multisensory information that its organic assets collect. All CBRNE reconnaissance is conducted by a CBRNE recce platoon that is organic to the BEB's headquarters and headquarters company (HHC). This leaves the BCT S-2 responsible for developing the information requirements, the collection synchronization and the collection integration across the BCT.[17]

If the current organization were changed to place the collection assets of the MICO under the Cavalry squadron in the form of a "surveillance troop," it would improve the BCT's ability to conduct reconnaissance and surveillance activities. This change would create a single proponent within the BCT responsible for the synchronization and integration of IC assets, as well as for the training and development of these formations. By filling this organization with leaders who are experts at reconnaissance and IC, they will be able to manage and accomplish these tasks with a greater focus and unity of effort than the current construct.

Conclusion

Current ongoing efforts across the Army to improve the capabilities of the Cavalry squadron's vehicles, equipment and organization are necessary to prepare for the battlefields of the future. However, material solutions are only half the equation. New vehicles, optics and organizational structure will all be for naught if Cavalry squadrons are not led, trained and used properly.

Cavalry leaders must be experts through senior mentorship from a DIVCAV commander, by requiring proper professional-military education for their roles and by habitual assignments to Cavalry organizations. IC doctrine must improve; it is imperative to have a nested concept to guide the planning and execution of information collection within an integrated framework for reconnaissance and security operations. Cavalry squadrons must be the BCT's proponent for IC by making them responsible for IC synchronization and integration, and by consolidating all of the BCT's IC assets inside the squadron to unify efforts for their training and employment.

The Cavalry's success on the battlefields of the future requires leaders who are true experts and empowered through doctrine as the BCT's proponents for IC. For Cavalry to remain relevant in the next conflict, we must reforge the saber.

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Notes

[1] "CSA Cavalry Review_JDS_12MAR14.PDF," Maneuver Center of Excellence brief to the Army Chief of Staff.

[2] FORSCOM DIVARTY implementation order, Fort Bragg, NC, April 2014.

[3] U.S. Army Field Artillery School whitepaper, "Field Artillery Brigade, Division Artillery (DIVARTY)," Fort Sill, OK, May 2014.

[4] FM 6-0, ***Commander and Staff Organization and Operations***, May 2014.

[5] FM 3-55, ***Information Collection***, May 2013.

[6] FM 2-01.3, ***Intelligence Preparation of the Battlefield***, December 2010.

[7] FM 3-20.96, ***Reconnaissance and Cavalry Squadron***, March 2010.

[8] FM 2-0, ***Intelligence Operations***, April 2014.

[9] ATTP 2-01, ***Planning Requirements and Assessing Collection***, April 2012.

[10] FM 3-20.96.

[11] ATTP 3-06.11, ***Combined Arms Operations in Urban Terrain***, June 2011.

[12] FM 3-21.10, ***The Infantry Rifle Company***, July 2006.

[13] FM 3-90.6, ***The Brigade Combat Team***, September 2010.

[14] FM 2-19.4, ***Brigade Combat Team Intelligence Operations***, November 2008.

[15] FM 3-90.6.

[16] "5-4 Cavalry End-of-Rotation After-Action Review," NTC, March 1, 2013.

[17] FM 3-90.6.

Acronym Quick-Scan

ARC – Army Reconnaissance Course
ASI – additional-skill identifier
ATTP – Army tactics, techniques and procedures (publication)
BCT – brigade combat team
BEB – brigade engineer battalion
CBRNE – chemical, biological, radiological, nuclear and explosives
CLC – Cavalry Leader's Course
DIVARTY – division artillery
DIVCAV – divisional cavalry
FM – field manual
FORSCOM – (U.S. Army) Forces Command
HHC – headquarters and headquarters company
HHT – headquarters and headquarters troop
IC – information collection
MCCC – Maneuver Captain's Career Course
MDMP – military decision-making process
MICO – military-intelligence company
MTOE – modified table of organization and equipment
NTC – National Training Center
PIR – priority-intelligence requirement
RSLC – Reconnaissance and Surveillance Leader Course
SME – subject-matter expert

Developing the Future Armor Brigade Combat Team's Cavalry Squadron

by MAJ Todd L. Poindexter

The Armor community is facing another period of change during which the development of reconnaissance formations will be crucial to future success. The change began in 2013 when the Army announced it would increase the size of its armored brigade combat teams (ABCTs) while decreasing the aggregate number of ABCTs in the force.[1] Part of the reason for this change was to provide the Army with fewer but more capable BCTs.[2]

The most significant organizational adjustment within the ABCT was the addition of a third combined-arms battalion (CAB).[3] This provides the brigade commander with more combat power to execute decisive action in pursuit of mission accomplishment. However, while this force structure change affords greater maneuver flexibility to the ABCT commander, it does not address two key capabilities that enable an ABCT to conduct decisive action: reconnaissance and security.

The responsibility for those missions resides with the ABCT Cavalry squadron.[4] Therefore, to give the future brigade commander the complete flexibility offered by a third CAB, there must be changes to the ABCT Cavalry squadron's organizational structure.

Problems of not reorganizing

Increasing maneuver capability in the ABCT without changing the structure of the Cavalry squadron poses several interesting problems. First, there is the assumption that the addition of a third CAB increases reconnaissance and security capability within the ABCT. This argument is doctrinally valid, as BCTs are capable of conducting the complete range of security missions to enable its own maneuver or that of another BCT.[5] However, this capability proves difficult when conducting missions that require the dedication of all three CABs to other tactical tasks (for example, a BCT combined-arms breach). Furthermore, history and military theory have established the missions of reconnaissance, security and limited offensive operations as standard roles for Cavalry organizations.[6] Over time, those missions, specifically security operations, have become specific operations requiring Cavalry expertise.

The second issue is the paradox between current reconnaissance doctrine and the squadron's actual capability. Current reconnaissance doctrine emphasizes the use of all forms of reconnaissance and security missions through guard to enable maneuver.[7] However, the current ABCT Cavalry squadron (formerly called the armored reconnaissance squadron (ARS)) is not capable of conducting either reconnaissance-in-force or guard missions to enable the ABCT to maneuver without augmentation (normally coming from the CABs).[8]

Finally, it is not clear how a Cavalry squadron designed for a smaller ABCT could be capable of supporting a larger one without changing its organizational structure.[9] Now may be the best time to capitalize on the organizational change that is already taking place, to align doctrinal purpose with capability and provide the future ABCT commander with a Cavalry squadron that allows him to capitalize on the additional maneuver capability provided by the third CAB.

Tension between doctrine and capability

If larger ABCTs provide fewer but more robust BCTs to the Army, each ABCT should be more capable of conducting decisive action. Reconnaissance and security operations enable decisive action.[10] Furthermore, reconnaissance and security operations provide the commander with improved understanding of the tactical situation and enable him to mass combat power at the decisive point.[11] Although all formations perform some rudimentary form of reconnaissance, Cavalry squadrons are the dedicated reconnaissance elements and have the potential to be the ABCT's security element. Developing the Cavalry squadron to completely fulfill its traditional doctrinal role would allow the brigade commander to make contact with the smallest unit possible, develop the situation and mass the propensity of forces at the decisive point.

Increasing the size of the ABCT, combined with the current tension in reconnaissance doctrine and capability, create a consistent need to allocate other forces to the Cavalry squadron to conduct the reconnaissance and security fight. Those additional forces are likely to come from the third CAB, thereby limiting the capability and flexibility of the ABCT as a whole. The current disconnect in doctrine, combined with the force-structure change to the ABCT, highlight the need to develop the Cavalry squadron, but what should it look like and what capabilities are required? To recommend a viable solution for the future, one must first look to the past.

Lessons of history

History can provide applicable lessons from the past that can assist in future development. Every organization has a culture and history that in many ways defines it over time and sets patterns of acceptable change. Those patterns can indicate required capabilities of any mechanized reconnaissance unit in the future. Cavalry organizations are no different in this regard. Examining the modern development of mechanized Cavalry units uncovers distinct debates that have driven patterns of change since 1943.[12] These debates have defined what change is

acceptable within the reconnaissance community and, to a large degree, have driven change over time.

First is the passive vs. aggressive reconnaissance debate. The advent and development of tanks and armored vehicles after World War I posed a distinct challenge to the concept of mechanized reconnaissance. The debate revolves around whether mechanized reconnaissance organizations should fight for information or gather intelligence through more passive forms of reconnaissance.[13]

The second debate that has defined the development of Cavalry formations is the technologist vs. traditionalist debate. The rapid development of surveillance technology further divided the reconnaissance community into those who believe that technology could rid warfare of friction and fog, and those who believe that, no matter how advanced technology becomes, friction and fog will always exist.[14]

Both these debates have converged, diverged and combined over time to shape the development mechanized reconnaissance units. Figure 1 illustrates how these debates have influenced the development of mechanized Cavalry organizations from World War II to today.

The most distinctive change noted in Figure 1 occurs at the division and brigade level from Operation Desert Storm to the present. Based on performance during Desert Storm, specifically the need for augmentation to conduct guard and economy-of-force missions, division Cavalry squadrons transitioned back to combined-arms organizations.[15] Then the advent of modularity removed division Cavalry squadrons from the force structure. The Force XXI brigade reconnaissance troop (BRT), organized for surveillance and target acquisition, lacked the capability to perform aggressive forms of reconnaissance for the brigade. Therefore, it developed from a wheeled Cavalry unit to the wheeled and mechanized Cavalry squadron (ARS) of today.

The current Cavalry squadron combines the anti-tank capability of the heavier division Cavalry squadron with the BRT's reconnaissance and surveillance capability. Indeed, the contemporary ABCT Cavalry squadron appears to be an organizational compromise between the Force XXI division Cavalry squadron and the BRT.[16]

Thus, the back-and-forth nature of debates within the reconnaissance community has established what could be defined as a pattern. If the reconnaissance unit requires significant augmentation to conduct standard reconnaissance, security or economy-of-force missions, its organization changes. Specifically, if the Cavalry organization is unable to conduct all forms of reconnaissance, security missions through guard or economy-of-force missions without significant augmentation, it is subject to change.[17] Therefore, these observations suggest that a trigger for development is associated with the need for habitual augmentation from the parent unit to accomplish requisite reconnaissance and security missions.

Requirements of future

An examination of the future is critical to determine what challenges lie ahead; however, determining the future is at best a difficult endeavor. Predictions of future conflict are varied in purpose and sometimes rife with bias, which makes the future of conflict highly uncertain. However, the nature

Era / Echelon	World War II	Korea	ROCAD and ROAD	Vietnam	Desert Storm	Force XXI	Transformation and OIF/OEF
Division	Squadron ✚■	Squadron ✖■	Squadron ✖▲	Squadron ✖▲	Squadron 〓▲	Squadron ✚▲	None
Brigade	None	None	None	None	None	Troop 〓●	Squadron 〓■
Battalion	Platoon 〓●	Platoon 〓●	Platoon 〓▲	Platoon 〓▲	Platoon 〓●	Platoon 〓●	Platoon 〓●

Legend

✚ Combined-arms organization at troop level

✖ Combined-arms organization at platoon level

〓 Reconnaissance-pure organizations (doctrinally limited in offensive/defensive capability)

■ Mixture of mechanized and wheeled

▲ Mechanized (tracked)

● Wheeled

Squadron: Battalion-equivalent unit
Troop: Company-equivalent unit
Platoon: Platoon-equivalent unit

*NOTE: Mechanized vs. wheeled determination is based on combat platforms, not sustainment platforms.

Figure 1. Armored-unit reconnaissance capability by echelon and era. This chart provides an overview of organizational change in Cavalry formations at the division, brigade and battalion level from World War II to the present, and highlights the development of the brigade Cavalry squadron from Force XXI to today. *(From the author's 2014 Command and General Staff College (CGSC) master's thesis in military arts and science, "Transforming Mechanized Reconnaissance: How the [ABCT] Cavalry Squadron Should Be Structured for Reconnaissance and Security in the Near Future")*

of war will not likely change, and this is likely to drive the conduct of war in the future. The strength of this assumption lies in the military theory of Carl Von Clausewitz,[18] who classified the nature of war as one of constant competition.[19] If competition is constant within the nature of war, then examining current trends of conduct that exemplify that competition should better suggest capabilities required in the future.

To ensure flexibility within the future Cavalry squadron, it is necessary to look at two trends. The first trend is a low-tech threat adaptation to overcome technological disadvantage. Unconventional forces that blend in with populations and operate in vast urban centers consistently offset the surveillance advantages afforded by our use of unmanned aerial vehicles (UAVs). This simple adjustment by competitors requires conventional forces on the ground in close proximity to guide the UAV to the known target, thereby offsetting a technological disadvantage.

The second trend is the growing emphasis on cyberwarfare. The threat in this case possesses the capability to degrade surveillance systems through direct and indirect fires or targeted cyberattack. Degradation of surveillance systems in this manner would force the maneuver commander to turn to more low-tech solutions.

The future Cavalry squadron must be rapidly adaptable to remain competitive in this dynamic threat environment. Balanced reconnaissance and combat capability would provide the ABCT commander with a squadron that possesses redundancy in collection and offensive capability to remain competitive and flexible across the spectrum of conflict in an uncertain and dynamic future environment.

The 'Cavalry squadron, armored'

In a broad sense, these collective observations highlight the need for a reconnaissance organization that requires minimal augmentation from its parent organization to conduct reconnaissance, security and limited offensive operations. This article does not account for more demands on the ABCT such as division and theater reserve requirements that will also require combat power from the larger ABCT. Doctrine establishes that the current Cavalry squadron lacks the capability to conduct reconnaissance-in-force and guard missions without some level of augmentation from the ABCT.[20] For future conflict, and to maximize on the flexibility provided by a larger ABCT, the Army must address the lacking capabilities in the Cavalry squadron.

The Maneuver Center of Excellence (MCoE) is already working a solution to this issue with the 6x36 initiative.[21] The MCoE initiative increases the anti-tank capability of the ABCT Cavalry squadron, standardizes all scout platoons within ABCTs and provides a common level of mobility with the CABs.[22] Although the 6x36 initiative improves the Cavalry squadron's firepower and mobility (by organizing it entirely with M3A2 Cavalry Fighting Vehicles (CFVs)), it is arguable that the squadron will still require augmentation to conduct guard, economy-of-force missions and some reconnaissance-in-force missions (especially against armored threats).[23] Therefore, any recommendation for the future ABCT Cavalry squadron should improve on the added capabilities offered by the 6x36 initiative. One such solution this article proposes is the "Cavalry squadron, armored."

The "Cavalry squadron, armored," provides a reconnaissance unit with equal passive and aggressive reconnaissance capability to the ABCT. It also provides requisite organic capability to conduct security missions, as well as limited offensive, defensive and stability operations without significant augmentation from the ABCT. Organizing the Cavalry squadron along these lines provides the ABCT commander with a reconnaissance organization that incurs minimal force-ratio risks. A reconnaissance squadron with the appropriate organic capability preserves the increased combat power within the future ABCT. This preservation of combat power through proper organization of the reconnaissance squadron provides the ABCT commander with more tactical options when called upon to conduct decisive action.

An in-depth review of the improved capabilities the "Cavalry squadron, armored" provides to the ABCT highlights how this squadron can allow a brigade commander to maximize the third CAB's combat power. The increased flexibility, firepower and maneuverability provided by the addition of a tank company – and the surveillance capability provided by the introduction of UAV and military-intelligence (MI) platoons in the headquarters and headquarters troop (HHT) – make this categorization possible.

The purpose of organizing the squadron in this manner is to provide the ABCT commander with a mechanized reconnaissance organization that can operate without significant augmentation from other ABCT assets. The squadron maintains the core organization of the 6x36 initiative, and adds the offensive capability of a tank company and more surveillance assets to the squadron (around 600 Soldiers total):

- The tank company provides the ABCT with a more complete reconnaissance organization that can guard or conduct reconnaissance-in-force against enemy armored formations.
- The tank company provides another maneuver unit that either can be task-organized among the Cavalry troops or used as an independent element to extend the squadron's tactical reach.
- For initial or precision-targeting capability in a variety of operations, the addition of surveillance assets such as the UAV platoon and MI platoon in the HHT provide the squadron with the requisite passive-surveillance capability.
- The UAV platoon allows the squadron to conduct surveillance in a much larger geographic area since the RQ-7B (Shadow) provides a much greater range and more station time than the Raven UAV.

The addition of a tank company and UAV platoon increase the squadron's direct-fire and observation range, thereby increasing its lethality and reach. These additional assets make it possible for the squadron to conduct operations across the breadth and

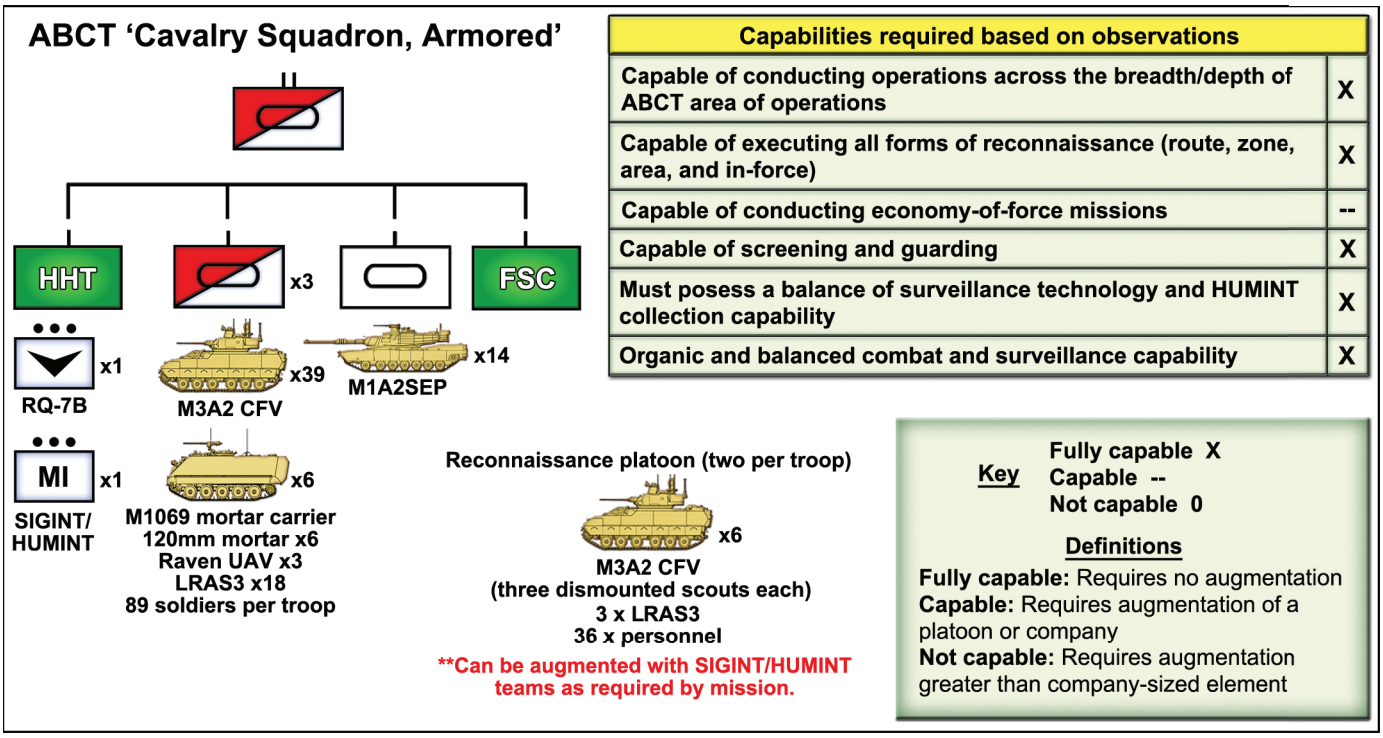

Figure 2. The "Cavalry squadron, armored," improves on the 6x36 concept through the addition of a tank company, UAV platoon and MI platoon. *(From the author's 2014 CGSC master's thesis, "Transforming Mechanized Reconnaissance: How the [ABCT] Cavalry Squadron Should Be Structured for Reconnaissance and Security in the Near Future")*

depth of a larger ABCT's area of operations without augmentation.[24]

Since the squadron has a similar organization to that of the 6x36 initiative, it is equally capable of conducting three of the four required forms of reconnaissance (route, zone, area). The addition of a tank company provides the ABCT commander with a squadron capable of finding enemy armored formations and developing the situation (through limited offensive action) so the brigade can close with and destroy the enemy force. This description is fundamentally the definition of reconnaissance-in-force.[25] This makes the "Cavalry squadron, armored," capable of executing reconnaissance-in-force without augmentation; therefore, the squadron can execute all forms of required reconnaissance missions.

The squadron is capable of limited offensive or defensive operations, which makes it incapable of economy-of-force missions. As for security missions, maintaining the organization of the 6x36 initiative and adding the tank company provide the firepower and protection necessary to conduct both screen and guard missions without augmentation.[26]

The addition of more organic surveillance assets improves the squadron's targeting capability by combining intelligence analyzers and collectors with surveillance technology in a single reconnaissance unit. This presents the squadron as a balanced organization with regard to surveillance technology and human-intelligence (HUMINT) collection capability. The aforementioned assets, plus the tank company, provide the ABCT with a squadron that possesses the flexibility to execute both passive and aggressive forms of reconnaissance without augmentation. Therefore, it also provides the ABCT commander a reconnaissance organization with organic and balanced combat and surveillance capability.

To field the "Cavalry squadron, armored," resources will have to come from somewhere. The recent structure change to BCTs across the Army has reduced the overall amount of BCTs in the force.[27] The four deactivated ABCTs can provide the resources for the additional tank companies required in the 12 remaining ABCTs.[28] The 12 BCTs that will be deactivated between now and 2017 can provide the UAV platoons, HUMINT and signal-intelligence (SIGINT) assets required.[29] It may even be possible to integrate the entire MI company, currently residing in the brigade engineer battalion, from the active ABCTs into the Cavalry squadron to combine intelligence analysts with collectors.

The addition of these assets would also require additions to the Cavalry squadron's forward-support company (FSC). First, adjustment to the FSC must include the appropriate maintenance capabilities to support tank, sensor and UAV maintenance activities. Second, to support the additional assets, fuel- and cargo-transportation capacity in the FSC must increase. Some would argue that current monetary and personnel constraints preclude developing the ABCT Cavalry squadron in this manner; however, even if current constraints preclude its development in the near term, the recommendation in this article provides a framework for development in the long term.

Conclusion

The 6x36 initiative makes great strides in improving the capability of the ABCT Cavalry squadron. However, the "Cavalry squadron, armored" provides the best option for the future of mechanized reconnaissance. It offers

the future ABCT a reconnaissance organization that requires less augmentation to conduct reconnaissance and security operations.

Developing the Cavalry squadron through the examination of doctrine, past development and the future addresses many capability shortfalls usually dealt with through task organization. Organic capability within the squadron allows the brigade commander to manage combat power among the three CABs to mass forces at the decisive point vs. allocating them to reconnaissance and security efforts.

The "Cavalry squadron, armored" is capable of fulfilling Cavalry's historic purpose and roles. Its capability to conduct reconnaissance-in-force, guard and some economy-of-force missions breaks the change paradigm established during the past development of mechanized reconnaissance organizations.

Finally, with regard to future conflict, the squadron is flexible and capable enough to remain competitive in operations that range from general war to protracted stability operations.

If one of the reasons for expanding the ABCT's capabilities is to provide a more robust organization capable of conducting decisive action in uncertain future environments, then development of the Cavalry squadron must be a consideration to enable tactical and operational success into the future.

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Notes

[1] Daniel Wasserbly, "U.S. Army Leaders Outline Major Reorganization," ***Jane's International Defense Review,*** 46 (2013).

[2] Lance M. Bacon, "Odierno: Brigade Cuts Need to Reorganize," ***Army Times***, March 3, 2012, http://www.armytimes.com/article/20120303/NEWS/203030314/Odierno-Brigade-cuts-needed-reorganize.

[3] Ibid.

[4] There is doctrinal tension on this point between the brigade and Cavalry squadron field manuals (FMs). FM 3-90.6 assigns the Cavalry squadron a reconnaissance-only role. FM 3-20.96 defines its role as reconnaissance *or* security. FM 3-90.6, ***Brigade Combat Team***, Washington, DC: Government Printing Office (GPO), 2010, and FM 3-20.96, ***Reconnaissance and Cavalry Squadron***, Washington, DC: GPO, 2010.

[5] FM 3-90.6.

[6] MAJ Todd L. Poindexter, "Transforming Mechanized Reconnaissance: How the Armor Brigade Combat Team (ABCT) Cavalry Squadron Should Be Structured for Reconnaissance and Security in the Near Future," Fort Leavenworth, KS: thesis for CGSC master's degree in military arts and science, 2014.

[7] FM 3-90.2, ***Reconnaissance, Security and Tactical Enabling Tasks***, Vol. 2, Washington, DC: GPO, 2013.

[8] FM 3-20.96.

[9] The estimated frontage for the larger ABCT is 16 kilometers at standard distance and 24 kilometers at extended distance. Although these distances are not represented in current doctrine, the assets within the current Cavalry squadron are not capable of securing these frontages. See the author's 2014 thesis for his CGSC master's in military arts and science.

[10] FM 3-90.2.

[11] Ibid.

[12] Dr. Robert S. Cameron, ***To Fight or Not to Fight: Organizational and Doctrinal Trends in Mounted Maneuver Reconnaissance from the Interwar Years to Operation Iraqi Freedom***, Fort Leavenworth, KS: Combat Studies Institute Press, 2010.

[13] Ibid.

[4] COL Curtis D. Taylor, "Transformation of Reconnaissance: Who Will Fight for Information on the Future Battlefield?", Fort Leavenworth, KS: thesis for CGSC master's degree in military arts and science, 2005.

[5] Cameron.

[6] Poindexter.

[7] In this case, the forms of reconnaissance required are route, zone, area and reconnaissance-in-force. Special reconnaissance is omitted due to the fact it is generally executed by Special Forces units. See FM 3-90.2 and Cameron.

[8] Carl von Clausewitz concluded that the nature of warfare remains constant while the environment within which warfare occurs constantly changes. See "On the Nature of War" in ***On War***, edited by Michael Howard and Peter Paret, Princeton, NJ: Princeton University Press, 1984.

[19] Ibid.

[20] FM 3-20.96.

[21] MCoE, "Force Design Update Cycle 13-01: The Standard ABCT Scout Platoon," presentation at Fort Benning, GA, 2013.

[22] Ibid. The 6x36 concept consists of three Cavalry troops with two platoons each and a mortar section. Each platoon consists of six CFVs and 36 Soldiers. Platoons also possess Force XXI Battle Command Brigade and Below Long-Range Advance Scout Surveillance System (LRAS3) and Raven UAV systems.

[23] Poindexter.

[24] Ibid. The estimated frontage for the larger ABCT is 16 kilometers at standard distance and 24 kilometers at extended distance. Although these figures are not represented in current doctrine, the additional assets within the "Cavalry squadron, armored" proved capable of securing both distances.

[25] FM 3-90.2.

[26] Ibid. *Screen* is a security task that primarily provides early warning to the protected force, while *guard* is a security task to protect the main body by fighting to gain time – while also observing and reporting information, and preventing enemy ground observation of and direct fire against the main body. The addition of a tank company provides the squadron the requisite firepower to fight to gain time for the BCT.

[27] Wasserbly.

[28] Andrew Feickhart, "Army Drawdown and Restructuring: Background and Issues for Congress," Washington, DC: the Congressional Research Service.

[29] Ibid.

Acronym Quick-Scan

ABCT – armored brigade combat team
ACR – armored Cavalry regiment
ARS – armored reconnaissance squadron
BCT – brigade combat team
BRT – brigade reconnaissance troop
CAB – combined-arms battalion
CFV – Cavalry Fighting Vehicle
CGSC – Command and General Staff College
FM – field manual
FSC – forward-support company
GPO – Government Printing Office
HHT – headquarters and headquarters troop
HUMINT – human intelligence
LRAS3 – Long-Range Advanced Scout Surveillance System
MCoE – Maneuver Center of Excellence
MI – military intelligence
OLC – oak-leaf cluster
OEF – Operation Enduring Freedom
OIF – Operation Iraqi Freedom
SIGINT – signals intelligence
UAV – unmanned aerial vehicle

Painting the Picture: Cavalry Operations in a Jungle Environment
(14 Lessons Re-learned at 25th Infantry Division's Jungle Operations Training Course)

by CPT John Healy

"To our men … the jungle was a strange, fearsome place; moving and fighting in it were a nightmare. We were too ready to classify jungle as 'impenetrable.' … To us it appeared only as an obstacle to movement; to the Japanese it was a welcome means of concealed maneuver and surprise. … The Japanese reaped the deserved reward. … We paid the penalty." –Field Marshall Victor Slim in Burma, World War II (concerning the dark early days of the Burma campaign)

Picture the situation: The United States' strategic focus is shifting from U.S. Central Command to U.S. Pacific Command, therefore 25th Infantry Division stood up the Pacific Contingency Response Force. The U.S. Army Pacific operating environment (OE) encompasses Southeast Asia, which is rife with environments that have traditionally been difficult in which to operate – many countries in the South Pacific region have thick jungle and/or rainforest terrain, which require a specialized skillset to ensure success in contingency operations. Based on these conditions, 25th Infantry Division's commanding general directed the establishment of the Jungle Operations Training Course (JOTC) on Oahu, HI.

Since our unit is a mounted reconnaissance troop with the primary mission of being the "eyes and ears" of the brigade commander, it was necessary to send Apache Troop, 3rd Squadron, 4th Cavalry Regiment, through JOTC to sharpen our skills on dismounted reconnaissance and security in restrictive terrain. This article describes a series of tactics, techniques, and procedures (TTPs) that led to Apache Troop's success conducting reconnaissance in a jungle OE and provides keys to shaping offensive operations for supported units.

JOTC's modules

JOTC's goal is to prepare Soldiers and units from 25th Infantry Division, joint services and foreign partner nations to conduct successful operations in a jungle environment. The course is executed by a battalion task force and covers five weeks, with each troop/company executing a 21-day cycle divided into four modules.

Module 1 is six days covering individual jungle skills. This is a round-robin module covering the following tasks:

- Patrol bases;
- Rope-assisted movement;
- Waterborne operations;
- Squad movement;
- Land navigation; and
- Boobytraps.

This module serves as a way to introduce new TTPs that are fundamentally different from what any Cavalry unit has trained on since Vietnam. It also sets the stage for situations Soldiers and leaders will see in Modules 2 and 3. Platoons had the opportunity in Module 1 to develop standard operational procedures based on the new doctrine in preparation for field training in later modules.

Module 2 is three days where troops/companies execute both a squad and platoon live-fire exercise (LFX) focused on movement, actions on contact and fire-and-maneuver in a jungle environment.

Module 3 is four days of both squad

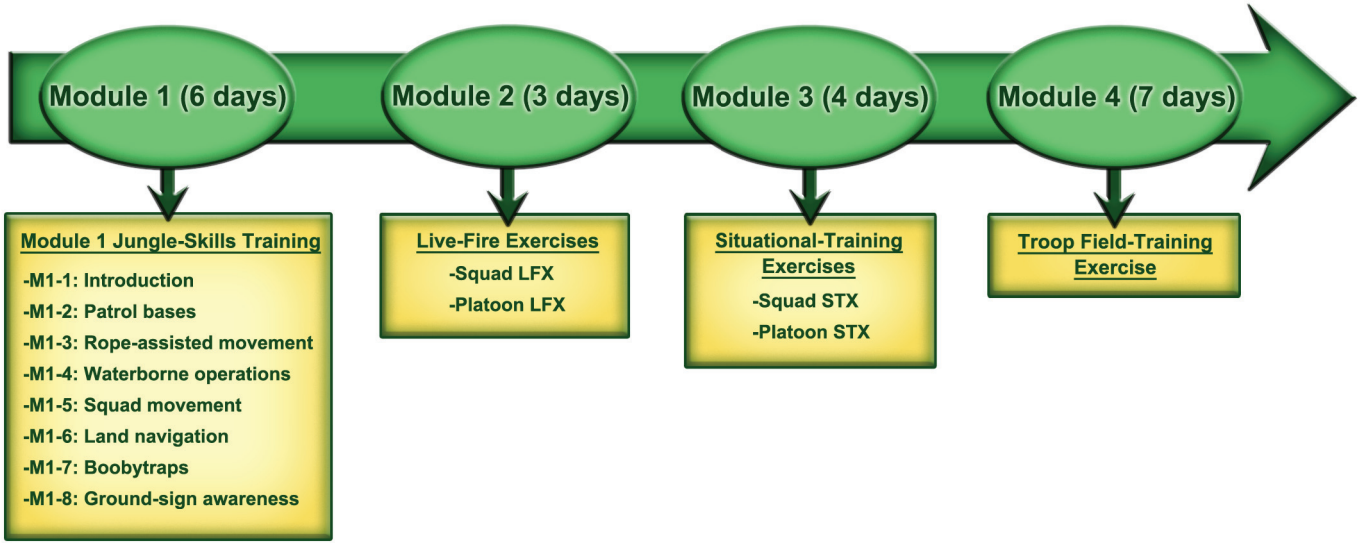

Table 1. JOTC training progression.

and platoon situational training exercises (STXs) oriented on jungle doctrine learned in Module 1.

Module 4, the culminating training event, is a six-day company/troop field-training exercise (FTX) where the Cavalry troop executes reconnaissance forward of an infantry company on multiple objectives, conducts a reconnaissance handover and supports the deliberate attack with fires.

The troop STX (Module 4) consisted of one day of troop-leading procedure during a five-day FTX, where the mission was to conduct reconnaissance up to 48 hours prior to the battalion task force's attack. Our key tasks were to identify the composition and disposition of enemy forces on two objectives, identify the most advantageous approach routes for follow-on forces, conduct a reconnaissance handover with the follow-on infantry company and provide overwatch during the attack, assisting with supporting fires if necessary.

The location of the training was Kahuku Training Area (KTA) in north-central Oahu. KTA's terrain is characterized as severely restrictive rainforest, with steep gulches that often require rope-assisted movement across water obstacles and dense fern greenery that was virgin in most areas, often requiring trailblazing with machetes. Our primary mode of insertion was via UH-60 helicopter on a helicopter-landing zone (HLZ) out of visual and audible range of the objectives, from which scouts executed an approximately three-kilometer movement to the objective.

14 successful TTPs employed in executing jungle reconnaissance

Conduct early face-to-face coordination with the leadership of the supported infantry company. The most important element of the planning process to ensure mission success was the face-to-face interaction with the rifle-company commander during the task-force combined-arms rehearsal (TF CAR). This interaction, with scout-platoon leaders and the fire-support officer (FSO) present, was pivotal in ensuring we understood the infantry company commander's intent for his assault, so that we as scouts could conduct reconnaissance to both paint the enemy picture and help shape the battlefield for his attack. This opportunity also served as the perfect opportunity to gain situational awareness of the fires plan for the follow-on unit in the event our scouts were required to observe fires on the objectives.

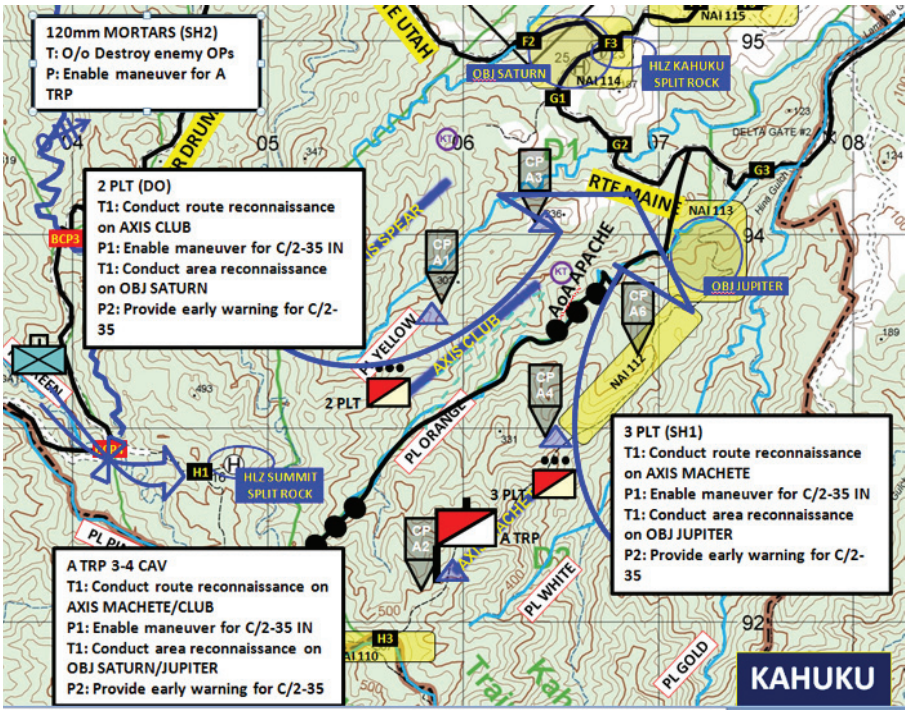

Figure 1. Apache Troop company FTX concept sketch.

Commander's reconnaissance guidance needs to address terrain equally as in depth as the enemy. *Focus.* Simply put, our mission was to find the enemy and show the infantry the best route to success. The latter point proved to require more in-depth analysis than first expected. Because of this, the focus of our commander's guidance was twofold and enduring throughout the mission: Identify the composition/disposition of the enemy; and identify routes and key positions to facilitate the infantry company's attack.

In the jungle, a wrong turn can lead to hours and, in extreme cases, days of delay. For this reason, terrain-focused reconnaissance was nearly as important as finding the enemy. This reconnaissance included deliberate identification of checkpoints (CPs) along a reliable route, hazardous terrain where special equipment was required and no-go areas. In addition, our accurate time/distance analysis resulted in an appropriately adjusted timeline for the infantry company's movement so the leadership had maximum time for reconnaissance handover upon link-up. Concurrently, our scouts were identifying the disposition of enemy forces and, in particular, enemy weapons systems in accordance with the high-payoff target list.

Tempo. The first stage of our movement was through restrictive (deep gulch with river) terrain where enemy contact was not likely. During this period, our tempo was rapid and forceful. Once we gained the high ground, we ran the risk of being observed by enemy forces with optics, so we transitioned to stealthy and deliberate movement to avoid detection. We maintained this tempo for the rest of the operation.

Engagement criteria. Our engagement criteria allowed our scouts to engage only when we needed to avoid a hard compromise and to cover a break-contact. This was important, because with these criteria we were able to tailor our loads to carry little ammunition and no machineguns, giving our scouts the freedom to carry more water and meals-ready-to-eat to last 96 hours.

Conduct deliberate route planning. In an environment where a wrong decision on routes can lead to hours or days of observation missed, this part of the planning process needs to be deliberate and has several considerations. The first considerations in route planning are time and tempo – i.e., how much time is available, and how quickly does the commander need the information? For planning considerations, a 100-meters-per-hour pace can be expected for a platoon-sized element through dense jungle terrain. This pace not only accounts for difficult movement with necessary gear but also enables Soldiers to employ proper tactics.

Figure 2. Apache Troop scouts conduct a clandestine river crossing during JOTC's Module 1. *(Photo by 2-35 Infantry Public Affairs)*

Secondly, the route planner must find the most accurate map data available to properly plan for terrain. Attempt to find a map that was made using more than just aerial-satellite imagery. Correctly interpreting contour lines will be a priority; a relatively flat path can quickly transform into a non-navigable drop-off. Accurate map data combined with deliberate map reconnaissance will alleviate these issues. Traditionally, the best avenues in the jungle have been along ridges and across saddles, using low ground as a last resort (per Field Manual 31-30, ***Jungle Operations***, October 1960).

Lastly, graphic-control measures are especially helpful in the jungle. Since visibility can be limited to 10 meters at times, plotting notable terrain features such as streams, hill, spurs, draws, etc., as CPs can help guide movement and confirm pace. Other useful navigation-control measures include recognizable backstops such as a body of water, a dominating piece of terrain or handrails such as ridgelines or streams.

Plan for the use of high ground during planned communication windows to ensure optimal transmission. Reliable communication in the jungle is integral to executing effective mission command and keeping higher headquarters informed with timely and accurate reporting. Effective communication on the move was often difficult because radio/telephone operators and forward observers could not extend their long whip antennae due to thick vegetation. For this reason, whenever possible we used communications windows and set up communications platforms on high ground. When the element became so far removed that standard communication was difficult, the platoons employed field-expedient antennae to ensure effective transmissions were maintained. Note: During planning, have the appropriate length of wire pre-cut for field-expedient antennae based on the desired frequency for ease of use after the line of departure (LD).

Employ an advance guard to proof the route and confirm maneuverability forward of the main body. Not everything in the jungle is as it appears on a map. A 20-foot decline in contour lines can quickly turn out to be a sheer rock face once on the ground. The incongruence between map data and actual terrain makes forward reconnaissance even more valuable in the jungle. The reconnaissance platoon or troop is the route surveyor for the infantry battalion, but who is the internal route surveyor for the reconnaissance element? The most effective method is to conduct a hasty route reconnaissance before moving the main recon body forward. The forward element's TTPs will depend on mission, enemy, terrain, troops available, time and civil considerations – particularly on terrain and visibility. A technique we used was to send out a hasty leader's recon of the planned routes to determine trafficability. This prevented larger elements from walking into situations where they had to backtrack and consume time.

Use long-range optics to develop the objective from standoff. The objectives rested at the base of two large spurs that ran down from the ridgeline to the northeast. Each platoon was tasked with conducting reconnaissance down one of the spurs that ran to the objectives to conduct assessments on insertion routes, while at the same time developing the enemy situation on the objectives. Initially the platoons used their dismounted long-range optics to develop the objectives from standoff, confirming/refining the fires plan and identifying intelligence gaps that needed to be filled by closer-in reconnaissance. From there, the platoons used a push-pull method with their sections, with one moving down the spur to conduct close reconnaissance while the other remained on higher ground to maintain eyes on the objective with a larger scope.

Carefully tailor combat loads. With every dismounted operation, individual Soldier loads are always a consideration for leaders. In some cases, leaders should consider the necessity for full combat power and personal protective equipment, depending on the length of the movement and the engagement criteria. For example, due to the difficulty of our infiltration, coupled with our guidance to avoid becoming decisively engaged at all costs, the troop decided not to take machineguns. We also did not take body armor. Both these elements decreased our survivability, but this risk was mitigated by ensuring our 120mm mortar section was constantly in supporting range in the event one of our platoons needed to execute a break-contact. The troop also took a minimum of personal ammunition – just enough to support a break-contact – to further lessen individual loads to allow Soldiers to carry more water.

When conducting long-duration operations in the jungle, "comfort items"

should be a last priority. Mission-essential equipment and the minimum amount of gear to survive for the duration of the operation should be the only items considered in a Soldier's packing list. Any extra space should be used for additional water storage.

Also consider adjusting the position of the Soldier's sustainment pouches (relocate them from the sides to the rear) to reduce each Soldier's profile so he can better avoid getting caught in dense vegetation. Careful consideration of the Soldier's fighting load proved to be a force multiplier and helped the troop maintain a steady pace all the way to the objective.

Use personal camouflage to increase survivability. Scouts need to be able to infiltrate to observe the reconnaissance objective without being detected, and personal camouflage will play a major role in maintaining the required stealth. Camouflage face paint needs to be part of the packing list, inspected during pre-combat checks (PCCs)/pre-combat inspections (PCIs) and included in priorities of work. Also as a part of priorities of work, scouts in observation posts (OPs) not only need to be constantly improving their personal camouflage but also the camouflage of their position to prevent identification from above.

Training to conceal Soldiers and equipment from ground and air observation is equally important to combat, combat-support and combat-service-support units. Proper use of camouflage will help make up for an enemy's superior knowledge of the jungle area.

Use small elements for trailblazing and rotate often. Trailblazing in the jungle presents different challenges than most reconnaissance units normally encounter, considering the OEs of Operation Iraqi Freedom (OIF)/Operation Enduring Freedom (OEF)/Operation New Dawn (OND). Regardless of the mission set of the reconnaissance unit and the surrounding terrain, making a new trail in the jungle is a slow and resource-intensive process. Planning considerations include the size of the trail that needs to be made, the size of the follow-on force, time available to establish a trail and available manpower.

As I said, blazing a trail is a very time-consuming process because only two to three individuals at most can be at the head of the formation shaping the trail. Unit leaders can choose to have the rest of the element slowly follow behind or to establish security halts to the rear of the trailhead and push trailblazers forward. The latter was the preferred method during the company FTX, as it allowed the platoons to establish hasty OPs to provide overwatch as the trail was slowly blazed forward. Leaders must be vigilant to ensure that security is constantly established while also making sure that trailblazers are rotated regularly to prevent exhaustion and maintain tempo.

Figure 3. An Apache Troop scout negotiates a one-rope bridge during JOTC's Module 1. *(Photo by 2-35 Infantry Public Affairs)*

When preparing men, weapons and equipment prior to trailblazing, Soldiers would make their jungle tools readily accessible (in addition to machetes, pruning shears are an effective and quiet alternative) and, once moving, attempt to make an opening wide enough to fit the appropriate-sized element through the terrain. In a dense rainforest environment such as Hawaii, a realistic planning consideration for trailblazing progress is 50 to 150 meters per hour.

Plan for and rehearse the use of ropes in maneuver. Jungle terrain and vegetation made maneuvering dismounted elements extremely difficult. Often, movement was limited to less than 200 meters in an hour. Drastic elevation changes forced formations into a file, forcing Soldiers to maneuver along ridgelines no more than three feet wide with severe drop-offs on both sides. Ridgelines also often took sharp dips, which drastically hindered our ability to move toward the objective safely. Widespread proficiency in how to deploy, use and recover ropes was essential to our scout elements while operating in a jungle environment. Platoon leadership always needed to be aware of where ropes were distributed throughout the formation, and rope set-up needed to be a well-rehearsed battle drill prior to LD.

Failure to conduct proper rehearsals and inefficient rope distribution in the formation led to an underuse of ropes and a subsequent loss in maneuverability, loss of stealth and increased casualties as Soldiers became injured from falling in the difficult terrain while carrying heavy loads. Ropes enabled both our ground scouts and follow-on forces to conserve time and manpower enroute to the objectives.

Strive to answer information requirements that support the

Figure 4. Apache Troop scouts conduct rope rehearsals during JOTC's Module 1. *(Photo by CPT John Healy)*

follow-on attack. Constant terrain analysis is essential to successfully support the infiltration of follow-on forces. Our troop had an intimate knowledge of the infantry commander's intent for movement and execution. Consequently, our scouts were able establish CPs along their movement route and identify key terrain for subsequent infantry maneuver.

Typical information requirements a follow-on infantry commander would need include suitable mortar firing points, support-by-fire locations, assault positions, OPs for command-and-control of the battlefield and, possibly the most important, the best tactical routes into and out of positions and locations. For these reasons, it is important for scouts and Cavalry leaders to be well-versed in offensive operations, be familiar with the combat power and capabilities of ***all*** units in the brigade, and have a good understanding of what terrain and approaches are most advantageous for infantry units in offensive operations. Once in close proximity to the objectives, we sent out small patrols to gather more information concerning possible avenues of approach for friendly assaulting forces on the objective, support-by-fire positions, water-resupply points, patrol-base locations and disposition of enemy early-warning forces around the objective. This was all information to enable the assaulting element.

After the more detailed area recon of the objective was complete, we established an OP along the approach route to provide early warning on enemy patrols heading toward the objective rally point (ORP) while other teams scouted the area for patrol-base locations and a water-resupply point.

Information gathered during the route reconnaissance enabled the battalion task force to make decisions concerning what avenues of approach could be used to maneuver toward the objective. The route-reconnaissance information also enabled the follow-on company to move quickly, quietly and with minimal risk due to pre-identified rope points, clearly marked trails and the presence of an OP providing overwatch on the route. The details gathered while conducting the closer-in area recon enabled the follow-on infantry platoon to conduct a much-needed water resupply; save time by moving to a pre-cleared patrol-base location; and execute stealthy maneuver at night to excellent support-by-fire and assault positions. Information gathered from long-range area reconnaissance gave the assaulting platoon an accurate picture of the enemy disposition and composition on the objective just before the assault. A combination of both the up-close stealthy and long-range recon enabled the follow-on infantry company to ultimately conduct a successfully coordinated deliberate attack on multiple complicated enemy objectives in difficult terrain.

Use stationary OPs to overwatch maneuvering scouts in low terrain. In addition to the challenges presented by terrain and vegetation during maneuver, effects on visibility due to terrain, vegetation and weather also required a change in tactics to accomplish the mission. Ridgelines and valleys provided the only options for maneuver. Unfortunately, valley floors contain the densest vegetation, impossible to pierce even with thermals, and ridgelines have many saddles that create dead space from the best OPs on the high ground. Low-lying clouds often reduce visibility at higher elevation from well over three kilometers to less than 100 meters.

To overcome these challenges, platoons performed a section-sized push-pull route reconnaissance down the descending route leading to the objective, with the rear section maintaining overwatch on the objective from the high ground about three kilometers away. The OP on the high ground could alert the section conducting the route reconnaissance to changes in the enemy macro situation on the objective and provide early warning in the event an enemy patrol left the objective toward the forward section's position.

Using a combination of this push-pull method, traveling overwatch under cloud cover and updates on the enemy macro situation from the rear section's OP on the high ground, we were able to conduct a thorough recon of our designated routes until each platoon was about 800 meters from their objectives. At this point, each platoon established an ORP and began preparation for a more thorough reconnaissance of the area around the objective in an effort to fill in what information our OP on the higher ground could not see. Platoons continued reconnaissance in this fashion until link-up with the follow-on infantry company.

Have a keen knowledge of your

supported unit's fires plan to be able to assist with observation. During execution, reconnaissance elements have the ability to free the maneuver unit from the obligation of observing rounds upon impact. Since the jungle is a densely vegetated environment with drastic elevation changes, maintaining visibility on an objective during movement can often be impossible. Therefore, scouts in already well-established OPs are invaluable in observing fires. Equipped with lasing optics, a scout can refine preplanned target locations to ensure first-round effects, thus more effectively preparing the objective before the assault. Without reconnaissance assets in the jungle, maneuver units may be forced to fire blind with an unrefined plan and hope to be able to adjust. It is key that the reconnaissance FSO knows the fires plan of the infantry force ahead of time – whether from the TF CAR or through radio coordination – to ensure continuity when scouts are required to observe the effects of preparatory fires before the attack.

Carefully consider water resupply and medical evacuation (medevac) when planning your routes. Our primary method of aerial resupply was a prepackaged speedball that was cached along our route. Machetes again come into consideration to clear an area for Class I and Class V to be kicked out of a UH-60. The issue with aerial resupply comes again with the presence of a helicopter in sight of the enemy. We mitigated this by controlling the air corridor and separating the speedball dropsite with a piece of high terrain, masking it from the objective and thus out of eyesight from the enemy. Another method our task force considered was low-cost, low-altitude aerial resupply, but we were unable to do this due to weather conditions.

The key to incorporating water resupply in the jungle environment is to identify points along the route to resupply during map reconnaissance. With jungle operations being slow in nature, units need to plan water resupply in such a manner that routes do not need to be drastically altered and to prevent use of long-duration patrols to seek out water sources. If proper planning is not applied to address water

Figure 5. An Apache 3-4 Cavalry scout is medevaced via hoist during JOTC's Module 4. *(Photo by CPT John Healy)*

resupply, leaders will find themselves altering their plans out of desperation and risking detection.

Due to the nature of the jungle and high precipitation in the OE, there were ample opportunities for resupply. We were fortunate to have been able to conduct water resupply at every water crossing we encountered using the Sawyer Mini Filtration System, but these opportunities may not always exist. Generally, we planned our routes to get to the high ground and remain there because this was the best opportunity for reconnaissance. However, these planning considerations needed to be balanced with the requirement to patrol to water sources. It was important to identify these potential sources during map reconnaissance because it allowed us to preplan our water-resupply points.

Also, a necessary consideration is the amount of water Soldiers are predicted to drink. The men were consuming four quarts a day, and we were able to hold 50 quarts per section. With this planning factor in mind, the troop was able to predict when each section would need water resupply throughout the week.

When conducting operations in the jungle environment, there is limited to no opportunity for ground evacuation of wounded or injured personnel. The primary method for evacuating Soldiers in the jungle is through hoist operations because after infiltration there are rarely opportunities to take advantage of open spaces for HLZs. During the company FTX, our route took us along a ridge, which provided limited opportunities for helicopters to extract Soldiers needing medical attention. For these reasons, always identify and look to incorporate high ground during your planning.

In one case, the use of machetes allowed us to cut down any trees and shrubbery to allow the medevac aircraft to set one skid down to receive our casualty because the hoist was disabled. Machetes can also clear trees and shrubs in the way of the hoist in thicker terrain. Keep in mind the second- and third-order effects on the mission during air-medevac. The presence of a helicopter will no doubt alert the enemy to the scouts' location and potentially compromise the mission. Overall, since medevac can be dangerous for both the scouts on the ground and the pilots in the air, leaders need to exercise due diligence and prevent serious injuries by maintaining an appropriate pace and taking the necessary safety measures during movement.

Conclusion

"The only way to train for jungle operations is to train in actual jungle. … Unless troops live under conditions under which they have to fight, they will be dominated by their environment." –LTG S.F. Rowell, commander, New Guinea Force, 1942[1]

Jungle operations are slow, dangerous and exhausting. Mistakes in movement and planning can cost an attacking force time, manpower and equipment. Leaders need to make use of all time available after receiving the initial warning order to conduct necessary movement to prepare equipment and validate standard operating procedures with section-level rehearsals. Comprehensive platoon and troop rehearsals, together with tailored PCCs and PCIs, will set leaders up for success and buy commanders precious time. Once the LD is crossed, a detailed reconnaissance on both terrain and enemy is essential for a follow-on attacking force's success. Once scouts have eyes on, the ability of leaders to think offensively will make reconnaissance more valuable to the infantry leaders we support.

From the arrival of the follow-on force

Necessary jungle-specific equipment	
ITEM	RECOMMENDED QUANTITY
Rappelling rope, 120 feet	1 per section or squad
2-quart canteens	2 per Soldier
Carabineers	2 per section or squad
Water-purification systems	1 per team (4 Soldiers)
Machetes or pruning shears	2 per section or squad
Mosquito nets	1 per Soldier
Jungle boots (w/prominent heel)	1 pair per Soldier
Water bladder, 5-quart	2 per section or squad
Trash bags	2 per Soldier

Table 2. Recommended jungle-equipment chart.

at link-up through final forward-passage-of-lines, the Cavalry takes ownership of ensuring infantry leaders have a solid understanding not only of the enemy situation but also of the best terrain they can use to execute their attack. If executed in this way, our infantry brothers will see how well Cavalry can enable and shape their mission so the scales are tipped overwhelmingly in their favor when the time comes to initiate the attack.

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Notes

[1] From LTC S.F. Rowell's report on operations of the New Guinea Force, Aug. 7-Sept. 28, 1942, originally quoted in ***The Foundations of Victory: The Pacific War 1943-1944***, edited by Peter Dennis and Jeffrey Grey (Canberra, Australia: Australian Department of Defence, 2004).

Acronym Quick-Scan

CAB – combined-arms battalion
CP – checkpoint
FSO – fire-support officer
FTX – field-training exercise
HLZ – helicopter-landing zone
JOTC – Jungle Operations Training Course
KTA – Kahuku Training Area
LD – line of departure
LFX – live-fire exercise
Medevac – medical evacuation
OE – operating environment
OIF – Operation Iraqi Freedom
OND – Operation New Dawn
OP – observation post
ORP – objective rally point
PCC – pre-combat check
PCI – pre-combat inspection
PL – phase line
STX – situational-training exercise
TF CAR – task-force combined-arms rehearsal
TTP – tactics, techniques, and procedures

Arming for Impact: Empowering Cavalry to Enhance Joint Combined-Arms Operations

by CPT Nathan A. Jennings

"A numerous cavalry, whether regular or irregular, must have a great influence in giving a turn to the events of a war." –Antoine-Henri Jomini

The U.S. Cavalry's role in facilitating multi-echeloned maneuver through mobile protected firepower is a decisive component of American expeditionary superiority. Once called the "illuminating torch and protective shield of the army" by Napoleonic generals, Cavalry has long specialized in reconnaissance and security at both tactical and operational levels.[1] Looking forward to the myriad challenges over coming decades, this imperative will prove more crucial as mounted formations dynamically shape joint combined-arms operations that must, according to the 2014 Army Operating Concept, "possess the ability to operate dispersed over wide areas because they are able to integrate intelligence and operations to develop *situational understanding through action* while possessing the *mobility* to concentrate rapidly."[2]

Emerging trends in 21st-Century conflict – such as population shifts toward mega-cities, social instability and resource competition – will only increase challenges for American units.[3] Simultaneously, information technologies will continue to accelerate operational tempos as networked formations increasingly synchronize and synergize. These demands will ultimately require that fewer brigade combat teams (BCTs), enabled by their most mobile elements, wield greater versatility as they establish landpower dominance across expeditionary theaters.

One way to enhance the Army's capacity to influence operational environments is to reconceptualize the role of Cavalry squadrons in armored (ABCTs), Stryker (SBCTs) and infantry BCTs (IBCTs) from limited intelligence-collection elements to more lethal, and thus more tactically versatile, fighting formations. Due to economized brigade modularization over the previous decade, and the corresponding elimination of division Cavalry squadrons and armored Cavalry regiments (ACR), tactical-level squadrons have emerged as nearly single-dimensional formations lacking enough firepower or survivability to fight through high-intensity contests.

This dilemma, centering on the current Cavalry fleet's inadequate contributions relative to their parent BCT's mechanized, motorized or airmobile profiles, consequently limit potential scope of maneuver for planners and commanders. While comprehensive improvement in mobility, protection and armament to all reconnaissance platforms would be an ideal, if unrealistic, remedy, in an era of fiscal constraints, the Army should prioritize upgrading vehicle weapons to the highest lethality appropriate to BCT type.

This expansion of combat versatility would empower the 32 maneuver brigades and Cavalry squadrons that will likely remain after BCT reorganization – reflecting a 28-percent reduction in the total Cavalry force since 2010 – to provide more dynamic contributions to joint efforts.[4] As doctrinally required by Field Manual (FM) 3-20.96, ***Reconnaissance and Cavalry Squadron***, the improvement would allow each squadron to provide their BCT, joint task force or multinational headquarters with expanded "freedom of maneuver and initiative over the enemy."[5] With deactivation of the battlefield surveillance brigades (BfSB), and despite ongoing initiatives to create Cavalry at division or corps echelons, BCT Cavalry may also shape outcomes at operational levels.

Necessary superiority to achieve these missions could pragmatically and rapidly be achieved by adding proven armored platforms with more powerful armaments to deficient squadron fleets, or by installing larger-caliber weapon systems on the current "recce" vehicles within each unit.

Figure 1. The battle-tested M1 Abrams main battle tank has historically empowered Cavalry in reconnaissance-and-security maneuvers.

The resulting lethality would allow the Army's most mobile ground formations expanded utility in both perception and reality.

The squadrons in each type of maneuver brigade, or any potential operational-level Cavalry formation, would accordingly require different enhancement. Beginning with the ABCTs, incorporation of the venerable M1A2 Abrams main battle tank into the mechanized Cavalry would allow them highest destructive capacity. For the medium-level SBCTs, adding 25 or 30mm autocannons to existing Stryker recce vehicles, similar to General Dynamics' Light Armored Vehicle III (LAV III), would empower far more aggressive maneuver. And in the IBCTs, where ground mobility is a perennial structural issue, likewise upgrading motorized troops with a 25mm-capable light tactical vehicle would substantially increase their utility while adding critical maneuver independence to the "light" brigades. With such improvement, essentially transforming America's challenged reconnaissance squadrons into operationally impactful organizations, all Cavalry units would prove far more effective in supporting combined-arms efforts ranging from forced-entry invasion to wide-area security (WAS).

ABCT Cavalry squadrons

The squadrons of the ABCTs are currently the only mechanized reconnaissance elements in the Army, and by 2016 will represent 31 percent of the nation's Active-Component tactical-level Cavalry at 10 squadrons and 30 troops.[6] Doctrinally assigned to conduct reconnaissance and security for the heavily armed and armored tanks and infantry fighting vehicles of the combined-arms battalions (CAB), the heavy reconnaissance squadron – with its deficient pairing of M3 Cavalry Fighting Vehicles (CFV) and up-armored humvees in six scout platoons across three troops – cannot forcefully negotiate the highest-intensity contests of maneuver combat.[7] While the CFV is an effective scouting vehicle due to its protected hull, tracked mobility, 7.62mm coaxial machinegun, 25mm autocannon and anti-tank missile armament, the diminutive humvee is a grossly inferior "guntruck" without adequate mobility, survivability or stabilized weapons to dynamically fight through mechanized battles.[8]

The resulting inadequacy of the ABCT Cavalry – centering on its limited ability to fight for information, attack and defend against armored opponents in the ultimate crucible of 21st-Century armored combat – can be remedied with a relatively simple fix. By replacing the humvees with the M1A2 Abrams and its peerless hull protection and 120mm smooth-bore cannon, and by restructuring along legacy ACR troop configurations, the heavy squadrons would instantly become formations capable of not only matching the mobility of CABs, but would own the organic ability to conduct high-tempo reconnaissance and counter-reconnaissance against enemy armor, and to maintain fighting screens in the face of combined arms and joint attacks.[9]

The unrivaled potency of Abrams/CFV teams across diverse combat environments is a historically proven quantity. While the U.S. Armor School's initiative to upgrade ABCT Cavalry troops with Bradley-pure scout platoons provides substantial improvement, CFVs alone are simply not armed or armored enough to dominate heavy reconnaissance and security. Instead, the ACR's battle-tested "slant" of two tank and two CFV platoons per troop offers a more capable alternative.[10]

Demonstrated in both the 1991 and 2003 American invasions of Iraq, the pairing of tanks and CFVs brings the highest degree of combined-arms potency to joint forces during forcible-entry operations. As advocated by co-authors LTC Chris McKinney, COL Mark Elfendahl and LTG H.R. McMaster in their 2013 ***Foreign Affairs*** article, "Why the U.S. Army Needs Armor," such mechanized partnership possesses the exclusive capacity to "keep pace with fast-moving aircraft" and "maneuver quickly to strike the enemy from unexpected directions with multiple forms of firepower."[11] Simultaneously, as seen during counterinsurgency operations in Iraq, heavy Cavalry also allows parent brigades expanded flexibility for patrolling in stability endeavors.

Taken in the context of evolving operational settings like Mesopotamia and Eastern Europe, this platform upgrade would prove beneficial in security challenges of the future. As information, signals and surveillance technologies improve, operational tempos will drive compressed decision cycles that demand increased rapidity and synchronization in digitally networked maneuver.[12] To excel in this environment, which may include hybrid and asymmetric attacks that will stymie less armored formations, ABCT squadrons need the peerless firepower and protection of the tank.

As defined by FM 3-20.971, ***Reconnaissance and Cavalry Troop***, the enhanced formations would then have the capability to truly "fight for information in full-spectrum operations" while executing reconnaissance-in-force and contested surveillance.[13] This reconfiguration would not only make each armored squadron a multifunctional asset to its brigade, but would allow rates of situational development commensurate to the capabilities of affiliated CABs.

Incidentally, the planned complement of 96 mounted troops to just 66 tank companies across the entire maneuver force will ensure that Cavalry retains a decisive 59-percent majority within Armor Branch.[14]

SBCT Cavalry squadrons

The wheeled Stryker brigades and their subordinate reconnaissance elements first deployed to combat in 2003, according to U.S. Army doctrine, as a BCT that is "more deployable than the [heavy] BCT" yet has "greater tactical mobility, protection and firepower than the IBCT."[15] In this capabilities-bridging context, the planned array of eight Stryker Cavalry squadrons and 24 troops offer exceptional potential to conduct full-spectrum operations, and specifically reconnaissance and security tasks, in multi-dimensional urban settings. Destined to comprise 25 percent of the total Cavalry force, these squadrons support their brigades with a composition of three reconnaissance troops (with three scout platoons each) while benefiting from an advanced complement of sensory systems and unmanned aerial surveillance (UAS).[16]

Despite the unique and proven value of the SBCT as a maneuver force that possesses a singular combination of mobility and dismount capability, the brigade suffers from a dearth of dominating and scalable firepower. In both the infantry battalions and Cavalry squadrons, the eight-wheeled Stryker carrier vehicle operates with free-standing or remotely operated machineguns with limited support from a low density of Mobile Gun System (MGS) platoons armed with 105mm cannons. In the Cavalry in particular, where scouts patrol with the Stryker Reconnaissance Vehicle (SRV), the potential for counter-reconnaissance against superior armed opponents like the Russian-grade BRDM-3 and BTR-82, each with larger 30mm cannons, creates disadvantage at the moment of contact.

The answer to this deficiency is clear: Stryker Cavalrymen must deploy with stabilized vehicle weapons and volume of firepower large enough to allow dominance across full-spectrum environments. This superiority is equally crucial whether enabling higher-echelon schemes or conducting independent maneuver. Since the Stryker platform has proven ideal for its mission with balance between protection, crew space and urban trafficability, the Army should upgrade the existing reconnaissance vehicle with either an externally mounted and remotely operated 30mm autocannon, or a manned 25mm turret system like the LAV III. While a lighter and miniaturized remotely controlled innovation may be ideal, arming Stryker scouts with the proven M242 Bushmaster, enhanced by magnification and thermal optics within an armored turret, would offer an immediate solution. Needless to say, the latter option would substantially increase the weight of a Stryker platform.

Regardless of the choice for unmanned or manned vehicle weapons, Stryker Cavalry wielding larger autocannons would instantly adopt more aggressive reconnaissance-and-security profiles in support of combined-arms maneuver (CAM). The scalability of 25mm effects, in contrast with the more destructive and less nuanced impacts of the Abrams' and MGS' main guns, would also provide greater patrol flexibility to joint headquarters during WAS. Commanders could task-organize troops to enhance infantry-battalion firepower or disperse the squadron's tactical independence to economize control of peripheral sectors.

Looking toward the future of Cavalry utility, this increased lethality will be as crucial to empowering the Stryker squadrons as the addition of tanks could be for their tracked counterparts. Able to confidently fight through contested landscapes, the nation's medium-grade squadrons would maximize the convergence of information superiority, urban mobility and aerial integration with better armament to increase SBCT value in strategic landpower.

IBCT Cavalry squadrons

The final type of Cavalry that require improvements are the 14 motorized squadrons of the IBCTs that will likely remain after reorganization. Unfortunately, due to diverse expeditionary postures and doctrinal imperatives to be "capable in complex terrain defense, urban combat, mobile security missions and stability operations," identifying a universal armament enhancement for the planned eventuality of 42 wheeled troops across six ground, five airborne and three air-assault squadrons is challenging.[17] Making a holistic upgrade even more critical, the IBCT mounted reconnaissance forces – which will represent a significant proportion of the Army's Cavalry squadrons and troops at about 43 percent each – suffer from reliance on the inferior humvee platform with unstabilized machineguns.[18]

Given these limitations, even when considering the planned reorganization of the light squadrons' single infantry companies into a third Cavalry troop, IBCT mounted scouts are currently unable to adopt aggressive reconnaissance-and-security maneuvers in even moderately contested environments without inducing unacceptable risk. Given the fact that they are markedly outclassed by peer-competitors in both armament and protection, and only match weaponry of developing world militias, they cannot achieve their doctrinal assignment to "fight for information against light/motorized forces" without submitting to an extremely deliberate movement rate.

Also, with pintle-mounted machineguns and anti-tank missiles that are essentially redundant in capability to the IBCT rifle battalion's organic heavy-weapons company, the squadron fails to fulfill another doctrinal intent: to provide its brigade with "enhanced firepower and mobility for offensive or defensive operations."[19] These Cavalry

Figure 2. The European Pandur series and its scalable weapons systems offers a possible mobility solution for IBCT Cavalry. The Pandur shown is in Austrian service. The Pandur II is available in a number of variants and can take a variety of turret systems, according to its manufacturer. *(Photo by Austrian armed forces)*

thus require complete replacement of vehicles and weapons to improve structural limitations inherent to their BCTs.

The answer to this deficiency begins with repurposing the lightest squadrons as the mobile protected firepower component of each IBCT instead of posturing for economized intelligence collection. Due to requirements for significant restructuring, the enhancement demands not just lethal improvement but also upgrades in mobility and protection with a new light tactical vehicle. Similar to the needed improvement to the Stryker Cavalry, these motorized scouts should also equip with 25mm or 30mm autocannons to expand their higher headquarters' organic arsenal, as opposed to using redundant .50 caliber or 7.62mm machineguns already possessed by rifle battalions. These higher-caliber systems must also be stabilized with thermal, magnified and laser-ranged targeting, ensuring an immediate qualitative advantage against likely motorized opponents across all operational landscapes.

Given these demands, Army planners should first explore adopting the Stryker platform, which would admittedly sacrifice air-mobility, as an immediate and interim "off the shelf" improvement to IBCT Cavalry. Since even the up-armored humvee units of airborne brigades realistically conduct only ground insertion due to air-dropability restrictions, the larger size and weight of the Stryker may prove minimally detrimental.

Alternatively, the Army should continue the development of a light tactical vehicle slightly larger than the humvee, perhaps similar to the six-wheeled Armored Ground Mobility System (Pandur series), but with the mandate that it can support a miniaturized 25mm cannon. While seemingly contradictory to the IBCT's necessarily lightened posture, the organic availability of greater mobile lethality would actually increase its versatility. In this manner, restructuring U.S. light Cavalry as forces capable of destroying armored personnel carriers, disabling tanks and penetrating urban infrastructure would prove critical supporting joint efforts in both CAM and task-organized security.

Reconceptualizing Cavalry lethality

The potential enhancement of organic lethality of all squadrons across ABCTs, SBCTs and IBCTs offers a new scope of utility for American Cavalry in joint combined-arms operations. Yet despite the upgrades, larger weapons would not be a panacea to the challenges of mounted warfare. Scouts with better armament will still rely on traditional strengths of stealthy maneuver, navigation expertise and indirect-fire skills – in concert with mastery of newer enablers like UAS and digitized information superiority – to acquire information about enemy and terrain. As with most large-scale redesigns, improvements in vehicles and weaponry would incur substantial costs. Integrating heavier platforms would require fiscal prioritization, marginally decrease deployability in lighter formations and likely require prepositioned fleets to achieve expeditionary rapidity.

Figure 3. General Dynamics' combat-proven LAV serves as an example for upgrading the SRV's lethality profile.

Despite these obstacles, restructuring Cavalry forces as empowered formations would allow them to fulfill the Army's imperative to "conduct operations consistent with the tenet of *adaptability*, anticipating dangers and opportunities and adjusting operations to seize, retain and exploit the initiative."[20] Moving beyond optimization for lightly contested intelligence collection, upgrading all 32 future Cavalry squadrons with stabilized, high-caliber weaponry would position them as dynamic force-multipliers to expand BCT options in both decisive action and stability operations.

By adding tanks to the ABCT Cavalry, enhancing the SBCT squadrons with 25mm cannons and redesigning IBCT motorized scouts with more capable light tactical vehicles, each brigade would enjoy the qualitative advantage it needs to dominate reconnaissance-and-security arenas. This versatility would result in the confidence to execute high-tempo reconnaissance at the tactical level while maintaining capacity to attack and defend.

If arming for greater impact provides immediate tactical dividends, it likewise offers expanded utility during echeloned operations. More heavily armed and armored BCT squadrons would be structured, with modest augmentation, to shape limited maneuver for joint headquarters with degrees of the autonomy once owned by division Cavalry and ACRs.

Similarly, as the Army explores options for reconstituting Cavalry formations at division and corps echelons, the imperative for dominance in hybrid environments holds even greater import. Whether structuring as divisional squadrons or modular reconnaissance brigades, the requirement to maneuver farther and faster to shape joint

and multinational operations will necessitate even greater independence in forcible maneuver.

With expanded requirements to fight for information independently while potentially conducting guard and covering assignments, armored Cavalry at echelons above brigade should include tanks, while their Stryker counterparts should have more lethal armament. Taking the combined-arms concept farther, the Army should task-organize attack aviation and unmanned platforms directly into these squadrons, similar to the legacy division-Cavalry structure.[21]

Looking toward the coming decades, the U.S. Army will have to, according to its 38th Chief of Staff, "prevent wars and shape security environments" while conducting "sophisticated expeditionary maneuver" with fewer BCTs and subordinate elements.[22] When accounting for the ongoing brigade reorganization and deactivation of the three Active-Component BfSBs – and excluding potential restructuring for creation of operational Cavalry – remaining squadrons will likely represent 25 percent of all maneuver battalions across the force.[23] While yet capable, this reduced mounted corps will embrace ever-higher maneuver tempos with greater versatility as they enable joint task forces across diverse operating environments.

A panoply of technological advancements in net-centric synchronization, signals innovation and aerial and high-altitude surveillance will compel forceful reconnaissance and increasingly complex security requirements. To meet these challenges, the Army should reconceptualize its single-dimensional Cavalry squadrons as the ultimate heavy-weapons component within each brigade, division and corps. Rising to a new level of confidence, let the American Cavalry tradition ride into the 21st Century wielding a new range of dynamic versatility.

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Notes

[1] Jean Roemer, ***Cavalry: Its History, Management and Uses in War***, New York: D. Van Nostrand, 1862.

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[5] FM 3-20.96, ***Reconnaissance and Cavalry Squadron***, March 2010.

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[12] See FM 3-21.21, ***The Stryker Brigade Combat Team Infantry Battalion***, for a description of how digitalized networks like Force XXI Battle Command Brigade and Below enhance and drive tempo in maneuver operations.

[3] FM 3-20.971.

[4] Tan.

[5] FM 3-90.6.

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[7] Ibid.; this quantity accounts for the expected deactivation of the BfSBs and the eventual reorganizing of a third motorized reconnaissance troop in IBCT Cavalry squadrons as forecast by BG Lee Quintas, "Commandant's Hatch: Cavalry Update," ***ARMOR***, July-September 2014.

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[2] See MAJ William Nance, "Lost Sabers: Why We Need Operational Cavalry and How to Get it Back," ***ARMOR***, October-December 2014, for more on this topic.

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Acronym Quick-Scan

ABCT – armored brigade combat team
ACR – armored Cavalry regiment
BCT – brigade combat team
BfSB – battlefield surveillance brigade
CAB – combined-arms battalion
CAM – combined-arms maneuver
CFV – Cavalry Fighting Vehicle
FM – field manual
IBCT – infantry brigade combat team
LAV – Light Armored Vehicle (III)
MGS – Mobile Gun System
SBCT – Stryker brigade combat team
SRV – Stryker Reconnaissance Vehicle
OIF – Operation Iraqi Freedom
UAS – unmanned aerial surveillance
USMA – U.S. Military Academy
WAS – wide-area security

The Tank is Dead! Long Live the Tank!

by 1LT Kier Elmonairy

*(**Editor's note:** Amid increasing tensions over the situation in Ukraine, the Russian state media announced it would debut a new main battle tank and infantry fighting vehicle (IFV) during the Victory Day Parade May 9, 2015. These vehicles, the first types in a new family of Russian armored fighting vehicles (AFVs) known collectively as Armata, are intended to replace most of the Russian armored fleet by 2030. The following article describes one possible American response to this development and the generally increasing lethality of today's modern battlefield. For more information, see http://nationalinterest.org/feature/the-russian-armys-secret-weapon-enter-the-armata-program-11711. This story links to original Russian announcements.)*

Predicting the demise of the tank as a principal weapon of land warfare is one of the longest-running pastimes in the study of military history and defense affairs. Before the guns had gone silent on the fields of Cambria, the site of history's first major tank offensive, the German army had taken its successful blunting of the British attack to mean that the tank was a battlefield novelty of little importance.[1] The combination of high-explosive anti-tank (HEAT) warheads and the compact guidance systems in the anti-tank guided missile (ATGM), first deployed in numbers during the Yom Kippur War of 1973, was also supposed to have spelled the end of the tank.[2]

With the end of the Cold War and the "end of history," the demise of the tank was again foretold. This era was supposed to mark the end of conventional conflicts, with the tank increasingly relegated to minor and secondary roles, since airpower and Special Forces were to take the lead in brushfire wars the world over. And yet, in each instance, the tank's unique combination of mobility, firepower and survivability ensured that the tank not only avoided consignment to the trashbin of history, but remains one of the principle expressions of land combat power in the modern age.

The Allied tank offensives of 1918 helped ensure victory against the Central Powers.[3] The development of advanced composite armors in response to the ATGM threat by British and American engineers under codenames such as "Chobham" and "Burlington" would make tanks like Abrams and Challenger some of the brightest stars of Operation Desert Storm.[4] Even in today's conflicts against non-state actors and state proxies, tanks have repeatedly proven their worth by providing a high degree of tactical overmatch to the armies that employ them.[5]

Looking forward, the Soldier of tomorrow is likely to face an increasingly complex and lethal environment. Advanced weapons that were once the exclusive reserve of the world's leading militaries are now finding their way into the hands of second- and third-rate militaries, as well as non-state paramilitary organizations. Recent Israeli operations in the Palestinian territories, such as Pillar of Fire and Protective Edge, have demonstrated that highly sophisticated ATGMs and other precision-guided munitions (PGMs) are becoming increasingly common and are presenting issues once primarily dealt with by the foes of Western militaries.[6]

In light of this, the author believes that the demand for survivable firepower like that found in tanks will be increasing rather than decreasing in demand. Furthermore, to provide that survivable firepower, the Army should pursue more aggressive modernization of the Abrams than is currently planned, as well as beginning development of a new vehicle that leverages mature as well as developing technologies and design concepts. Only in this way will the Armor Corps remain at the forefront of tank design because, as this article will show, the most exciting developments in AFV technology are often foreign.

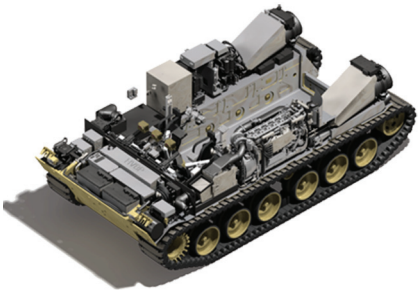

Figure 1, above. The XM1202 tank from the FCS program. Figure 2, right. The MGV chassis.

Assessing past development

To remain relevant and capable of contributing to the Army and the joint team's combat effectiveness, America's tank fleet must adapt to the changing threat environment. While the M1A2 System Enhancement Program is a world-class tank, the underlying vehicle was commissioned during the Nixon administration and the Abrams is quite nearly at the limits of its growth potential.[7] This situation is remarkably similar to the one faced by the Armor Corps in the mid-1970s. The U.S. Army then sought to leap ahead in tank design to make up for a development holiday during the Vietnam War and the combined threat of a new generation of Soviet tanks and increasingly effective ATGMs. At that time, the Army sought to capitalize on research conducted as part of the failed MBT-70 and XM-803 tank development projects.[8] By incorporating mature

technologies from the two cancelled programs into the A3 version of the M-60 and pushing forward with 55 critical technology enhancements in the new M-1, the Armor Corps achieved a quantum leap forward in capability while establishing the technical foundations for the dominance the M1 has thus far enjoyed.[9]

Now the Army is faced with more than a decade's worth of ground-vehicle research represented by the now-defunct Future Combat Systems (FCS) manned ground vehicle (MGV) and ground combat vehicle (GCV) programs with no fielded systems to show for it. Also, ground-vehicle design has continued to progress in other countries, leading to fielded vehicles with proven features that could be included in future American projects.[10]

To deal with this state of affairs, the author proposes that the current Engineering Change Proposal 1B (ECP1B)[11] being drafted for the Abrams be expanded to incorporate proven and mature technologies not currently slated for inclusion to increase the ECP1B's utility while a new-build tank is pursued for deployment in the mid-2020s. This new tank should represent a modest improvement in combat capabilities over the M1A3 but with particular attention paid to design modularity, built-in growth potential and the ability to incorporate new technologies as they become available. This dual-track strategy would provide increased performance to the warfighter at the soonest possible date while also positioning the Armor Corps to take advantage of cutting-edge and breakthrough technologies as they become available.

While the recent edition of ***Military Review*** contains an article by Dr. Alec Wahlman and retired COL Brian M. Drinkwine that deals with some of the possible upgrades to the Abrams, this article looks to handle the finer technical details of possible upgrades as well as review foreign developments in tank design.

Mobility

To keep the discussion of proposed features of the M1A3 and a new vehicle somewhat organized, we will group these topics into the three broad categories that define the primary attributes of a tank: mobility, survivability and lethality. In all these domains, the Abrams remains at or near the top when compared to foreign vehicles. While tanks like the Leopard II or Leclerc may be quicker owing to their lower weights, the Abrams' 1,500-horsepower (1,118.5 kilowatts) makes it one of the world's most maneuverable tanks. The advanced Chobham composite armor and depleted uranium mesh that comprise the Abrams' current armor package provide a level of survivability rivaled only by the British Challenger II with its own advanced composite armor. With regard to lethality, the pairing of the M256 120mm smoothbore cannon and the M829 family of Armor-Piercing Fin-Stabilized Discarding Sabot (APFSDS) is

Figure 3. The Leopard II A7, displayed at Eurosatory 2010. *(Photo from Wikimedia Commons; used per applicable licensing "Attribution 2.0 Generic (CC BY 2.0)"*)

one of the most effective pairings of gun and ammunition in the history of armored warfare. Despite all this, the fact remains that ground-vehicle technology has continued to progress and that the Abrams could stand to gain considerably from leveraging these advances.

Turning first to the M1A3, significant increases in capability across all three domains are already planned by General Dynamics Land Systems (GDLS) through ECP1B.[12] Dealing first with mobility, GDLS has proposed several improvements. Chief among these is the Abrams dieselization initiative. The MTU-833 CRI diesel engine, similar to the engine found in the Leopard II, will replace the 1,500-horsepower Honeywell AGT1500C turbine engine. While providing the same power as the gas turbine, the diesel engine will deliver a 50-percent increase in cruising range through enhanced fuel efficiency and a 37 percent reduction in maintenance costs owing to greater simplicity and higher commonality with commercial diesel engines.[13]

Another mobility improvement, also courtesy of the Leopard II, is the Dehil 570 P-series track and road wheels, which last 20 percent longer than the current generation of track while also reducing the vehicle's acoustic signature.[14] In-arm pneumatic-suspension units replace the torsion-bar suspension and complete the planned mobility enhancements.[15] Enhancing reliability, the M1A3 will also include suite of on-board diagnostics that increase the speed and accuracy of maintenance.[16] When taken together, the mobility enhancements proposed by GDLS represent a significant improvement to the status quo.

Also, if slightly elevated design risk is deemed acceptable, two technologies researched for the FCS MGV program stand consideration as mobility enhancements as well. The FCS MGVs were to be powered by diesel-electric hybrid engines that provided huge improvements in fuel efficiency as well as improved electric-power-generation potential.[17]

Segmented band track, a continuous rubber track with metal inserts, is another technology originally developed for the FCS that would enhance the M1A3's mobility through a reduced roll resistance, reduced acoustic signature, reduced weight and longer lifespan when compared to conventional metal tracks.[18]

Survivability

Turning to survivability, GDLS is proposing to include unspecified sensors providing 360-degree situational awareness and an active protection system (APS) on the next iteration of the Abrams tank.[19] While both of these would represent first-of-their-kind systems on American ground vehicles, they have already been fielded and, in some cases, are battle-proven with foreign armies.

A case in point would be the Trophy APS developed by Rafael. This system consists of a series of millimeter-wave radar sensors that create a hemispherical area of coverage around the protected vehicle. After detecting an incoming threat, such as a rocket-propelled grenade, the system launches an explosive countermeasure to intercept the round before it impacts the vehicle. These systems have been combat-proven with the Israeli army, which took a brigade's worth of the equipment to Operation Protective Edge to protect the Merkava IV tanks. The system also calculates the point of origin of the incoming round and provides the ability to slew the main gun to that point.[20]

Another mature technology ready for inclusion in ECP1B is the SSP-1 OBRA-3 Laser Warning System by Polish Defence Holdings. This system detects laser radiation commonly used in range-finding equipment and alerts the crew to the location of the laser rangefinder. Four sensors mounted on the vehicle provide 360-degree coverage and the same slew-to-cue capability found in the Trophy APS.[21] Both systems are also capable of autopopulating battlefield-management software with the point of origin for each detected incoming threat.

By allowing the M1A3 to perceive the threat before it can engage, avoid being hit if engaged and shorten the time it takes to acquire the threat, systems like Trophy and SSP-1 provide a significant improvement over the Abrams' already impressive survivability while requiring little to no more development prior to integration, since these systems are both designed as plug-and-play after-market additions to mature vehicle designs. This is, in fact, a major source of the marketability stressed by the manufacturers and could be leveraged for rapid fielding to the current fleet of Abrams tanks.

Lethality

Moving to lethality, GDLS is looking to integrate an ammunition datalink that would allow use of the projected advanced multi-purpose (AMP) 120mm round.[22] Seeking to improve the Abrams' target-acquisition capability, ECP1B may also include a third-generation forward-looking infrared (FLIR) sensor suite.[23] While replacing four existing rounds, the AMP round does not provide an increase in lethality so much as take the guesswork out of

Figure 4. The Merkava IVm with Trophy APS.

what round should be battle-carried.[24]

An increase in lethality could be achieved through integrating technologies already found on foreign vehicles. The M256 120mm smoothbore cannon that currently equips all M1 tanks in service is a license-built copy of the Rheinmetall L44 120mm, referring to the fact that the length of the gun is 44 times its 120mm bore.[25] Leopard IIA6 and all subsequent versions mount the Rheinmetall L55 120mm gun.[26] The additional 25 percent in barrel length imparts a higher muzzle velocity and accuracy to rounds fired from the gun. As demonstrated in the inclusion of the L55 on the Leopard IIA6, the high degree of commonality with the L44 makes integration of the longer gun relatively simple.[27]

A further increase requiring minimal development would be the certification of Israeli Aerospace Industries' Lahat ATGM for use in the Abrams. The Lahat ATGM can be launched from a variety of platforms, including from the main gun of tanks with 105mm and 120mm guns.[28] By extension, the Abrams' M256 should be compatible with the Lahat ATGM. The round's range of 4.97 miles (eight kilometers) from ground platforms would significantly enhance the Abrams' reach, which – even when equipped with an L55 type gun firing conventional munitions – would be about 2.5 miles (four kilometers).[29] This increased reach would close the gap that exists between the Abrams' maximum engagement range and the 3.1 mile (five kilometers) range of tanks like the T-80 and T-90 when equipped with the AT-11 Sniper ATGM.[30] To maximize the potential of the standoff range provided by Lahat, ECP1B should also seek to leverage the manned-unmanned teaming capabilities being developed as part of the AH-64E Block III program.[31] The ability to manipulate unmanned aerial vehicles would permit the Abrams to use remote systems for target designation and use Lahat to achieve a true beyond-line-of-sight engagement capability.

New-build vehicle

All the upgrades described previously would significantly enhance the Abrams tank's performance. The fact remains, though, that the vehicle will be approaching 40 years in service by the time these upgrades could come to fruition. A new-build vehicle is a requirement. If the need for this vehicle is clear, the features and capabilities are not as concrete. Still, the trends discussed previously should give a good sense of where the new vehicle needs to go in terms of development, what threats it should be able to address and what capabilities it should have.

Given a typical developmental timeline, requirements drawn up today must seek to discern the environment in which a given system will operate years in the future. While doing this with any accuracy is difficult, the trends of the present hold a light to the way of the future. As discussed earlier, recent and ongoing conflicts in the Middle East demonstrate that even future conflicts with non-state actors will bring our Soldiers and armored vehicles into contact with advanced ATGMs, other PGMs and the sensors that go with these weapon systems. The diffusion of weapons and technologies once exclusively held by Western militaries will define the battlefields of tomorrow. To counter this, a future tank must seek to exploit the asymmetrical technological advantages of American and allied militaries: advanced lethality solutions, sensors and sensor fusion, and network solutions.

As the pace of both technological change and the evolution of the threat environment increase, the ability of a platform to adapt over time must be a conscious design attribute. Modularity and excess space, weight and power must be built into the design.

Turning first to mobility, a new-build vehicle should take full advantage of the research in hybrid drive trains conducted for the FCS and GCV programs. A vehicle equipped with such an engine, and the band track discussed earlier, would benefit from much improved fuel efficiency and acceleration, as well as from generating plenty of excess electrical power. Also, when running on electric power, the new tank would be able to virtually eliminate its acoustic signature and thereby open up new maneuver possibilities and increase its own survivability.

Reducing signature

Moving to survivability, a future American tank must embrace a concept of layered defense because the enemy cannot engage what it does not see, cannot damage what it cannot hit and cannot kill what it cannot penetrate. To ensure the enemy cannot see the tank of the future, signatures of all types must be reduced when compared to the current generation of vehicles.

The current state-of-the-art in cross-spectrum signature reduction for ground vehicles is the Polish PL-01 concept tank. The vehicle's visual signature is diminished by reducing the standard four-man crew to three by replacing the loader with a mechanical autoloader and moving all crew members into the hull. The resulting unmanned turret has a very low profile and the reduced space required by the crew limits the vehicle's protected volume, reducing its weight and size overall.[32]

The PL-01's radar signature is reduced by applying radar-absorbent material to the vehicle's skin and shaping its surfaces to minimize the probability of a surface being perpendicular to a radar receiver.[33] The infrared (IR) signature reduction is perhaps the most intriguing part of the whole vehicle. A matrix of hexagonal plates on the vehicle's skin can change its temperature to match that of the environment on the vehicle's opposite side, giving it the ability to disappear from view in an IR sensor.[34] The vehicle may even call forward a false IR signature from an onboard library, allowing the 35-ton tank to take on the appearance of a passenger car or anything else it might choose to imitate.[35] More IR signature reductions are achieved by active cooling of the PL-01's exhaust.[36]

The hybrid diesel engine and band track discussed earlier would serve to reduce a future American tank's acoustic signature. Having made the new-build vehicle harder to see, the work of making it harder to hit will also rely on a cross-spectrum approach. Laser warning systems would warn the new tank that a threat has begun an engagement sequence. Millimeter-wave radars installed on the vehicle as part of an active defense system would

Figure 5. The Polish PL-01.

alert the vehicle to the presence of an incoming round. If the vehicle was unable to evade the detected threat, the APS would engage the incoming round and prevent the vehicle from being hit. If all these countermeasures were defeated, it would fall to the new tank's passive armor to defeat the incoming rounds.

Modular armor

A modular-armor concept built around the idea of tailorable levels of protection should be the basis for the future tank's passive protection. Modular armor is widely applied to European armored vehicles. The PL-01 makes extensive use of modular-armor modules, as does the Leopard II.

The modular-armor design provides a number of important benefits:

- First, the level of protection the vehicle carries is no longer fixed, as is the case with the Abrams. The Abrams tank must carry the incredibly heavy armor that shields it from APFSDS and HEAT rounds even on patrols where the most serious threat it will face are small arms. Modular armor allows the vehicle crew to tailor the level of protection to the threat level, carrying the appropriate level of protection and not more.
- Second, modular armor allows for rapid replacement of damaged modules.
- Finally, modular armor allows a vehicle's armor to upgrade as material technology advances without a major redesign of the vehicle or costly retrofits.

Cannon

Third, and perhaps most importantly, we turn to the lethality of the proposed new-build vehicle. While the Abrams has been equipped with the M256 120mm smooth-bore cannon since the 1980s, the survivability of its targets has increased greatly. The T-90, the most advanced tank fielded by Russia and other states, combines composite armors and Kontakt-5 explosive reactive armor to achieve a protective power equivalent to 4.4 feet (1.34 meters) of solid steel.[37] When the effects of APSs are factored in, the current weapon systems suite in the Abrams seems barely adequate. A future tank will likely be fielded initially with a version of the M256, but a potential for a more lethal weapon must be built into the turret of the new vehicle.

Shortly before the end of the Cold War, American and West German tank designers projected that future Soviet tanks would be immune to the 120mm and began design work on 140mm cannons.[38] The 140mm cannons were intended to provide muzzle energies of roughly 18MJ, or twice that of the 120mm cannons deployed on Abrams and Leopard II.[39] A gun of this size will make an autoloader a near necessity and will require a larger breach block and larger recoil space, all of which will impact turret design before a 140mm gun is even ready for fielding.

Another option for increasing the hitting power of main-gun projectiles is the pursuit of electro thermal-chemical propellant ignition. These guns achieve higher muzzle energies by igniting propellant through a plasma cartridge that is catalyzed by electrical impulses.[40] This method of ignition greatly increases the consistency and effectiveness of the propellant ignition and delivers huge improvements in performance.[41] A U.S. Army study conducted in the late 1990s with a prototype 120mm electro thermal-chemical gun designated the XM-291 achieved muzzle energies of 17MJ, or just below those achieved with the larger 140mm prototypes.[42] A future tank capable of fielding a gun with such energy would be assured of defeating the protective systems of all fielded armored vehicles and any projected vehicles the author is familiar with.

Sensors

As always, though, the key to maximizing the potential of these weapons lies in the ability to perceive a threat. Third-generation FLIR is being considered for inclusion in Abrams' ECP1B, a development that will ensure the full use of advanced munitions currently being researched. Millimeter-wave radars in APSs as well as laser-warning systems (LWSs) provide a level of 360-degree awareness to select foreign ground vehicles today and could be incorporated into M1A3, as discussed earlier. To enhance this level of 360-degree situational awareness for the new-build vehicle, the future tank should include systems similar to the AN/AAQ-37 Distributed Aperture System (DAS) fielded on the F-35 Joint Strike Fighter (JSF). This system – six sensors embedded in the skin of the aircraft – provides the JSF 360-degree IR search and track as well as missile-launch detection. This information is fused into a single picture and is superimposed onto a helmet-mounted

Figure 6. The F-35's DAS allows the pilot to peer through the aircraft body to see high-resolution thermal imagery on a helmet-mounted display as well as automatically detect and classify targets. *(U.S. Marine Corps photo)*

display that permits the pilot to see through the skin of the aircraft as if it were glass.[43]

While the ground environment the future tank will inhabit is more cluttered than the one inhabited by the JSF, sensors like the DAS, combined with sensor fusion, would permit the tank to shed its traditional lack of situational awareness imposed by its armored skin. Sensor fusion would permit the seamless integration of information from IR, daytime television, LWS, millimeter-wave radar and other sensors into a single picture of the operating environment. Leveraging the network in conjunction with these sensors would permit the future tank to achieve a level of situational awareness and, therefore, lethality that Abrams crews can only imagine. While some people might consider all this superfluous and unneeded, consider that American tank crews who witnessed the transition from M1A1 to M1A2 have already witnessed the potential of sensors to increase their lethality.

The Commander's Independent Thermal Viewer (CITV), mounted on the M1A2's turret, permits the commander to search for targets while his gunner executes an engagement cycle. The Force XXI Battle Command Brigade and Below allows the commander to instantly share information from his CITV with other networked vehicles. A future tank that is enabled by a suite of sensors providing 360-degree stare across the electromagnetic spectrum will only accelerate the increase in lethality realized by previous Abrams upgrades.

Tank is dead

This article has covered a lot of ground in discussing the future of armored firepower for the U.S. Army. The various topics from the changing threat environment to advances in ground vehicle protective systems, to historical parallels in defense acquisitions, could each justify books in their own right. And of course, this author would be remiss if he did not acknowledge the often-decisive role of tank-crew training and its ability to magnify or overcome materiel superiority. For the sake of looking at the future's broad outlines and what capabilities a future American tank must encompass, some developments such as directed-energy weapons were not mentioned. Some cutting-edge vehicles, like the South Korean K2 or Japanese Type 10, were also passed over. This is not to say that these ideas and vehicles do not represent important advances in the state of the art or that some of their features should not be included in a future American tank.

The existence of so many vehicles with whole sets of capabilities currently absent on American ground vehicles confirms two things. First, the tank as we know it is dead. Second, the tank as a means of delivering survivable firepower to the decisive point on an increasingly complex and lethal battlefield has a bright future enabled by ideas and technologies unimaginable a few short years ago. The tank is dead! Long live the tank!

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Acronym Quick-Scan

AFV – armored fighting vehicle
AMP – advanced multi-purpose
APFSDS – Armor-Piercing Fin-Stabilized Discarding Sabot
APS – active protection system
ATGM – anti-tank guided missile
CITV – Commander's Independent Thermal Viewer
DAS – distributed-aperture system
ECP1B – Engineering Change Proposal 1B
FCS – Future Combat Systems
FLIR – forward-looking infrared
GCV – ground combat vehicle
GDLS – General Dynamics Land Systems
HEAT – high-explosive anti-tank
IFV – infantry fighting vehicle
IR – infrared
JSF – Joint Strike Fighter
LWS – laser-warning system
MGV – manned ground vehicle
PGM – precision-guided munition

Leading Staffs: New and Persistent Challenges

by COL Andrew Morgado

"Operational planning groups (OPGs) are designed to tackle a problem; however, OPGs themselves are problems." –Student, School of Advanced Military Studies (SAMS)[1]

This SAMS student's observation, while specific to staff planning working groups formed to address military problems, are endemic of military staffs writ large.[2] His observation indicates that the process of melding together people and processes of staff planning into a cohesive entity capable of producing a useful product is a persistent challenge.

Neglected component

The function of a staff, and particularly the performance and leadership of military officers responsible for executing staff functions, is a neglected component in military leadership doctrine and practice. This neglect is problematic for military organizations. The origins of this inattention are: (1) the lack of doctrine and leadership emphasis on staffs, (2) the new realities of exercising the art and science of control and (3) the eternal challenges of leading people and organizations.

All these issues limit staffs and military organizations from achieving their full potential. To improve staffs, the Army must invest resources in educating and training individual officers and staffs and create doctrine specifically directed at the skills required to function on staffs. The Army must change how it considers staff leadership in its doctrine and promulgate practical tools staff officers can apply in their daily duties to improve on staff performance.

Army leadership doctrine centers on the concept of mission command and places the onus of unit success on the commander. The commander is the central figure who drives the operations process, organizes teams and influences audiences inside and outside the chain of command.[3] The staff must then coordinate, synchronize and share information.[4] Doctrine then shifts to the mechanics of staff processes and the products that result from staff action.

Retired U.S. Navy CPT Ronald E. Ratcliff, a professor of national-security decision-making at the Naval War College, notes this command focus is not new or necessarily misplaced. He remarks, "The literature about military history and leadership is focused on a few great leaders who rose to meet the martial challenges of their time and place. Often forgotten are the subordinates who enabled these leaders to see their challenges more clearly and who helped them turn their decisions into action."[5]

Ratcliff also notes that despite the frequency and duration of staff experiences in the span of an officer's career, proficiency in staff work is often undervalued. Ratcliff writes, "Frequently, especially for those temporarily assigned to staffs, officers serve in important decision-making positions with limited experience or scant operational proficiency in areas for which they are directly responsible. Yet their commanders and staff peers will demand

the same high level of performance that has characterized their careers up to that point."[6]

The role of the commander has been and will continue to be essential in the performance of a military organization, but doctrine's paucity of material on those traits required for effective staff leadership ignores this critical component to organizational success. GEN Matthew Ridgeway, in an article written in 1966 on leadership, addressed the particular demands and importance of staff leadership when he wrote, "The qualities of a leader are not limited to commanders. The requirements for leadership are just as essential in the staff officer, and in some respects more exacting, since he does not have that ultimate authority which can be used when necessary and must rely even more than his commander on his own strength of character, his tact and persuasion in carrying out his duties."[7]

GEN Ridgeway and Ratcliff underscore the three principal institutional deficiencies with respect to leadership of staffs: namely, short attention in doctrine, an underappreciation of its unique leadership demands and inadequate preparation of those officers expected to execute this critical function.

Pathological organizations

As GEN Ridgeway indicated, the problems of leadership in this organizational context are not new. More recent scholarship, particularly by John Kotter, Eliot Cohen and John Gooch, provide more insights to the particular challenges of leadership on staffs and, in the case of Cohen and Gooch, inside military organizations.

Kotter, in his book ***Power and Influence***, identifies the "pathological aspects of modern organizations." These include bureaucratic infighting, parochialism and destructive power politics.[8] Kotter traces the origins of these pathologies to greater diversity and interdependence in the workplace and a growing "power gap" where leaders no longer have the inherent power or authority over subordinates to accomplish tasks.

This concept of a "power gap" is particularly applicable to military staffs. It is an irony that, despite the military's adherence to rigid rank structures and exercise of authority, the relatively high-ranking members of military staffs have little real power. Though Army doctrine specifies leaders of specific command-post nodes that, by virtue of their position lead identified staff entities, they in fact only exert limited control over cross-sections of individual staff sections with nominal staff section leaders.[9] This cross-compartmentalization and imposed hierarchy creates conditions for integrated and functional tasked-based cells but also leaves the situation rife for Kotter's "pathologies" to emerge.[10]

Cohen and Gooch, in their classic work on military failure, ***Military Misfortunes***, add to the equation by stressing that whenever men form organizations and then have to operate complex systems, also of their own making, failures are normal outgrowths of this interaction.[11] Cohen and Gooch illustrate how a "disaster environment" exists when personality and organizational inhibitors combine in unanticipated ways.[12] Failing to account for these dynamics will deprive the commander of sound advice and timely information from his staff – and ultimately, mission failure.

Lack of doctrine

Army doctrine and practice spends little time in addressing these challenges. Leadership and staff doctrine focuses primarily on the role of the commander and staff-officer responsibilities in the processes of staff work. Army doctrine charges the commander to lead the staff, while the staff is responsible for supporting the commander.[13] The concept of mission command directs the commander to drive the operations process, develop teams and influence internal and external audiences[14] while "encouraging" collaboration throughout his organization.[15] Though these functions are important, it grossly underestimates the leadership required within staff sections to see this support come to fruition and to simply keep staff and unit processes running.

Army Doctrinal Reference Publication (ADRP) 6-22, ***Army Leadership***, stresses the importance of informal leadership and aligning collective efforts that are critical to unit success, but spends little time in providing some solutions to what it calls the "challenges" to unit cohesion.[16] Given only the comparative lack of leadership doctrine on the execution of staff tasks, the problem could be solved in a relatively straightforward manner. Army practices, however, compound the problem by not paying enough attention to how staffs are trained and organized, and to how officers are selected to serve on staffs.

Doctrine's focus on developing teams, while acknowledging some of the inherent fractures within staffs, underestimates the high degree of friction staffs encounter on any given day. The modern realities of individual staff augmentees, joint-manning documents and the eternal "hey-you" have conspired to create not staffs, but loose amalgamations of people who must be continuously formed into working units.[17]

Lack of preparation

Compounding the *ad hoc* approach to assignments is the chronic underpreparation of officers in assuming their duties. A U.S. Army Research Institute study completed in 1991 found that more than half of company-grade officers assigned to battalion staffs were not career-course or Combined Arms Service and Staff School trained.[18] In another study of battalion and brigade staffs in 1997, the lack of training was further compounded by the high frequency of turnover among staff members.[19]

Though some may challenge this assessment as dated and say that we are a far different Army today than in 1991 or 1997, the author's personal assessment across three combat deployments witnessed nothing in present staff-assignment processes that would counter this ratio in today's Army.

The problems of doctrine and staff assignment could be partially blunted by paying more attention to staff training. Staff work is detailed, complicated and, particularly as it reaches higher echelons, frequently deals with very complex issues. In our current complex operating environment and in the

application of the elements of combat power across a broad spectrum of tasks, staffs can be easily overwhelmed even when very well prepared.

As retired GEN Fredrick Brown noted in his analysis of staffs, staff officers must not only come to grips with tasks required within their own specialty, they must master the synchronization and agility required to perform tasks across many specialties to simply accomplish a unit's mission.[20] GEN Brown went on to caution that "these teams must be trained as rigorously as any individual soldier or leader, for their collective judgment and following actions will permit success by competent, brave platoons."[21]

Evidence from the Army's combat training centers and other exercises demonstrate the levels of training and cohesion have been quite low.[22] Too frequently, staff training is not a deliberate process focused on honing problem-solving skills, but is relegated to day-to-day operations tasks or reserved for major unit evaluations or exercises. GEN of the Army Douglas MacArthur observed, "Skilled officers, like all other professional men, are products of continuous study, training and experience. There is no shortcut to the peculiar type of knowledge and ability they must possess. Trained officers constitute the most vitally essential element in modern war and the only one that under no circumstances can be improvised or extemporized."[23] Doctrine and training focused specifically on staff work and leadership are essential to organizational success.

Unique leadership demands

In addition to the institutional barriers to effective staffs, military organizations must also be ready for the "human" challenges of staffs. Military organizations are made up of people and therefore must be ready for the frictions inherent in human interaction. The three most challenging tasks for staffs and units involve dealing with selfish behaviors, toxic leadership and the impact of complex problems.

Selfish behavior can take several forms. Most prominent among these are avoiding responsibility and exploiting one's position for personal gain. In the diffused structure of staffs, officers can disassociate themselves from support of the commander and accomplishment of the unit's mission and focus more on the preservation of their individual equities.

In a study of staff performance, the Army's Information Management Support Center noted common staff errors as not reviewing tasks, inadequate coordination, not understanding the impact of requirements, conflicting priorities, selective compliance and giving the impression of unwarranted assumption of authority.[24] A recent paper on service cultures suggests "occupationalism" as a possible source of this behavior. Individuals trained in a particular military-occupational specialty frequently discount inputs not consistent with their orientation and seek only to protect their position within the organization.[25] Similarly, in an interview given by GEN Martin Dempsey, he noted careerism and competition as key inhibitors to effective communication and integrated action.[26]

Ratcliff also notes that staff officers can also be negligent in their duties by being too loyal to the commander and not providing the critical thinking required of an officer. He writes, "Among the most demanding ethical questions officers face is the choice between honesty and loyalty – when it is right to be obedient and when it is wrong. Loyalty in military service is almost always the essential attribute of a trusted subordinate. Yet it is often the subordinate willing to risk being considered disloyal – who asks the frank question that might give the commander pause to reconsider a decision. The limits of one's loyalty is a decision that every officer must make, especially one who aspires to being more than a 'yes man.'"[27]

Both the study of staff challenges and Ratcliff's assessment of loyalty touch upon the second challenge of human interaction and the related concept of toxic leadership.

ADRP 6-22 defines toxic leadership as "a combination of self-centered attitudes, motivations and behaviors that have adverse effects on subordinates, the organization and mission performance."[28] Recently there has been a proliferation in the identification and discussion of toxic leadership among Army leaders. Although its causes are not immediately evident, its impact on the organization is clear. Toxic leaders create hostile environments and disrupt the formation of teams by their focus on individual performance and self-aggrandizement. It is a trait apparent in all leaders, not limited to commanders. Toxic leaders are usually invisible to their superiors, as they frequently deceive, intimidate and coerce to achieve goals and accomplish missions in the short term.[29] In a large staff with limited formal oversight, toxic leaders can thrive in meeting short-term expectations but cause long-term damage to the cohesion of the staff and effectiveness of the unit as a whole. The presence of self-centered and toxic leaders only complicates an already complex problem.

Toxic leadership is "a combination of self-centered attitudes, motivations and behaviors that have adverse effects on subordinates, the organization and mission performance." — ADRP 6-22

Impact of complexity

Staff leadership involves the exercise of leadership on the organizational level, where competencies are applied on increasingly complex situations.[30] This is an evolution from the basic or direct leadership level, where leaders are initially introduced to and expected to exercise at the entry levels of the Army. Though still required to exercise direct leadership, the organizational leader deals with more complexity, greater uncertainty and a greater number of unintended consequences.[31] The result of this ambiguity is that results are not always discernible, and values, policies

and directives are frequently distorted as they move vertically and laterally through an organization.[32]

Retired LTG Walter Ulmer notes that not all leaders can make this transition. He writes that the Army's hierarchy has "a good share of well-intentioned non-leaders who cannot – by virtue of their personality, limited capacity for trust, lack of self-confidence or improper definition of success – perform at the executive level."[33] Service on staff may be an officer's first introduction to organizational-level demands and a first indicator that their personal traits and competencies are not suited for this level.

Recommendations

Reform of the Army's staff-effectiveness problem must begin with an acknowledgement that a problem actually exists. It then requires modifications to Army doctrine that incorporate individual and staff-specific guidelines, better training and a shift in the cultural attitudes toward staff. Doctrinal changes will likely be the easiest goals to attain.

Army doctrine first needs to accept that personal foibles, human limitations and team dynamics will more readily thwart the development of the planning process and staff products than enemy action. Kotter's "pathologies of modern organizations" are real impediments to effective military staff work. Kotter identifies, particular to the Army experience, the widening gulf between the aspirational tenants of mission command and its user-level application on a military planning staff.

Military staffs, with multiple, assigned skill specialties, cross-functional teams and diffused responsibility epitomize the concept of a "power gap." Army doctrine should treat the leadership on staffs as its own competency and adopt Kotter's identification of what a leader's "real job" is within this context. Kotter states that the real job of a leader is "to identify all relevant lateral relationships, assess who will resist and how strongly, develop good relationships and vary other methods if relationships do not work. Fundamentally, the leader must determine where cooperation is necessary and where is compliance necessary."[34] Army doctrine should deal directly with this "resistance" that will be inherent to any staff setting.

Ratcliff offers another guide to this pragmatic approach to staff-leadership attributes when he suggests that "officers also need a firm grasp of three essential aspects of military service: a well-developed personal and professional ethical framework, a solid hold on formal and dynamic decision-making processes and a sophisticated understanding of risk management."[35] Explicitly stating these attributes within doctrine, specific to the staff experience, will form a tighter linkage between the staff process and leadership requirements.

In an even more practical vein, leaders should carefully consider how staffs are organized. A leader, when organizing a staff, must take individual skills and personal motivations into account when forming separate planning or action teams. Understanding roles and relationships of the actors involved allows the leader to supervise and manage work while considering the procedures and hardware necessary to facilitate communication between potentially disparate groups. Even considerations of group-planning team size and physical location will weigh on the overall effectiveness and productivity of the staff grouping.

Implementation of these principles will likely require a shift in Army culture that currently downplays the utility of staff integration and stability. To attain the cooperation and teamwork stressed by Army doctrine, the right people have to be assigned to staffs and kept together long enough to build trust and capability. The success of the staff depends on trained individual contributors and their effective combination as a collective entity. Staff integration allows the unit to focus its energies on accomplishing tasks and achieving objectives.[36] Integration requires sustained cohesiveness, training and practice. Treating the staff as a dumping ground for officers proven incapable at other echelons or a temporary waystation to other positions are short-term perspectives that ultimately diminish unit capabilities and hinder the exercise of mission command.

Conclusion

Development of teams is not new, nor is it ignored in Army doctrine. ADRP 6-22 clearly states, "Forming effective, cohesive teams is often the first challenge of a leader working outside a traditional command structure. … Cohesive teams accomplish missions more efficiently than a loose group of individuals."[37] Taking on a new perspective on staff selection, training and longevity will help Army leaders translate doctrine to actual practice.

The study of leadership on Army staffs has been a neglected topic in professional discourse, and this has been to the organization's detriment. Lack of specific doctrine, inattention to staff collective training and poor assignment practices serve to undermine the development of this key component that a command and Army units have to solve complex problems. As the Army transitions to a new era where it is not consumed by wars in Iraq and Afghanistan, it must consider the evolving realities of leadership on Army staffs and how to prepare its officers for the challenges that will certainly follow. Change will require a new appreciation about ways to lead people without formal authority and change the current Army culture that downplays the role of a staff.

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clusters (OLCs) and the Meritorious Service Medal with three bronze OLCs.

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Acronym Quick-Scan

ADRP – Army doctrinal reference publication
CGSC – Command and General Staff College
FM – field manual
GPO – Government Printing Office
OLC – oak-leaf cluster
OPG – operational planning group
SAMS – School of Advanced Military Studies

Persistent Surveillance and Joint Fires in the Horn of Panjwai

by MAJ Robert L. Green

The 1st Squadron, 2nd Cavalry Regiment, recently returned from its deployment to Afghanistan. During its deployment, the squadron partnered with two Afghan National Army (ANA) kandaks (battalions) in the conduct of operations to secure a small section of Regional Command-South. Based on reductions in the size of the force in Afghanistan, the squadron deployed with about one-half its authorized personnel. Despite the small size of the unit, the squadron was able to support the development of the Afghan forces while maintaining pressure on Taliban forces operating in the area.

Two capabilities enabled the squadron's success: outstanding security-force assistance advisory teams (SFAATs) and the application of joint fires through persistent surveillance. While the SFAATs' contributions were likely more important to the long-term success of the Afghan forces, they are not the topic of this brief article. The focus of this article is the application of joint fires at the squadron level in security operations.

It is important to note up front that while the squadron achieved a high level of success against the Taliban in this case, this article does not imply that such results are replicable across all formations or in all situations. Traditional factors still affect the outcome of any operation: enemy, equipment, time, terrain, weather, etc. In the case of 1st Squadron, they either had favorable conditions for joint fires or, for the most part, were able to overcome unfavorable conditions.

Because the squadron had limited combat power, opportunities for employing traditional means for gaining and maintaining contact with the enemy (in other words, reconnaissance-and-security operations) were infrequent. Working within the means available, the squadron learned to maximize the capabilities of persistent surveillance and unmanned aerial vehicles (UAV) to locate and direct fires against enemy forces. This was a critical task not only to support ANA operations, but also to protect the force and support base defense. The ability to locate and strike enemy forces in close proximity to the base helped deny the enemy opportunities to mass for attacks or employ long-range weapons against the base. The primary platform used to locate enemy forces was the Persistent Ground-Surveillance System (PGSS).

PGSS

A quick explanation of the basic capabilities of the PGSS is in order. The PGSS has a suite of capabilities mounted on a tethered balloon that floats above the ground-control station at varying altitudes. Operators on the ground use information collected by the systems on the balloon to direct operations, locate forces and assist in fire direction.

The squadron employed a PGSS operated by a team of Soldiers from Romania specially trained for the mission, supported by a small team of contractors responsible for maintenance. As with any piece of equipment, it was only as good as the people using it. In this case, the Romanian team was highly skilled, dedicated to the mission and very familiar with the area, maximizing the system's effectiveness.

Where should the squadron orient the PGSS to locate enemy forces? The squadron developed a reconnaissance-and-surveillance matrix based on historical enemy activity and patterns of movement observed by the previous unit. The personnel in the squadron's tactical-operations center (TOC) recorded every observed enemy movement and activity and plotted them digitally on a map with size, activity, location, time and composition annotated. Through these efforts, lead by the squadron fire-support element, patterns of enemy activity began to emerge, which enabled the squadron to develop named areas of interest (NAI) for further reconnaissance and surveillance. Using the reconnaissance-and-surveillance matrix, the squadron TOC could shift observation to specific areas at specific times to identify enemy activity.

R&S matrix

Using the reconnaissance-and-surveillance matrix as a planning tool, the squadron staff also requested assets at specific times to observe specific NAI in efforts either to refine situational awareness or to execute strikes to destroy enemy forces. This method made clear the task and purpose for close combat attack, close air support or other surveillance platforms ahead of time, which aided in mission planning for supporting elements. Because the squadron shared the developed patterns of enemy activity, supporting elements had a shared understanding of the situation and rapidly gained familiarity with the squadron's area of operations and NAIs.

The reconnaissance-and-surveillance matrix also enabled the squadron to provide immediate task and purpose to aerial assets that would often arrive unexpectedly. This was usually the result of a previous mission ending earlier than expected. Assets operated by units that frequented the squadron area were familiar with the NAIs and enemy patterns and were able to quickly orient based on task and purpose provided by the squadron. Decisions regarding which NAI to assign to these unexpected assets were quick because the reconnaissance-and-surveillance matrix was broken down by times when enemy forces were typically active in each NAI.

The squadron was also successful in coordinating other collection capabilities to further refine enemy force locations and gain contact to enable the application of fires. In operations conducted with limited combat power, maximization of all available capabilities is critical. Although not specifically trained for such coordination in tactical operations, the expertise and creativity of the personnel in the squadron TOC enabled synchronization of all elements of combat power and contributed directly to the mission's success.

Close coordination with the ANA before and during operations included operational planning and intelligence sharing, and enabled the combined team to employ their strengths in concert. The ANA was the primary maneuver force clearing roads, engaging enemy forces with direct fires, and clearing and searching villages for enemy personnel and materiel. The squadron provided real-time updates on enemy locations and movements, friendly force (ANA) locations and indirect and non-lethal fires. The squadron also coordinated the employment of joint fires in support of ANA maneuver. The SFAATs were critical as the conduit of information between the squadron and the ANA.

Figure 1. A PGSS is equipped with an AN/PRC 117G radio to extend its range of communications during preparations for Capability Set 13 network-verification testing at the U.S. Army Communications-Electronics Research, Development and Engineering Center, Fort Dix, NJ. The network-verification testing was the equipment's final check-out before PGSS was deployed overseas. *(Photo by Claire Heininger, army.mil)*

Training

While the squadron was able to

achieve success in its mission, there were several areas where more emphasis during predeployment training would have been beneficial:

- Predeployment training for TOC personnel on the incorporation of persistent-surveillance capabilities;
- Predeployment training on realistic scenarios involving fires/airspace deconfliction;
- Training for fires personnel on the correlation of locations observed through surveillance with imagery appropriate for clearance of fires regarding collateral concerns;
- Training on the integration of multiple real-time collection capabilities in support of maneuver forces; and
- Training for field-grade officers on the rules of engagement (RoE), weapons effects and engagement criteria in lethal-strike scenarios.

The following paragraphs discuss each challenge and offer methods to overcome or avoid these challenges in future operations.

Incorporation of persistent-surveillance capabilities in predeployment training and exercises would benefit personnel assigned to monitor and track operations. This would require more capabilities at combat training centers (CTCs) – as well as deployable training teams for units not scheduled to attend a CTC before they deploy, or for units on alert for contingency operations. Having persistent-surveillance capabilities available for predeployment training would facilitate proper TOC manning and standard-operating-procedure development, and would also support training to address the other gaps outlined previously. Training with persistent-surveillance capabilities allows units to deploy with a working knowledge of the systems' capabilities and limitations, which factors into planning for operations, base defense, fires and force array. While the availability of persistent-surveillance systems in the combat zone may be a limiting factor, during predeployment training, the target audience should be company and above, if possible.

TOC ops

During combat operations, the airspace can often become very busy with fixed-wing aircraft (for example, jets, bombers and special-operations fixed-wing support), rotary-wing aircraft (e.g., attack aviation, scout aviation, lift aviation and air ambulances), UAVs (e.g., Predator, Reaper and Shadow), mortar fire and artillery fire. The persistent-surveillance system is also present, which requires standoff for aircraft as well as gun-target-line deconfliction. TOC personnel must be trained to manage all these assets to avoid incidents of collision or friendly fire during operations.

In the current operating environment, where collateral damage and civilian casualties are major concerns, opportunities to strike enemy personnel can be fleeting. TOC personnel must be able to deconflict the users of the airspace quickly to facilitate timely and accurate fires. This facet of predeployment training is probably the most difficult to replicate, as it requires live assets on station. Fixed-wing assets can probably be simulated, but rotary-wing assets should be on station for this training if possible.

Fires personnel operating in the TOC must be able to quickly associate activity observed via persistent surveillance (and other systems such as UAVs) with locations on current imagery to calculate the range to the target and gun target line (for ground-based fires) and the distance from the target to collateral concerns. Fires personnel must also be able to deconflict friendly-force locations. Fires personnel can use this information to make recommendations on the type of ordnance to be used based on the collateral effects of various munitions. This is another step that adds to the time required to execute a strike and must be done quickly and accurately to be successful. With a persistent-surveillance system available for training, units can easily train this step. It is also important to ensure aircrews conduct a proper check-in to ensure that personnel in the TOC know what types of munitions are available, as this factors into when and where a unit can strike enemy forces.

TOC personnel must be familiar with other means of collection that can provide a direction or location of enemy activity, or target confirmation. Incorporating such systems aids the unit in gaining and maintaining contact with the enemy and enhances the capabilities of persistent surveillance. Once a unit gains contact via other collection means, it can then orient the persistent surveillance (or other observation means such as UAVs or ground forces) onto the enemy. Such systems are also useful in confirming suspected enemy activity observed through the persistent-surveillance platform. This can be replicated either live or virtually during predeployment training and helps the TOC personnel understand how to employ all available capabilities in the fight.

RoE

In the end, a field-grade officer (usually the operations officer or executive officer) must make the decision whether to engage and the method of engagement. This depends on the RoE, the law of land warfare and the guidance for fires published by higher headquarters at each echelon. Knowing the RoE is not enough.

Those faced with making the decision whether to strike must also understand the collateral effects of the weapons systems available for employment, the basics of the law of land warfare and the reliability of the weapons systems. Location of friendly forces seems like an obvious requirement, but in the case of 1st Squadron's deployment, it was not always easy. For example, Afghan local police would often patrol without prior notification, in plain clothes and in areas of known enemy activity. Prior to a strike, the TOC would always confirm through the SFAAT teams the locations of friendly forces.

Leaders must also understand the perceptions of the local populace, power brokers and government officials. Maintaining close ties with these groups is a must to prevent unintended negative consequences that could drive a wedge between our forces and the local population.

Methods that units may be able to use to assist in training field-grade officers to make these decisions include

detailed discussions of the RoE and its application, review of storyboards and video footage of actual strikes, and discussion with those experienced in making these decisions. This would require access to products developed by units conducting combat operations in Afghanistan. The 1st Squadron alone conducted more than 30 strikes and produced storyboards, videos and current-operations reports for each. Should these products be available to deploying units, it would be very simple to develop a series of vignettes for use in training TOC personnel and field-grade officers who will have to make the call.

Also, other products developed during 1st Squadron's deployment could be of use. These include the patterns of enemy activity and the reconnaissance-and-security matrices used to plan surveillance, combat operations and requests for supporting assets.

This article serves merely to highlight one method for employing joint fires and other assets in support of combat operations based on the recent deployment of 1st Squadron, 2nd Cavalry Regiment. A more complete analysis would include greater discussion of the coordination of close air support and close combat attack during the deployment, preferably from the pilot and aviation staff perspective. Further, a detailed discussion of the effects of the various types of munitions employed would enhance the value of this article. Finally, the recommendations for expanded training to prepare units to employ the capabilities described in this article are based on the military aspects of the situation the squadron encountered during their deployment. Should forces deploy to areas with aspects differing from those in the Horn of Panjwai, predeployment training would likely require further modification.

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Acronym Quick-Scan

ACR – armored Cavalry regiment
ANA – Afghan National Army
CTC – combat training center
CGSC – Command and General Staff College
NAI – named area of interest
PGSS – Persistent Ground-Surveillance System
RoE – rules of engagement
SFAAT – security-force assistance advisory team
TOC – tactical-operations center
UAV – unmanned aerial vehicle

The Battery Difference:

A Solution to Reducing Soldier Load and Increasing Effectiveness on the Battlefield

by MAJ Tom Beyerl

One of the greatest contributors to expendable Soldier load is spare batteries. Recent efforts by the Maneuver Center of Excellence at Fort Benning, GA, and project managers such as PM-Soldier Sensors and Lasers (PM-SSL) have standardized most dismounted electronic equipment into a few common battery types. Commercially available 1.5v AA batteries have replaced many unique equipment-specific battery types in night-vision devices, target locators and weapon sights. While these efforts drastically reduced the myriad types of batteries required, they did not necessarily reduce the overall Soldier load.

Recent commercial developments have brought the lithium non-rechargeable battery into the supply system as a means to carry more power in significantly fewer batteries. Lithium L91 AA 1.5v batteries (NSN 6135-01-333-6101 Pkg. 12) provide three to five times the system battery life as conventional alkaline AAs. While the initial cost is higher, lithium batteries' increased lifetime results in similar overall operational costs at drastically reduced Soldier load.

High-drain devices such as the AN/PSQ-20, 20A and 20B Enhanced Night-Vision Goggle, AN/PAS-13 Thermal Weapon Sight and the AN/PED-5 Laser Target-Locator Module benefit most from lithium non-rechargeable batteries. The current requirements for these devices deplete conventional alkaline batteries at such a rate that operational use time is severely limited. Many of PM-SSL's current sensors, lasers and precision-targeting devices were designed for the lithium battery with its far superior output capabilities and voltage curve. As expected, the No. 1 issue Soldiers expressed with these systems in post-combat surveys is poor battery life when using regular alkaline batteries.

Power struggle

While alkaline AA battery initial costs are significantly less than their L91 AA lithium counterparts are, Soldiers need to carry and expend a considerable number of alkaline batteries to match the operational time of far fewer L91s. This increases Soldier load. L91 AA lithium batteries' increased performance time offers the user less frequent battery changes, equating to reduced Soldier load and system downtime.

'Just the facts'

Using L91 lithium batteries:

- Extends operational life by 300 percent to 500 percent;
- Saves mission weight by about 600 percent; and
- Saves logistical costs by 300 percent to 500 percent.

Remember:

- Do not mix batteries of different types or brands. They will discharge unevenly and can ultimately rupture and fail.
- Using the wrong battery type affects the accuracy of your battery indicators or alarms. Developers designed night-vision devices, thermal sights and target locators to use L91 lithium AA batteries. Alkaline batteries will not accurately indicate, or alarm, their state of charge, but lithium batteries will.

Operating temperature

Cold temperatures diminish the capability of any battery. However, the lithium battery's chemistry is much more resistant to these losses. Lithium is the only AA battery that will effectively power most equipment in arctic conditions. At -20°C, the L91 lithium AA battery has more than 10 times the lifespan of its alkaline counterpart.

Weight matters

The L91 lithium battery is also lighter than an alkaline battery, resulting in about a six-fold reduction in overall mission battery load when combined with its extended battery life. With equipment weight reduction and Soldier load among the top priorities of materiel developers, this represents a significant advance over previous battery technology. The L91 lithium AA battery itself is 37 percent lighter than its alkaline counterpart, so Soldiers not only carry fewer batteries, but also the batteries they carry are lighter.

In addition to AA batteries, the venerable BA-5590 has a more powerful replacement in the BA-5390A/U (NSN 6135-01-517-6060). It packs 50 percent to 100 percent more runtime than the BA-5590 by using upgraded lithium chemistry. This battery also includes a state-of-charge indicator, which enables reliable use of partially discharged batteries and eliminates the need to dispose of partially used batteries.

The BA-5390A/U is the preferred battery for the AN/PED-1A and 1B Lightweight Laser Designator Rangefinder (LLDR 2 and 2H) because its high power demands will quickly deplete the BA-5590. Use of the upgraded battery can cut in half the number of mission-required batteries compared to the BA-5590. This is another opportunity to reduce individual Soldier load.

Check your TM

Equipment technical manuals (TMs) clearly state the acceptable battery types for their respective equipment. Always follow the TM recommendations to ensure the equipment is not damaged and operational needs are met. Many batteries look the same yet are not interchangeable with those designed uniquely for other equipment. Never mix batteries of different brands – alkaline and lithium variants – or those with different states of charge. This can cause uneven current draw, which can result in battery overheating and rupture.

Rechargeable batteries offer yet more weight and cost-savings opportunities when the mission or training conditions permit their effective use. Rechargeable batteries are usually used in maintenance situations.

Ultimately, commercial-battery technology advances have enabled developers to maximize capability by producing backwards compatible power systems. This provides significantly longer operational life at a lower weight penalty. While these newer components are initially more expensive, they lower operational costs, Soldier loads and logistical burdens due to the reduced numbers required.

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Acronym Quick-Scan

PM-SSL – Project Manager-Soldier Sensors and Lasers
TM – technical manual

Intelligence Center Develops Distributed Common Ground System-Army Tactical-Engagement Teams to Support Mission Command

by MG Robert P. Ashley and COL William L. Edwards

As the Army implements the new Army operating concept, "win in a complex world," the U.S. Army Intelligence Center of Excellence (USAICoE) developed the tactical-engagement team (TET) concept to bring Distributed Common Ground System-Army (DCGS-A) subject-matter experts (SMEs) to the operational Soldier in support of mission command.

The TET concept developed by USAICoE and the U.S. Army Training and Doctrine Command (TRADOC) Capability Manager-Sensor Processing (TCM-SP) for DCGS-A is a team of SMEs from across the Intelligence Corps who plan, coordinate and execute training to take leaders and Soldiers beyond simply understanding the functionality of DCGS-A.

The Army operating concept requires intelligence warfighting function (IWfF) training to increasingly focus on employing the DCGS-A weapons system to support expeditionary operations with light and lethal formations capable of deploying quickly.

This new environment is increasingly dominated by the proliferation of technology and rapid information exchange. Now more than ever, intelligence Soldiers are realizing that attaining and maintaining proficiency in the use of key mission-command systems is essential for success.

To that end, USAICoE and TCM-SP (DCGS-A) at Fort Huachuca, AZ, engaged in a deliberate effort with U.S. Army Forces Command (FORSCOM) and U.S. Army Intelligence and Security Command (INSCOM) by establishing a TET to enable intelligence Soldiers to fully employ the DCGS-A weapons system within the context of executing core intelligence tasks. The TET educates Soldiers from an operational-employment perspective focused on interoperability and seamless intelligence in the new operating environment.

TET training begins by focusing the intelligence professional on the tactics, techniques and procedures (TTPs) of employing and putting into action DCGS-A tools that specifically support the commander's decision-making cycle and processes. The whole idea is command-centric.

TET training

"Current DCGS-A system introduction, fielding and training does not build broad understanding within tactical-level IWfF/medium-weight force (MWF) leaders in the application and establishment of DCGS-A as a system of systems that provides intelligence support to training and operations, which enables mission command."-unit contact brief, 1st Infantry Division proof of concept

The TET concept is designed to enhance the commander's ability to operationally employ DCGS-A as a system of systems. Rather than focusing on basic "buttonology" or training with our junior Soldiers, the tactical-engagement concept engages the unit holistically, from the division commander and his key staff through battalion noncommissioned officers (NCOs) and junior analysts.

To accomplish this goal, the tactical-engagement concept is designed around the following principles:

- Train intelligence leaders on how to employ the system;
- Train intelligence leaders and Soldiers how DCGS-A enables mission command;
- Show intelligence leaders how to establish the brigade combat team's intelligence team on the network 24/7;
- Show intelligence leaders and senior trainers one method of training the team to support the commander; and
- Tailor tactical-engagement training to the unit's needs, then organize, plan and execute based on unit objectives.

Though each engagement is uniquely tailored and is based on unit objectives, the basic principle of tactical-engagement training centers around the unit and its ability to provide intelligence to the tactical commander while employing DCGS-A as its weapon system.

Tactical engagement essentially prompts leaders to look at their formations, honestly assess their capability and determine where they need help. After commanders assess their units' capabilities and decide where they need support, the TET leadership assembles the SMEs from across the intelligence enterprise to teach, coach and mentor those areas identified by the unit.

How TET began

In April 2014, TCM-SP determined there was a gap in understanding employment and use of the system of systems that gives DCGS-A its true power. The system, not unlike other complex technology advances, requires upfront proficiency from an individual perspective, but also an understanding by leaders of how the system should be employed and what tools it brings to the intelligence community in support of planning for operations, executing current operations and predicatively preparing for future operations – essentially the intelligence cycle during combat operations.

The idea of tactical engagement was to fill the gap between institution and unit training responsibilities

by essentially teaching intelligence professionals how to operationally tie in DCSG-A to the Army Battle Command System (ABCS) network and use its tools to conduct intelligence preparation of the battlefield (IPB) in support of the commander's military decision-making process, a foundational requirement of battle command. Also, the TET would train the importance of collaboration and near-real-time sharing of intelligence with operational partners as staffs fought to attain and maintain a common operational picture that provides the unit holistic and common understanding of the situation.

Realizing the span of this problem, tactical engagement was scoped to focus initial efforts on the 11 active divisions and their intelligence, operations and communications teams (G-2,G-3, G-6), specifically the IWfF and the senior intelligence officer of each formation. After initial concept development, TCM-SP proposed the idea to the Army's divisional G-2s and asked a unit to step forward and help provide a proof-of-concept training event.

Based on this engagement with the Army's intelligence leaders, command emphasis/focus and history with DCGS-A, 1st Infantry Division's G-2, LTC Marc Spinuzzi, volunteered to provide the venue for the proof-of-concept with his entire division IWfF. It was at this point that the TET concept took its first step from idea to action.

Spinuzzi describes the demonstration and impetus for contacting TCM-SP in April 2014: "Our DCGS-A demonstration was not intended to sugarcoat the system – we talked about what it does well and what it doesn't do so well. The two biggest problems we discussed were training and the DCGS-A interface. While there are plenty of training opportunities available for DCGS-A, we had found that most of them focused on a narrow set of tools. There were several great tools in DCGS-A that simply weren't being trained anywhere – tools like the Threat Characteristics Workcenter (TCW) and the [Intelligence, Surveillance and Reconnaissance (ISR)] Synchronization Tool (IST).

"The DCGS-A interface was also a common complaint," Spinuzzi said. "The system simply does not come across as 'user friendly.' It isn't intuitive, so Soldiers often struggle to find the tools they are looking for or to quickly make use of the ones they know. We thought we had a good solution to these problems. We needed to get our Soldiers to talk to someone who could listen to their thoughts and opinions and help adjust the training and the interface."

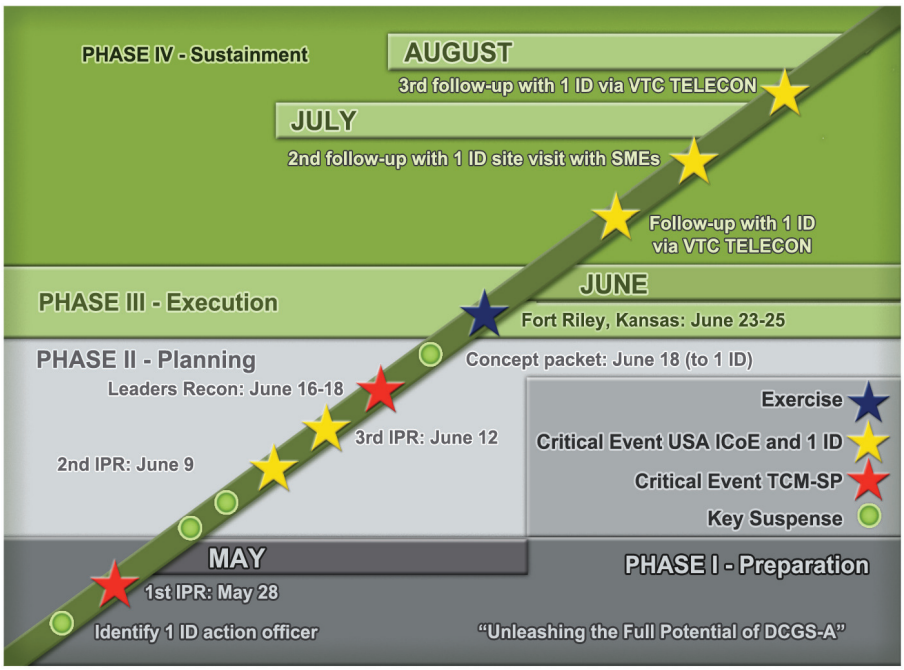

Figure 1. The glide path 1st Infantry Division and TCM-SP followed to execution.

TCM-SP saw an opportunity to implement a new vision of "unleashing the full potential of DCGS-A, one tactical formation at a time" and built a team of SMEs to provide the resident knowledge to build confidence and competence in the system. Rather than simply responding by sending a few trainers, as Spinuzzi anticipated, TCM-SP requested a complete list of 1st Infantry Division's training objectives. Then they put together a team of SMEs drawn from not only TCM-SP but the entire DCGS-A enterprise for a multi-day event at Fort Riley, KS.

Over a 60-day period, the DCGS-A TET held a series of collaborative and interactive planning sessions with 1st Infantry Division's chain of command and Spinnuzi's teams. TCM-SP and 1st Infantry Division staff linked each training event to 1st Infantry Division's training objectives and coordinated with many other organizations, who provided SMEs for the team

Proof of concept

The June 2014 engagement at 1st Infantry Division began with an introduction brief focused on educating commanders and staffs on DCGS-A capabilities. The assembled team of SMEs from the TET consisted of almost 30 people. The team was comprised of individuals from TCM-SP; Program Manager DCGS-A; USAICoE NCO Academy; Training, Doctrine and Support; New-System Training and Integration Directorate; and Department of the Army G-2. SMEs from all over the country came together with one clear objective: build leader and Soldier confidence, understanding and competence of how to successfully employ DCGS-A.

Soldiers and leaders of multiple intelligence military-occupation specialties (MOSs) were trained in a myriad of system tools during a three-day event. Training focused on intelligence production and ABCS interoperability.

Training during the 1st Infantry Division engagement included TCW; DCGS-A architecture; IST; employment of Tactical Ground Station (TGS) across a brigade, Multifunctional Workstation (MFWS) best practices; Geospatial Intelligence (GEOINT) Workstation (GWS) interoperability/configuration; Situation Awareness Geospatially Enabled

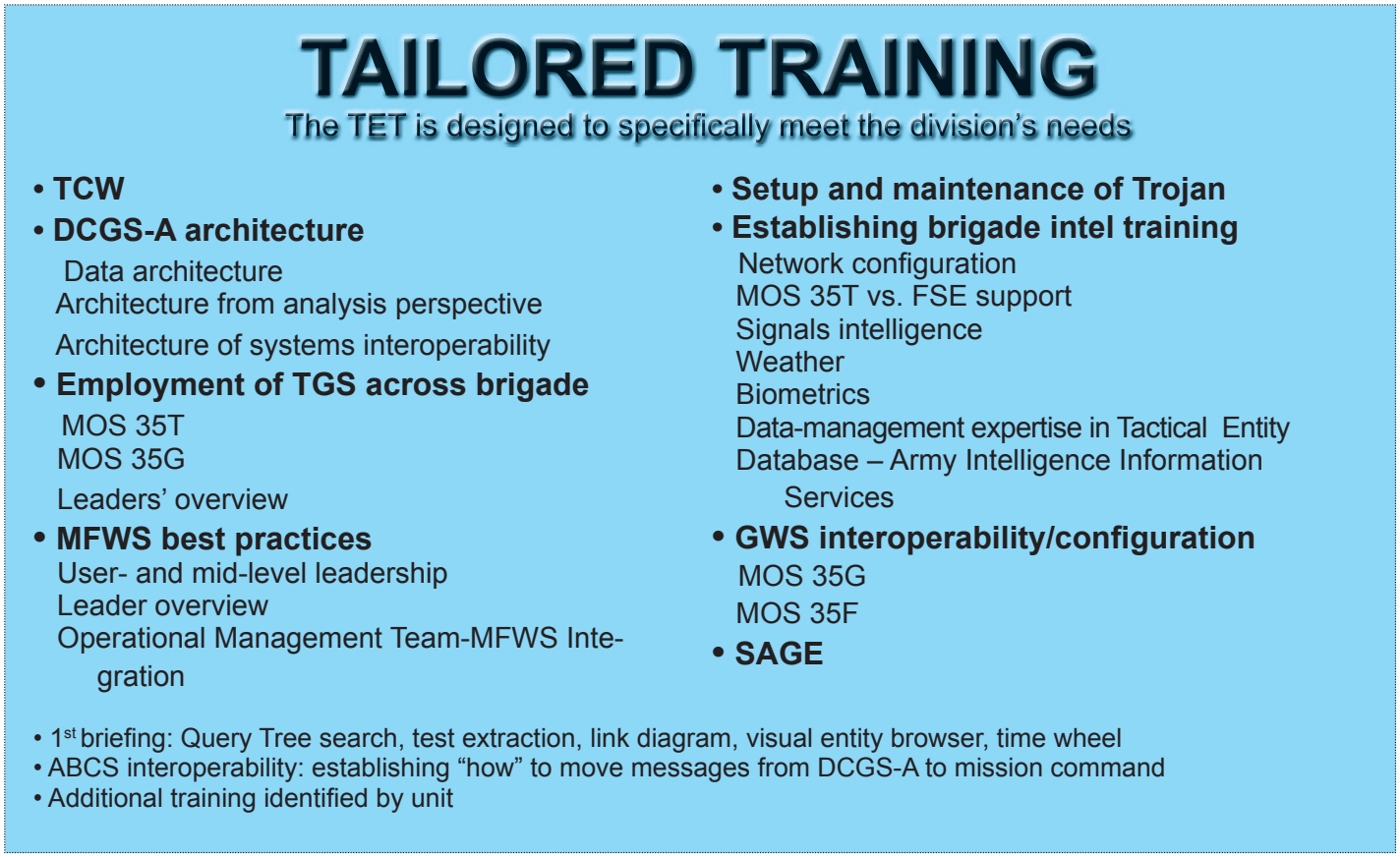

Figure 2. The "menu" of training available for the three-day event.

(SAGE), ABCS/mission-command interoperability; setup and maintenance of Trojan; and establishing a brigade intelligence-sustainment training plan.

Issues identified during the training were corrected on the spot. TET members were able to immediately adjust DCGS-A configurations to allow users

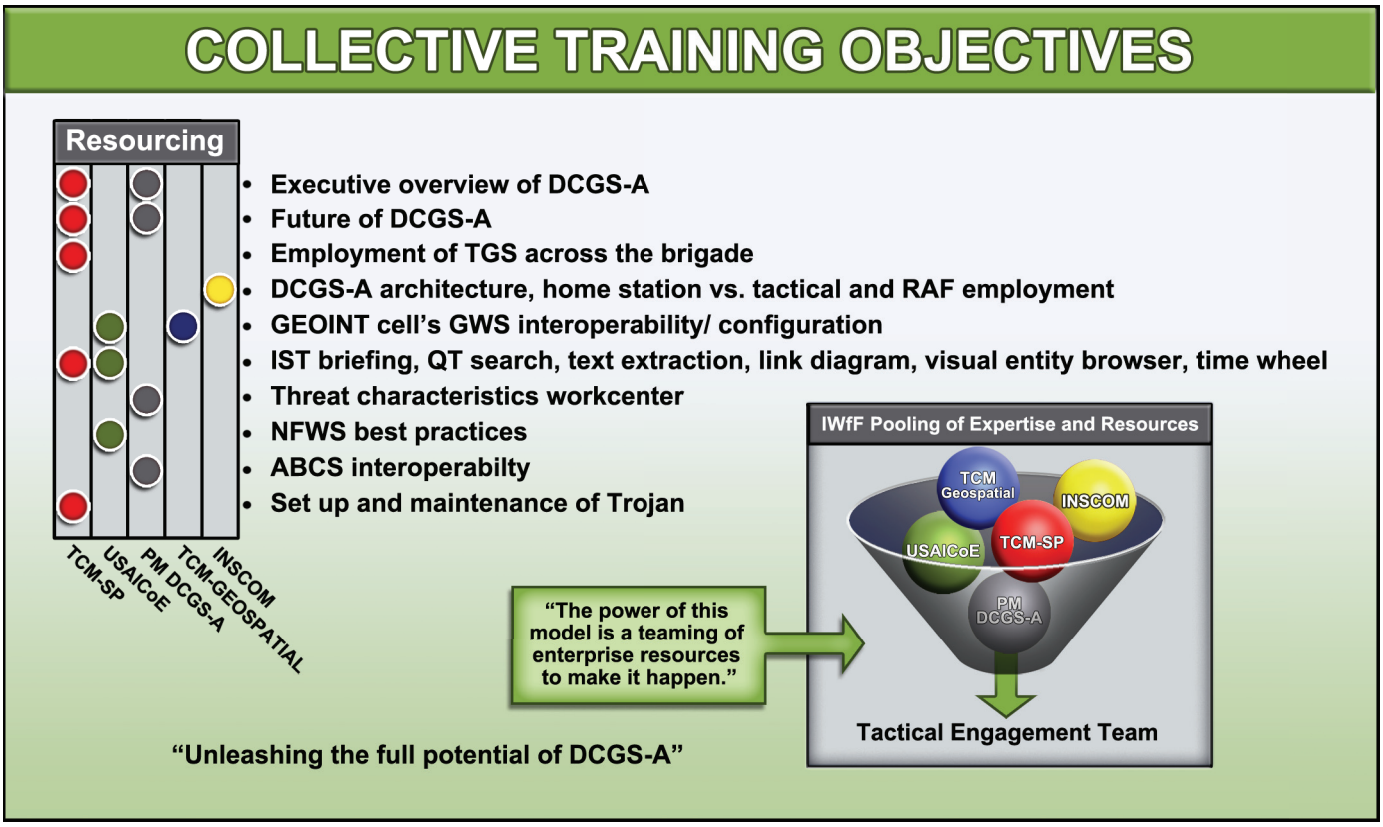

Figure 3. Details of the overall training objectives requested by 1st Infantry Division and how TCM-SP resourced each to meet their requirements.

to have access to all data sources around the world.

Soldiers and leaders alike were directly connected to experts for each facet of the system and were encouraged to use those connections to further educate themselves and train their Soldiers. Overall, the engagement laid to rest some of the false perceptions of DCGS-A and demonstrated that although the system is not perfect (no system ever will be), it provides a robust capability that when understood, trained and employed properly, will satisfy the commander's intelligence requirements.

"Key to our success was establishing command emphasis with brigade commanders to provide three uninterrupted and focused days of training, enabling the opportunity to connect our intelligence community across [Fort Riley] and discuss trouble areas, TTPs and lessons-learned in a near-rankless environment," commented Spinuzzi. "Senior intelligence leaders had a chance to pass on their lessons-learned to junior intelligence Soldiers. Junior intelligence Soldiers provided candid bottom-up feedback. The majority of our after-action report comments were requests for more, which was a great sign.

"TCM-SP brought in a world-class team of experts to address everything from DCGS-A best practices to brigade-level training strategies," Spinuzzi said. "The tactical engagement was a resounding success."

Tailored engagement

Throughout the combined planning process with TCM-SP, commanders and units drive the TET's composition by identifying training requirements as well as gaps in knowledge and capabilities. As such, each TET is organized, planned and executed based on unit-specified objectives, giving it a tailored feel. TCM-SP, in coordination with the unit, builds a unit-specific training strategy that complements existing program-manager functionality training associated with new-equipment training and doctrine, tactics and techniques (DTT). Also, post-DTT, collective-training strategies are established and are nested with FORSCOM G-2 and INSCOM. The entire concept is a building block using existing systems provided by senior intelligence leadership.

It holistically looks like this:

- Program manager provides functionality training when equipment is fielding;
- New-Systems Training Division from the USAICoE provides a

STRATEGIC TRAINING CONCEPT

PROBLEM STATEMENT: Lack of command emphasis/understanding of DCGS-A hinders proper implementation and usage of the DCGS-A as a system of systems.

TASK: TCM-SP strategic-engagement team provides an overview to commanders on DCGS-A intelligence-enterprise system-of-systems network and capabilities, collective training strategies and maintainer efficiencies for the employment of DCGS-A.

PURPOSE:
-Discuss commander's production requirements.
-Define intelligence needs.
-Discuss communications-architecture requirements.
-Develop awareness of training available to command.
-Discuss how to establish relationships with Network Enterprise Command and other key entities.
-Discuss training strategy.

TACTICAL TRAINING CONCEPT

PROBLEM STATEMENT: Current DCGS-A system introduction, fielding and training does not build broad understanding within tactical-level IWfF/MWF leaders in the application and establishment of DCGS-A system of systems to provide intelligence support to training and operations.

PURPOSE:
-Establish relations to enhance DCGS-A usage, improvement and user feedback.
-Build unit-leadership understanding on DCGS-A system of systems and its capabilities.
-Educate commanders and leaders on DCGS-A's contributing value to support training operations to build command emphasis on intelligence training across the Army.
-Train multi-intelligence MOS skillsets to establish requisite knowledge base to enable unit's IWfF to maintain, sustain and use DCGS-A.

ENDSTATE:
-Establish overall confidence in DCGS-A system of systems.
-Build leadership understanding and skills that will allow successful DCGS-A integration to division's and BCT's training and intelligence support to operations while providing SME expertise to facilitate unit's development of DCGS-A efficiencies, SOPs and TTPs.
-Build and establish lines of communication that will enable collaboration.

Figure 4. Key points of strategic-training and tactical-training concepts.

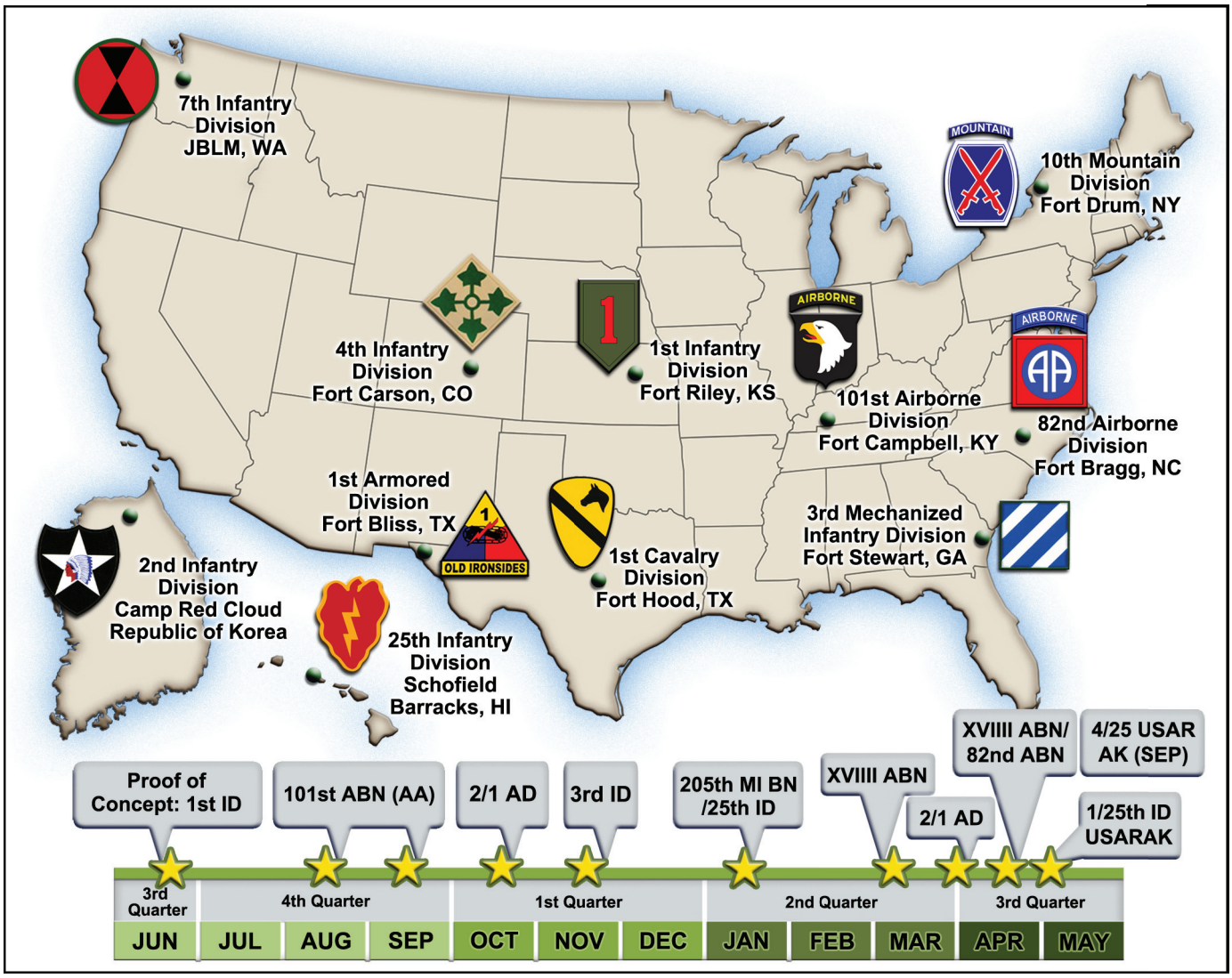

Figure 5.

90-hour IPB-focused training course to assigned analysts;

- INSCOM through Foundry provides DCGS-A advance-production training to intelligence leaders;
- Tactical engagement provides system-of-systems training specifically focusing on operational employment and interoperability, including focused training on tools or system components;
- Foundry sites provide sustainment training and offer internal collective training venues using Intelligence Electronic Warfare Tactical Proficiency Trainer; and
- Training centers bring it all together by providing an environment that is truly ABCS-centric.

Communicating best practices

The DCGS-A TET facilitates the sharing of lessons-learned, TTPs and best practices throughout the Army. Each engagement provides an opportunity to collect and share Army-wide success stories on system employment, combat-training-center best practices, regionally aligned force best practices and TTPs for decisive action and counterinsurgency missions. Peer networking is another key benefit. Relationships built facilitate continued sharing of ideas between formations long after the engagement is over.

As TET continues to engage the force, the collective knowledge will be socialized across formations and documented for use by the entire force. The TET also provides leave-behind products such as brigade training plans, TTPs, standard operating procedures (SOPs), tactical SOPs and example products to further enable unit success.

Strategy – strategic and tactical

The tactical-engagement strategy seeks to address current DCGS-A challenges at both the strategic and tactical levels:

- **Endstate – TET's goals.** Tactical commanders are confident in their S-2's ability to help them with battlefield visualization: see themselves, see the enemy and see the terrain.
- **Soldiers.** The unit's intelligence professionals gain confidence using DCGS-A and improve their ability to complete MOS skill-critical

tasks using DCGS-A. They understand the "so what" of producing intelligence products, are able to interoperate with the Army's ABCS architecture, and are confident and proficient at employing DCGS-A to its full potential to meet the commander's requirements. Unit intelligence Soldiers also gain a basic understanding of system-troubleshooting skills, thereby reducing the reliance on contract field-support engineer (FSE) support.

- **Leaders.** The unit's intelligence leaders understand DCGS-A from a system-of-systems perspective and learn to ask the "right questions" pertaining to employment and intelligence-product development. Also, they learn where to turn for assistance when required and how MOS 35Ts, intelligence-unit maintainers, can assist with technical issues. Lastly, they are confident in the system and competent in its use, enabling them to fully leverage the potential the system was designed to provide a tactical commander.
- **Team.** The commander's intelligence team understands the holistic approach to DCGS-A system training. DCGS-A tactical engagements assist the unit's intelligence team by providing a start point on how to train the intelligence discipline as a team vs. individual MOS skills acting independently. They learn that orchestrating in concert with the other warfighting functions provides a powerful tool for command decisions. Most importantly, through integrating DCGS-A training with the unit's ABCS, the unit understands how to fight using DCGS-A to support mission command.

Way ahead

Capitalizing on the momentum, TCM-SP has begun the process of engaging other senior leaders across the Army in an effort to offer similar training. Figure 5 is a snapshot of the way ahead. Units from across the Army are taking advantage of the TET concept. DCGS-A by design is expeditionary and tailorable. It takes large amounts of data and provides structure to enable an analyst to clearly see through the fog of war. Tactical engagement puts the potential of the weapons system in the hands of the warfighter to assist units in configuring, using and successfully employing DCGS-A in support of mission command.

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COL William Edwards is the chief of TCM-SP. Previous assignments include the TCM for biometrics, forensics and machine foreign-language translation. His most recent tactical assignment was commander, 3rd Brigade Troops Battalion, 4th Infantry Division, during Operation Iraqi Freedom and Operation New Dawn during 2009-2011. His military schooling includes Armor Officer Basic Course, military-intelligence transition and advanced courses, Military Counterintelligence Course, Military-Intelligence Combating Terrorism Course, U.S. Army Command and General Staff College and U.S. Naval War College. COL Edwards holds a master's of arts degree in national strategy and policy from the Naval War College and a master's of science degree in personnel management/administration from Central Michigan University.

Acronym Quick-Scan

ABCS – Army Battle Command System
DCGS-A – Distributed Common Ground System-Army
DTT – doctrine, tactics and techniques
FORSCOM – (U.S. Army) Forces Command
FSE – field-support engineer
GEOINT – geospatial intelligence
GWS – GEOINT Workstation
INSCOM – (U.S. Army) Intelligence and Security Command
IPB – intelligence preparation of the battlefield
ISR – intelligence, surveillance and reconnaissance
IST – ISR Synchronization Tool
IWfF – intelligence warfighting function
MFWS – Multifunctional Workstation
MOS – military-occupation specialty
MWF – medium-weight force
NCO – noncommissioned officer
SAGE – Situation Awareness Geospatially Enabled
SME – subject-matter expert
SOP – standard operating procedure
TCM-SP – TRADOC Capability Manager-Sensor Processing
TCW – Threat Characteristics Workcenter
TGS – Tactical Ground Station
TET – tactical-engagement team
TRADOC – (U.S. Army) Training and Doctrine Command
TTP – tactics, techniques and procedures
USAICoE – U.S. Army Intelligence Center of Excellence

REVIEWS

Chasing Jeb Stuart and John Mosby: The Union Cavalry in Northern Virginia from Second Manassas to Gettysburg by Robert F. O'Neill, McFarland & Company, Jefferson, NC, 2012, 316 pages, $42.75.

Cavalry operations in the American Civil War have long been a subject of fascination to diverse readerships. Intermix iconic leadership, dramatic reversals and studious detail, and you have Robert O'Neill's study on how eastern Union cavalry evolved between late 1862 and mid-1863 as they grappled with highly lethal Confederate mounted formations led by cavaliers like Jeb Stuart and John Mosby.

Arriving as a studious analysis of the cavalry brigades attached to the defenses of Washington that eventually reorganized into the Army of the Potomac on the eve of the seminal clash at Gettysburg, this work manages to provide an instructive, if overtly academic, contribution to lesser-known skirmishing and raiding during a transition period in America's most destructive conflict. While it falls short of magisterial – which is clearly not the author's intent – given the book's relatively narrow scope and moderate length, it nevertheless stands as an important contribution to Civil War historiography.

Chasing Jeb Stuart and John Mosby is a scholarly study that aspires to new depths of historical value within an already well-trodden genre. Capitalizing on durable interest in the legendary and often romanticized Civil War personalities Stuart and George Armstrong Custer, the work is ideally suited for informed readers such as graduate students, amateur historians and military professionals. To that end, the book is replete with footnotes and quotes that inform without distracting, while drawing on an impressive research base.

Given that O'Neill's stated aim is to save these Union cavalrymen from "history's dusty attic," he achieves his purpose (if imperfectly due to an awkwardly structured introduction and conclusion) by detailing mounted operations at the tactical and operational levels during periods generally marked by strategic pauses between more decisive campaigns. Unfortunately, heading each chapter with paired dates and quotes, without any additional context, makes the book difficult to assess at first glance.

The narrative arc of this work is chronological and centers on Union defensive operations in Virginia from early Fall 1862 until June 1863. The first half focuses on Richard Butler Price's cavalry brigade as it "served as a tripwire along a line of picket posts" to protect Washington, DC, from potential invasion and raiding by the vaunted Army of Northern Virginia. Consisting of the 1st Michigan, 1st Vermont, 1st West Virginia and 5th New York cavalry regiments, they embrace the frustratingly dangerous task of interdicting lighting guerrilla strikes by Confederate raider Mosby's 43rd Battalion, Virginia Cavalry, and defending against operational-level raids by Stuart's famed mounted division.

The later chapters of the work explore the incorporation of the brigade, along with its famed Michigan counterpart, into Julius Stahel's consolidated division in the months before Gettysburg. O'Neill expands the narrative, with admirable discipline, just wide enough to include larger strategic context while maintaining attention at tactical levels.

For readers seeking comprehensive understanding of Union cavalry development in the decisive theater of the Civil War, O'Neill's book provides an ideal prelude to Eric Wittenberg's new study, ***"The Devil's to Pay": John Buford at Gettysburg***, while also complementing Robert Trout's 2011 work, ***After Gettysburg: Cavalry Operations in the Eastern Theater***. With its fixation on the timeless mounted tasks of reconnaissance, counter-reconnaissance and screen operations, modern cavalry officers and enlisted scouts will identify with the work so long as they are prepared to grapple with dense prose. O'Neill's exploration of how Union cavalrymen negotiated the challenges of simultaneously countering conventional maneuver and "harassing attacks" – potentially similar to hybrid combat environments of the 21st Century – may offer more interest for military professionals. These dynamics, stemming from a well-researched story about American cavalries dueling for dominance across the contested Virginia landscape, establish ***Chasing Jeb Stuart and John Mosby*** as a must-read for Civil War enthusiasts.

Promotable CPT NATHAN A. JENNINGS

10th Cavalry Regiment

The distinctive unit insignia was originally approved March 13, 1922. It was amended Dec. 6, 1923, to change the wording in the description and the method of wear. The insignia was redesignated March 19, 1951, for 510th Tank Battalion. The distinctive unit insignia was redesignated for 10th Cavalry May 12, 1959. Black and gold have long been used as the regimental colors. The buffalo has likewise been the emblem of the regiment for many years, having its origin in the term "buffalo soldiers" applied by the Indians to colored regiments. The distinctive unit insignia is worn in pairs.

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