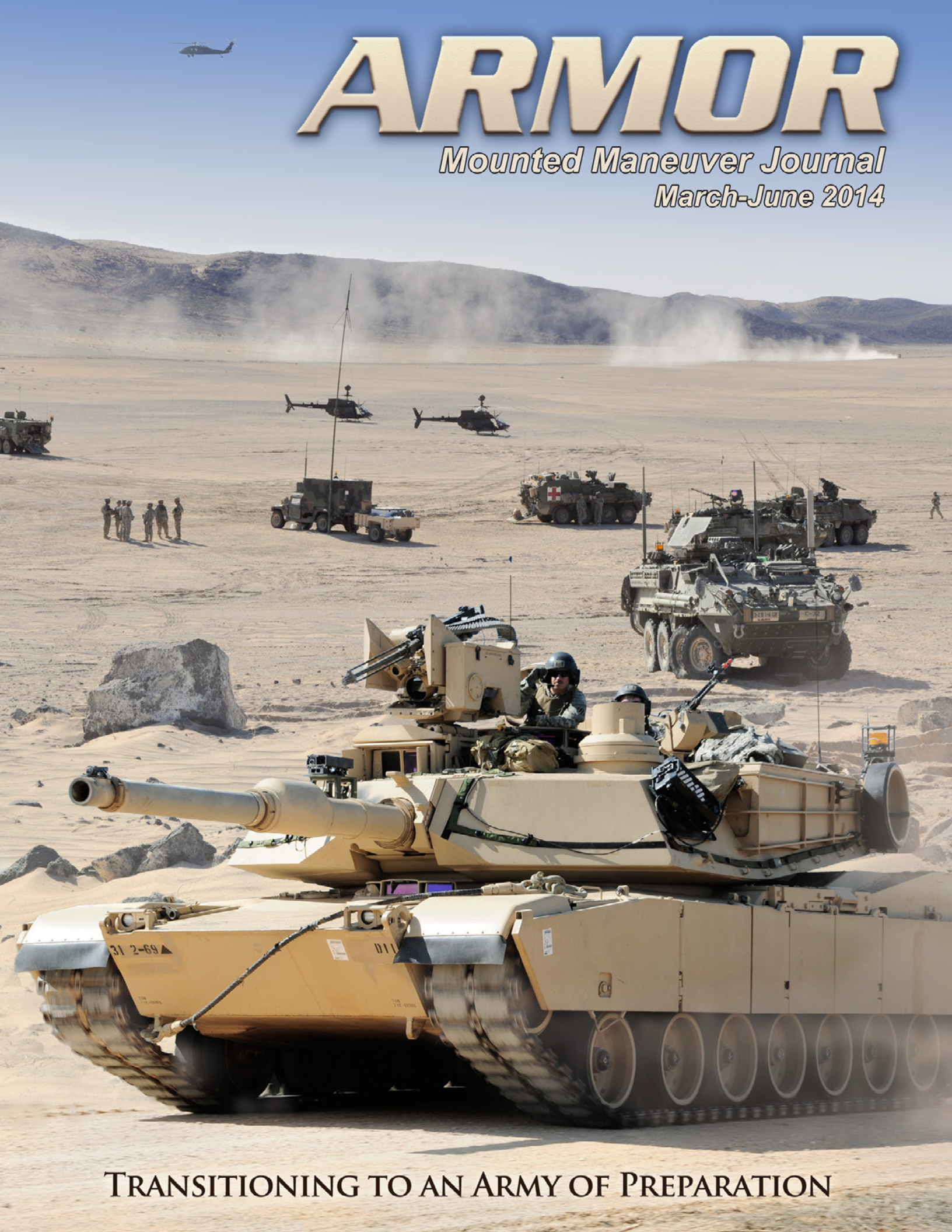
ARMOR

Mounted Maneuver Journal

March-June 2014



Transitioning to an Army of Preparation

ARMOR

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LETTERS

Dear ***ARMOR***,
In "Ideas on Cavalry" (***ARMOR***'s October-December 2013 edition, http://www.benning.army.mil/armor/earmor/content/issues/2013/OCT_DEC/Suthoff.html), the authors used promotions data in their "Identity crisis" section that misrepresents the original study conducted and should be not be considered in evaluating the authors' arguments.

In March 2013, Armor Branch in the Maneuver, Fires and Effects Division, Officer Personnel Military Directorate, U.S. Human Resources Command, compiled the data used for the article (including the article's Figure 1) and, after thorough analysis, came to conclusions drastically different from those stated in the article.

Our study indicated that company-grade armor officers have a statistically near-equivalent chance of being selected for major in the primary zone (PZ), regardless of the formation type in which they complete their company command. If we use the metric established by the authors of "Ideas on Cavalry" (armored brigade combat team (ABCT) against every other BCT type combined), the statistics they provided and some basic math, we find that ABCTs had a 89.7 percent (44 selected out of 49 eligible) PZ selection rate, where the other BCT types – infantry BCT (IBCT), Stryker BCT (SBCT) and battlefield surveillance brigade (BfSB) – combined for 87.1 percent (27 selected out of 31 eligible). The difference is 2.6 percent. Hardly reason enough to take the drastic actions recommended by "Ideas on Cavalry."

However, the authors chose to focus their analysis on below-the-zone (BZ) selection results. Anyone who has studied Army officer promotions boards and their results will tell you that BZ statistics cannot be used for any constructive analysis. Those results are completely unpredictable and variable. Anyone familiar with the board system can tell if an officer is competitive for BZ selection, but competitiveness usually encompasses 20 percent to 30 percent of the eligible population. Getting from the 20 percent to 30 percent who may be competitive to the final 6 percent who are normally selected resists successful predictive analysis.

To analyze board results, data on the number of officers considered BZ who had completed command in each BCT type is required. The article does not cite those totals (and I don't have them either), but a prudent extrapolation is to use the relative percentages of the PZ candidates and apply them to the BZ candidates. When we do that, we find that there were 80 officers in the PZ, with 49 of them serving in ABCTs, coming to 61.3 percent of the population (not 40 percent as stated by the article), with the remaining 31 (38.7 percent) serving in IBCTs, SBCTs and BfSBs.

So about 60 percent of BZ selects should have come from ABCTs (five or six out of nine), and the rest from other BCT types (three or four out of nine). That did not happen, as eight out of nine came from ABCTs and only one from an IBCT. An obvious discrepancy, but we are talking about an error of two officers in a board that selected nine out of 151. Again, this is not enough to justify the drastic actions recommended by "Ideas on Cavalry."

Also, due to its erratic and unpredictable history, BZ selection has never been, and should never be, considered a metric of success. Success is selection for the next grade, not BZ selection.

The promotions study referenced in this article was created to relay trends to senior leaders and to inform the expectations of captains soon to be considered by boards. It did not include data elements that would be required for the analysis used in this article. The authors likely did not have access to the full study, nor to any of the systems required to conduct independent queries. I ask the reader to disregard the data and analysis on promotion results cited in this article and to judge the authors' recommendations by the strength of the other arguments made.

THOMAS J. SPOLIZINO
CPT(P)

Acronym Quick-Scan

ABCT – armored brigade combat team
BCT – brigade combat team
BfSB – battlefield surveillance brigade
BZ – below the zone
IBCT – infantry brigade combat team
PZ – primary zone
SBCT – Stryker brigade combat team

COMMANDANT'S HATCH

BG Lee Quintas
Commandant
U.S. Army Armor School

An Army in Transition

There is no mistaking that our Army is in a period of transition. Decreases in military spending and reduction of future force levels all indicate a restructuring Army. The Army could reach endstrength levels not seen since before World War II. Leaner times will be challenging, and yet reduction in size will not equate to a reduction in readiness. In fact, a smaller force – highly trained and prepared for the next mission – must be better than its larger predecessor. Armor and cavalry forces will remain adaptive and agile through this transition as we seek to continually improve our mission effectiveness. As leaders, we must complement our focus on high-quality home-station training with meaningful and quality leader development and education programs as we prepare for current and future operations.

Restructuring our force creates opportunities to reorganize, and the decision to add a third maneuver battalion as part of the reduction to 450,000 Soldiers provides a signature example. During a recent cavalry squadron capabilities update to the Army Chief of Staff, we proposed multiple initiatives, including standardizing scout and cavalry formations across armored, infantry and Stryker brigade combat teams (BCTs). Standardized cavalry squadrons improve our formations' ability to conduct reconnaissance and security missions in the current and future operating environment. Beginning with the building block of all cavalry formations, we must first get the scout squad "right." A scout squad design of a six-man element, capable of operating both mounted and dismounted, simultaneously provides a capable and enduring formation. This six-man squad consists of two noncommissioned officers (NCOs) and four junior-enlisted Soldiers to provide the appropriate leader-to-led ratio. Six scout squads form the framework of a standardized scout platoon. The scout platoon, with six squads of six Soldiers per squad (or 36 assigned personnel, referred to as the 6x36 standardized scout platoon) affords commanders necessary baseline capabilities to accomplish reconnaissance and security missions in support of combined-arms maneuver (CAM) and wide-area security (WAS) operations.

We must equip the standardized scout platoons with six like vehicles. For the ABCT, this means six Bradley Fighting Vehicle platforms. For SBCTs, six Strykers. For the IBCT, we will use nine humvees as we await development of a suitable Light Reconnaissance Vehicle (LRV). This LRV, equipped with a remote weapon system and next-generation optics, will provide the necessary mobility, lethality and survivability.

Also, through our transition, we will seize the opportunity to focus on the fundamentals – our core competencies as tankers and scouts. The war on terrorism necessarily forced us to employ our tankers and scouts in nontraditional roles. As we capture the enduring lessons and recapture our skills from 13 years of largely counterinsurgency and Special Forces missions in Iraq and Afghanistan, we must re-establish our dominance in mobile protected firepower and reconnaissance and security across the range of military operations.

Good leaders and organizations expertly execute transitions. As the Army transitions and we prepare for an uncertain future, we owe our Soldiers and units comprehensive training plans focused on conducting CAM and WAS. Our mission success starts during home-station training, maximizing the training tools available within live, constructive, virtual and gaming environments. Resources such as the Close Combat Tactical Trainer, Virtual Battlespace 2 and 3 and the Training Brain Repository allow support for building leaders and units competent and confident in integrating the warfighting functions. Maximizing these tools will facilitate the planning and execution of planning, preparing and conducting decisive-action training environment rotations at a combat training center. The most important investments during this transition are in leader

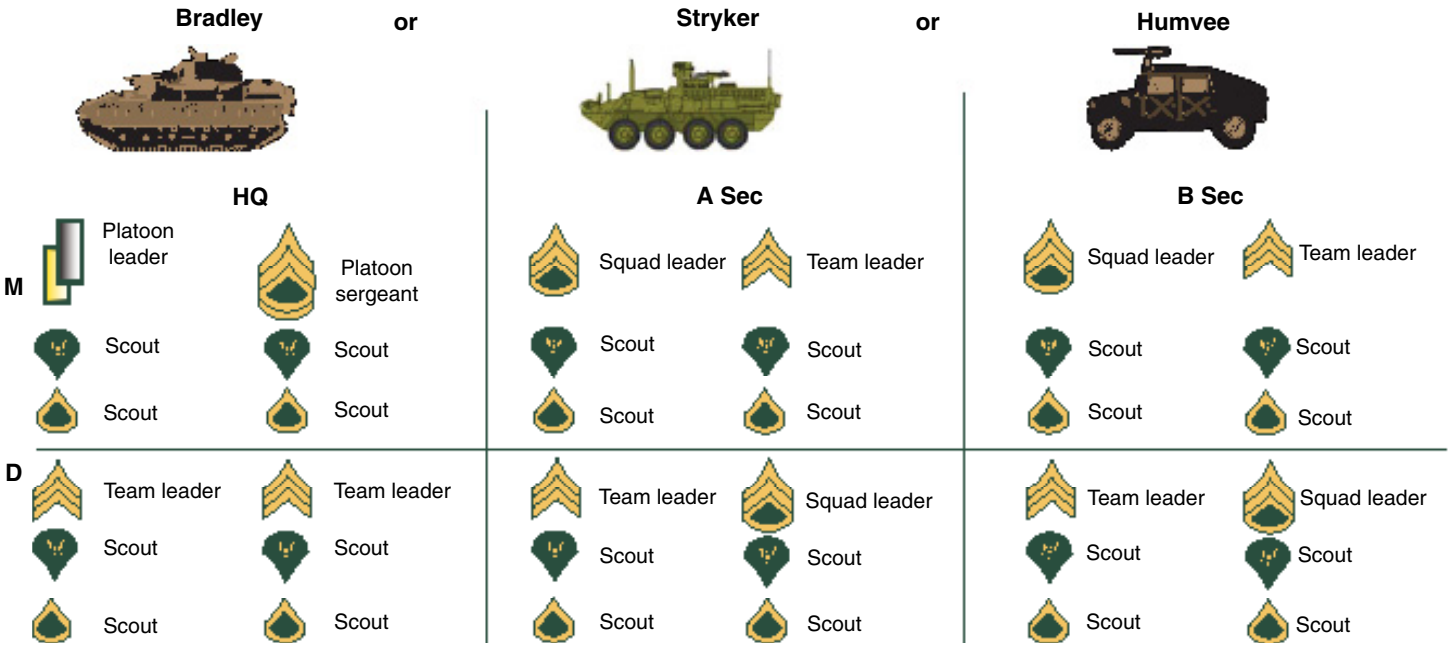

Figure 1. Standardized scout platoon.

development and education. As GEN Robert W. Cone, the former TRADOC commanding general, stated, "You cannot buy a good leader development and education program." Effective leader development and education programs provide our Army with adaptive and agile leaders we require now and in the future.

The Armor School continues to seek and create opportunities. An ongoing doctrine, organizations, training, material, leader development, personnel and facilities review will propose solutions on how to best train, man and equip the cavalry squadron, and I welcome your input. We are also enabling deliberate career paths that align professional military education with corresponding functional training, as well as a refined self-study program, for both officers and NCOs. Trained, educated and experienced leaders who possess doctrinal foundations will lead our armor and cavalry organizations through the transition. Improvements to the Reconnaissance and Surveillance Leader's Course, Army Reconnaissance Course, Cavalry Leader's Course, Stryker Leader's Course and Master Gunner Course make them more relevant and effective, and will provide enhanced capabilities to the force. The addition of reconnaissance and security electives focused on the unique requirements of our cavalry organizations in the Pre-Command Course, Sergeants Major Academy, Mission Command Training Program and Command and General Staff College will further prepare leaders through a lifetime of learning for the unique demands of maneuver leadership.

The strength of our formations remains our ability to provide adaptive, agile and inspiring leadership in any environment. Dedicated training on the fundamentals, coupled with well-developed and resourced leader development and education programs, will play an important role in our continued success. I encourage leaders to use Armor School media outlets to present your viewpoints to the rest of us. How is your organization preparing for this transition? What are you doing personally? Share your leader development and education plan, best practices and lessons-learned on Facebook (https://www.facebook.com/USAARMS). And of course, you may email me directly.

Forge the Thunderbolt!

Acronym Quick-Scan

ABCT – armored brigade combat team
BCT – brigade combat team
CAM – combined-arms maneuver
IBCT – infantry brigade combat team
LRV – Light Reconnaissance Vehicle
NCO – noncommissioned officer
SBCT – Stryker brigade combat team
WAS – wide-area security

"The 6x36 scout design had a tremendous impact on [opposing forces] planning and execution. The robust dismounted elements allowed the scouts to saturate the [area of operations]. This made it very difficult to infiltrate and, in most cases, the scouts were able to find us and track our movement through the screen line." —opposing forces commander

GUNNER'S SEAT

CSM Timothy L. Metheny
Commandant
Henry Caro Noncommissioned Officer Academy
Maneuver Center of Excellence

Noncommissioned Officer Training and an Army of Preparation

The U.S. Army is in a period of transition from an Army at war to an Army of preparation. This requires changes in the way we conduct training and in the way we educate our military professionals. The last Armor School update to the Noncommissioned Officer Education System (NCOES) was in 2008, when it transitioned the 19K and 19D Basic Noncommissioned Officer Course (BNCOC) to the Advanced Leader Course (ALC), and the 19D, 19K, 11B and 11C Advanced Noncommissioned Officer Course (ANCOC) to the Maneuver Senior Leader's Course (MSLC).

At that time, during the height of wars in Iraq and Afghanistan, the norm was that a senior staff sergeant attending ALC had three to four years' time in grade and two or more combat deployments as a section sergeant. This was mirrored by MSLC students, who were typically sergeants first class who had already served two or more years as a platoon sergeant during a deployment. Course content was developed with the current fight in mind, focused on current tactics, techniques and procedures being used during deployments and designed to prepare NCOs for their next level of promotion.

The purpose of today's ALC and MSLC is to train and develop Armor Branch NCOs to be adaptive leaders, critical and creative thinkers, armed with the technical, tactical, administrative and logistical skills necessary to serve successfully at the section/squad/platoon-sergeant level. NCOs receive training that builds on their knowledge, skills, abilities and attributes (KSAA) garnered from operational assignments and training experiences throughout their careers. NCOs graduate with an understanding of current maneuver doctrine and are grounded in its execution.

Today the Henry Caro Noncommissioned Officer Academy (NCOA) at the Maneuver Center of Excellence (MCoE), Fort Benning, GA, trains armor/cavalry NCOs using a rigorous course program of instruction based on updated doctrine, 21st Century Soldier competencies, the Maneuver Leader Development Strategy and the Army Learning Model. All NCOs who attend training at the Henry Caro NCOA are evaluated and assessed from the "whole Soldier" perspective. A student's overall grade point average is calculated from his Army Physical Fitness Test score, academic grade-point average, dismounted land-navigation score, garrison-leadership evaluation, tactical-leadership evaluation, personal-monogram experience paper, peer evaluation and instructor evaluation.

All students receive a DA Form 1059 Academic Evaluation Report that will enumerate the individual's class ranking with a statement such as "SSG Smith graduated the Advanced Leader Course Class 002-14 number 26 of 124 assigned students." This class ranking will help centralized promotion boards and the students' chains of command in establishing an order-of-merit list for promotions and further potential for advancement and future service. Also, the scoring matrix for graduation is divided into four tiers that range from the top 20 percent to those who "marginally achieve course standards."

Using multi-echelon leader development, students will also have the opportunity to conduct situational-training exercises, close-combat tactical training (CCTT) scenarios, field-training exercises (FTX) and physical-readiness training with their appropriate officer counterparts assigned to the Maneuver Captain's Career Course (MCCC), Armor Basic Officer Leader's Course (ABOLC) or Officer Candidate School candidates. This training initiative allows student NCOs and officers to better understand each other's capabilities and responsibilities, and facilitates interaction to develop the officer and NCO relationship. In any given course, it is not uncommon to conduct a CCTT or FTX mission with a MCCC captain as the company commander paired with a sergeant first class from MSLC as the first sergeant, and have an ABOLC lieutenant serving as the platoon leader maneuvering a platoon consisting of ALC staff sergeants. This is an awesome opportunity unique to the MCoE and 199th Infantry Brigade (Leader Development) that allows students from all courses to interact, train and grow in a learning environment and improve each other's understanding of their counterpart's capabilities.

Another training focus is implementation of the principles of the Adaptive Soldier-Leader Training and Education methodology, which centers on practical application and adult learning techniques. For example, students are given a block of instruction on training management in the classroom, then are provided with a training packet for their FTX. The students are then required to apply the Eight-Step Training Model by

planning, preparing and resourcing the FTX with cadre supervision and minimal assistance. Students will conduct a reconnaissance of the training site, prepare and issue an operations order, design training lanes that support terminal learning objectives, and then assist in the evaluations of other students executing the lane they designed. The endstate is that students leave the NCOA with an understanding of how to apply training management to conduct training at home station and similarly develop their subordinates.

Before attending the challenging suite of NCOES courses at the MCoE, NCOs and their chains of command are responsible to ensure all prerequisites are met. They must prepare themselves physically, mentally and emotionally through a combination of the Structured Self-Development Program, self-study modules available on the NCOA Website, and review of current Army doctrinal publications. By doing so, NCOs can establish the required base of knowledge that will be used as the foundation for their respective NCOES course.

As the Army transitions to an Army of preparation, our NCOES curriculum must also continue to transition to meet the needs of the future force. By meeting these requirements of increased course rigor, the NCOA ensures the continued development of agile and adaptive leaders who possess the KSAAs required to solve the complex problems of the modern battlefield and who are certified to lead the finest Soldiers anywhere in the world in both peacetime and combat operations.

Guest columnist CSM Tim Metheny, before becoming commandant of Henry Caro NCOA, served as command sergeant major, 3-8 Cavalry, 3rd Armored Brigade Combat Team (BCT), 1st Cavalry Division, Fort Hood, TX. Other assignments include deputy commandant, NCOA, Fort Knox, KY; first sergeant, Headquarters and Headquarters Company, 5-73 Cavalry, 3 BCT, 82nd Airborne Division, Fort Bragg, NC; first sergeant, A/B Troop, 5-73 Cavalry, 3 BCT, 82nd Airborne Division, Fort Bragg; and operations sergeant major, 3-505 Parachute Infantry Regiment, 3 BCT, 82nd Airborne Division, Fort Bragg. His military schooling includes the Ranger, Airborne, Pathfinder and Jumpmaster schools; Bradley Master Gunner Course; Scout Platoon Leader's Course; Drill Sergeant School; U.S. Army Sergeants Major Academy; ANCOC; BNCOC; Primary Leader Development Course; and Combatives 1 and 2. His awards include the Bronze Star medal (BSM) with V device; two more awards of the BSM; four awards of the Meritorious Service Medal; Leadership Award winner, Ranger Class 4-98, Drill Sergeant School and ANCOC; and honor graduate, Bradley Master Gunner School. He is a member of the Order of St. George and Excellence in Armor.

Acronym Quick-Scan

ABOLC – Armor Basic Officer Leader's Course
ALC – Advanced Leader Course
ANCOC – Advanced Noncommissioned Officer Course
BCT – brigade combat team
BNCOC – Basic Noncommissioned Officer Course
BSM – Bronze Star (medal)
CCTT – close-combat tactical training
FTX – field-training exercise
KSAA – knowledge, skills, abilities and attributes
MCCC – Maneuver Captain's Career Course
MCoE – Maneuver Center of Excellence
MSLC – Maneuver Senior Leader's Course
NCO – noncommissioned officer
NCOA – Noncommissioned Officers Academy
NCOES – Noncommissioned Officer Education System

How Interactive Multimedia Instruction Can Work for You

by retired SFC James Ocheske

One of the commander's enablers is the Instructional Technology Development Team (ITDT) at the Maneuver Center of Excellence (MCoE), Fort Benning, GA.

The ITDT's purpose is to develop digital-learning content (DLC) that can support the three learning domains (institutional, operational and self-development). This can be done by developing digital-training applications that can be implemented through commercial mobile devices supporting the Department of Defense's "Bring Your Own Device" strategy. The ITDT is able to produce mobile applications, interactive multimedia instruction (IMI), training videos, Virtual Battlespace 2/3 scenarios and three-dimensional interactive models that can be used by students or the instructor in or out of the classroom. The products may be implemented on unit kiosks, SmartBoards or other computerized means to support the Army Learning Model (ALM).

IMI development: ammo IMI

The ITDT recently completed a 105mm / 120mm ammunition IMI for the Armor School, specifically the Department of Direct Precision Fires (Abrams Branch). The IMI was designed as a passive-learner activity to support a blended learning program for the Master Gunner Course. The ammo IMI provides instructors and students with an informative "hands-on" interactive 3D instructional training support tool that illustrates an in-depth description of individual component locations, function and characteristics for ammunition used on the M1 Abrams and Mobile Gun System Stryker vehicle.

The ammo IMI can be used to enhance the instructor's platform-teaching techniques or be downloaded by the master-gunner student as a study aid. For anyone who has been through the Master Gunner Course, gone will be the stack of index study cards used to memorize the parts of the M829A1 Armor-Piercing Fin-Stabilized Discarding Sabot with Tracer and the many other rounds; with a simple download, the student can have the information on his desktop. Students may use the IMI in their study groups to review the content and prepare for the exam. As graduates of the course, they can then take the IMI back to home-station in their "toolbox" and easily explain the components, functionality and characteristics for main-gun ammo to peers and subordinates. The ammo IMI can also be used as a read-ahead for master-gunner candidates and in Excellence in Armor programs.

Figure 1. The first screen of the ammo IMI as it loads.

The ammo IMI also features ammo identification, which takes the user through the process of breaking down the lot number and national stock numbers by its digits; ammo planning, handling and classification are also covered. There is a section on depleted-uranium awareness and how to identify restricted and suspended munitions.

Did I mention the cool videos? There are videos of discarding sabot petals, multipurpose anti-tank and canister-round effects, and flareback.

How was this product conceived? The process begins with the unit identifying a need for digital content. The

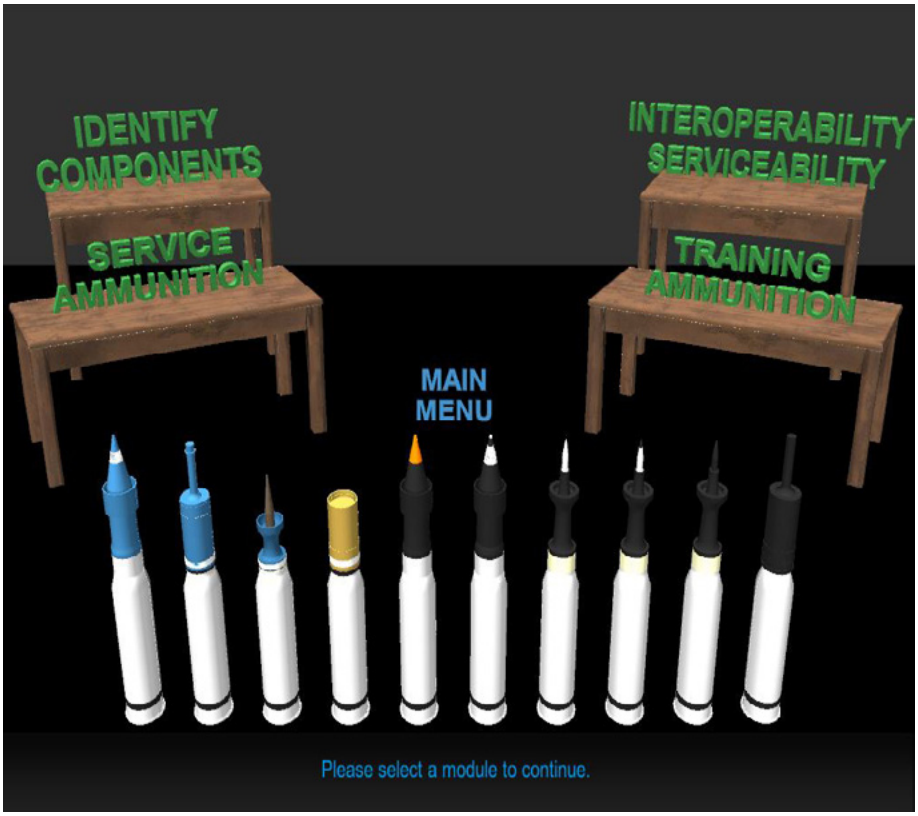

Figure 2. The ammo IMI divides into modules per type of ammunition.

ammo IMI will be used as the example. Every year the ITDT's chief sends requests for DLC requirements (gaming, mobile applications, digital content) to brigade S-3s for the upcoming fiscal year. A unit in our ammo example, 316th Calvary Brigade, identified a need for DLC to enhance the platform instruction of its ammunition class for master-gunner students. The brigade contacted the ITDT with a "request for instructional-training development," which provided the name of the course, requested product, description of the product, training material associated with the request (lesson plans, PowerPoint presentations, practical exercises, etc.) and the requestor's information. ITDT representatives meet with the requesting brigade to determine and finalize the product requirements: level of interactivity of the product, deliverables and funding.

Once the green light is given for development, the unit provides government-furnished information (GFI) to the development team. The section of the ITDT that does the DLC's modeling and programming consists of instructional-systems designers (ISD), software developers and graphic designers / media developers, who are currently contracted to Eagle Systems and CACI.

ISDs take the supplied GFI and product description and create a "storyboard" that shows the flow of the finished product and all interactions in a PowerPoint format. Once approved by the requestor, the storyboard serves as the basis for the development, and content can no longer be added.

The storyboard is sent to the graphic designers and media developers, who will construct models and animations to fulfill the storyboard and product request. The models, animations and graphics are forwarded to the software developers, who will program and package the product for its initial delivery to the requestor. The requestor has a 10-day review period to check the product for accuracy of content and functionality. If changes are needed, they are applied and sent back to the customer for final review, and the ITDT has it posted to Warrior University for download.

Contacting ITDT

The example given is, of course, a simplified one; the actual ammo IMI took 14 months from concept to finished product, but it is well worth the wait. The IMI can be easily accessed by Army Knowledge On-line (AKO) users or Common Access Card holders by visiting (make sure you are logged into AKO first) Warrior University's homepage. Once on the homepage, look under "What's Hot"; click on "MCoE M1 Tank and M2 Bradley IMIs." There are currently 12 IMIs for download; check them out and feel free to contact the ITDT with comments or suggestions.

While you are on Warrior University, check out all our products by clicking the "MCoE DoTD Training Materials" link located on the homepage under "What's Hot."

Want your own DLC developed? Commanders seeking development of DLC to support ALM should contact the ITDT in McGinnis-Wickham Hall, Fort Benning. Point-of-contact for product development is Dr. Roy Elam, chief of ITDT, 1 Karker St, McGinnis-Wickham Hall, Room W-121; roy.w.elam.civ@mail.mil; (706) 545-8828.

Retired SFC James Ocheske is a training specialist on the MCoE's ITDT, which is in Systems Branch, Training Development Division (TDD), Directorate of Training and Doctrine (DoTD). While on active duty, he served as a 19K armor crewman from 1984 to 2004. Previous jobs have also included electrical-equipment repairer leader, Range Division, Directorate of Plans, Training, Mobilization and Security, Fort Benning, GA; operations sergeant and senior observer / controller / trainer, 1-305th Armor, Camp Shelby, MS; and battalion master gunner, 2-34 Armor, Fort Riley, KS. Mr. Ocheske's military schooling includes the Armor School's Master Gunner Course, Fort Knox, KY. He holds a master's of business administration degree from Columbia Southern University.

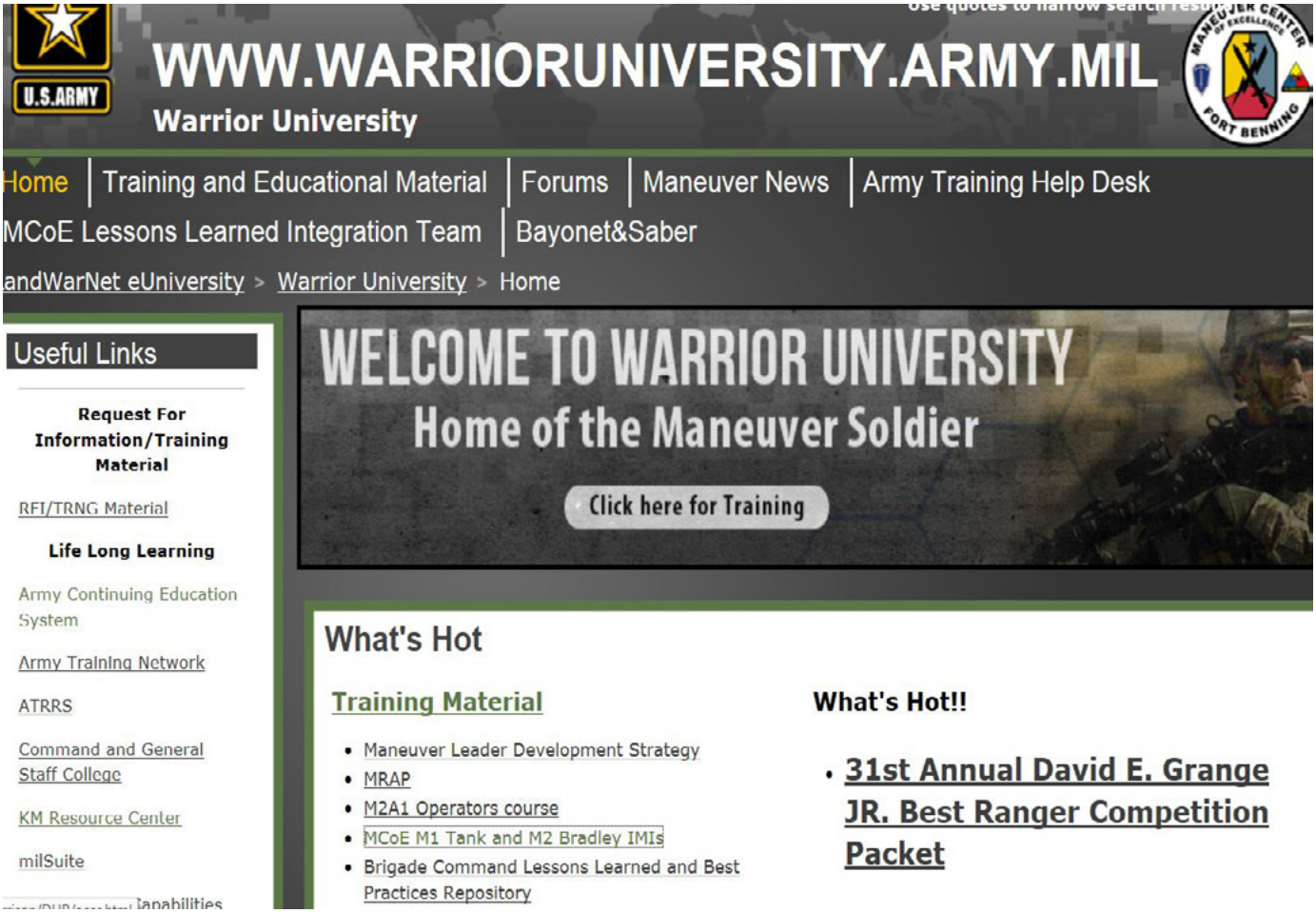

Figure 3. Once on Warrior University's homepage, look under "What's Hot" for IMI products.

Acronym Quick-Scan

AKO – Army Knowledge On-line
ALM – Army Learning Model
DLC – digital-learning content
DOTD – Directorate of Training and Doctrine
GFI – government-furnished information
IMI – interactive multimedia instruction
ISD – instructional-system designer
ITDT – Instructional Technology Development Team
MCoE – Maneuver Center of Excellence

Cavalry Organization and Task Terminology

by MAJ Ryan T. Kranc

On Sept. 11, 2013, GEN Robert W. Cone, former U.S. Army Training and Doctrine Command (TRADOC) commander, signed and approved a staffing memo generated by the Maneuver Center of Excellence recommending a standard naming convention for all cavalry organizations. The renaming initiative eliminated the multiple descriptions and labels of cavalry organizations that served only to confuse rather than to inform the force about the purpose of cavalry organizations.

As the U.S. Army looks to the future concepts of Force 2025 and re-establishes proficiency in the Army core competencies of combined-arms maneuver and wide-area security, it is important to revisit and re-emphasize proper terminology, particularly for cavalry organizations and for both reconnaissance and security tasks. Common understanding and use of a professional vocabulary describing organizations and tasks is essential to providing descriptive and explanatory language guiding the successful practice of mission command. The standard naming convention for cavalry organizations increases uniformity, clarity and efficiency in descriptive language and understanding of the purpose of cavalry organizations.

The approval memorandum streamlined the names of four organizations: cavalry squadrons, cavalry troops, scout platoons and scout squads. The memorandum officially rescinded use of the names and terms *armored reconnaissance squadron*; *reconnaissance, surveillance, target acquisition*; *reconnaissance squadron*; *recce troop*; *reconnaissance troop*; *motorized reconnaissance troop*; *dismounted reconnaissance troop*; and *recce platoon*. By standardizing the names of cavalry units, the Army highlights the unique but uniform requirements and capabilities of all cavalry forces, regardless of composition.

The primary purpose of all cavalry units is to conduct information collection through the execution of reconnaissance and security tasks for unit commanders to identify opportunities to seize, retain and exploit the initiative in close contact with enemy forces and civilian populations. Regardless of whether assigned to an infantry brigade combat team (BCT), Stryker BCT or armored BCT, cavalry formations satisfy the same function to the commander – that is, to develop information and intelligence about the enemy, terrain, civilian populace and infrastructure that informs decisions impacting current and future operations. Use of the terms *cavalry squadron*, *cavalry troop*, *scout platoon* or *scout squad* dictate that despite the materiel composition of the unit, the basic functions of each are the same.

Reconnaissance is defined as "a mission undertaken to obtain, by visual observation or other detection methods, information about the activities and resources of an enemy or adversary, or to secure data concerning the meteorological, hydrographic or geographic characteristics of a particular area" (Army Doctrinal Reference Publication (ADRP) 1-02). Reconnaissance has five forms: area reconnaissance, zone reconnaissance, route reconnaissance, reconnaissance in force and special reconnaissance. Reconnaissance missions determine the answers to information requirements that allow the commander to make informed decisions and employ combat power at the appropriate time and place to enable mission success.

Reconnaissance is a task, a troop-leading procedure (TLP) and a fundamental of security (*ensure continuous reconnaissance*). As a TLP, reconnaissance is required for all operations. As a task, reconnaissance provides answers to information voids and gaps and helps commanders understand and visualize the operational environment. As a fundamental of security, reconnaissance is a continuous imperative that ensures continuous information collection as one of the methods to providing protection and early warning to the protected main body.

Reconnaissance is not equal to surveillance, nor does the shorthand "R and S" mean "reconnaissance and surveillance." Surveillance is defined as "the systematic observation of aerospace, surface or subsurface areas, places, persons or things by visual, aural, electronic, photographic or other means" (ADRP 1-02). Surveillance is an activity used to help accomplish the task of reconnaissance. Too often we incorrectly use the term "surveillance" as a substitute for "reconnaissance," which further confuses units and Soldiers. Reconnaissance is a task accomplished through multiple methods and means, one of which is surveillance.

Security is defined as "those operations undertaken by a commander to provide early and accurate warning of enemy operations, to provide the force being protected with time and maneuver space within which to react to the enemy, and to develop the situation to allow the commander to effectively use the protected force" (ADRP 1-02). Security is the "S" in the shorthand of "R and S." Security is always the first priority of work and a task conducted to provide early warning, protect the main body and allow the commander reaction time and maneuver space creating options, alternatives and opportunities to seize, retain and exploit the initiative through

combined-arms maneuver. Security has five forms: screen, guard, cover, area security and local security. Continuous reconnaissance assists the reaction time and protection aspects of security through information collection and the filling of information voids.

Cavalry squadrons, cavalry troops, scout platoons and scout squads conduct reconnaissance and security tasks to provide their command information to improve decision-making and allow the unit to identify opportunities to seize, retain and exploit the initiative. All cavalry organizations satisfy the same function for their commanders, and though materiel differences separate different types of cavalry units, their function and purpose remains consistent regardless of organizational composition. The TRADOC commander's approval of standardized naming conventions in September 2013 emphasizes the functional similarity of all cavalry formations through standardized labeling from squad to squadron. To execute the Army's core competencies of combined-arms maneuver and wide-area security, leaders at all levels must ensure uniform understanding of the meaning and purpose of the terms *reconnaissance*, *security* and *surveillance*.

Lastly, proper use of professional language is vital to effective application and practice of mission command. Common understanding of our professional terminology achieved through leadership education and development requires local, small-unit development programs and initiatives, individual self-study and institutionalized professional military education to ensure future success. Lack of clarity or common understanding serves only to confuse and affects mission accomplishment.

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Acronym Quick-Scan

ACR – armored cavalry regiment
ADRP – Army doctrinal reference publication
BCT – brigade combat team
TLP – troop-leading procedure
TRADOC – (U.S. Army) Training and Doctrine Command

Developing Mission Focus to Ensure Military Expertise and Esprit de Corps in Army of 2020

by CPT Gary M. Klein and 1LT Christopher P. Harrell

The Army faces a number of challenges as it transitions from a force tempered in counterinsurgency (COIN) operations to an Army fully capable of unified land operations and decisive action. Fiscal constraints and changes in the recruiting environment, including the decreased number of Americans eligible for service,[1] will surely impact the Army. Meanwhile, there are internal challenges the Army and our profession must address, otherwise we risk eroding the ability to fight and win our nation's wars. The greatest challenge the Army will face in the upcoming decade is developing a strategic vision that galvanizes mission focus to maintain our operational and tactical military expertise.

Over the last decade, the Army, its Soldiers and its leaders were motivated to maintain military expertise and combat readiness because of the mission focus that regularly scheduled deployments to Iraq or Afghanistan demanded. As combat deployments decrease in the near-term, the Army will shift its mission focus to other existing or emerging threats through mission-essential task list (METL)-based training.[2] The more realistic and relevant the training environment, the more Soldiers will strive toward achieving individual and collective technical and tactical proficiencies. Each unit's mission focus — a combination of its aforementioned METL and training environment— will help drive disciplined training.

As we transition to an interwar period, the Army faces unique challenges in maintaining an adequate force size and structure, as well as tough, realistic training. Reflecting on similar periods in Army history will help us identify and navigate the challenges of the coming decade. Two excellent historic periods from which the Army can draw insight for the coming decade are post-World War II and post-Vietnam. These two eras are vastly different from each other, and one of the fundamental differences was in the Army's ability to maintain a mission focus during the transition from Vietnam. The challenges the Army is facing as it draws down from conflicts in Iraq and Afghanistan could have outcomes similar to those encountered in these two eras unless the Army develops a strategic vision that provides mission focus to instill military expertise and combat readiness.

Post-World War II

After the Allies declared victory at the conclusion of World War II in 1945, U.S. civilian authorities and the Army shifted their focus toward demobilization. From 1945 to 1947, the Army struggled to stabilize the rapid turnover of personnel, thereby overwhelming its efforts to focus on training, despite indications that a future conflict was possible in Korea.[3] It was not until 1947 that the military was able to begin small-scale joint training exercises similar to those executed in World War II.[4] However, these exercises would fail to prepare the Army for its initial Korean War engagements.

By the end of World War II, the U.S. Army was arguably the strongest Army the world had ever seen, comprised of an astronomical 6 million Soldiers.[5] However, almost immediately after victory, civilian authorities shifted their focus to the demobilization of forces, resulting in 10 understrength divisions with 684,000 Soldiers.[6] These drastic cuts were executed in accordance with the nation's focus on recognizing what it perceived to be an enduring peace. It was not until Congress passed the Selective Service Act (SSA) of 1948 that that Army began to sufficiently address the personnel shortages that would enable it to train and prepare for future missions.[7]

While the Army was stabilizing its endstrength in late 1947, it simultaneously began training exercises to teach new recruits and regain tactical competencies not practiced in the previous two years. It conducted Exercise Seminole in October 1947, combining the Navy's amphibious-landing techniques and the Army's armored tactics. In December 1947, the Army conducted another joint training exercise, this time with the Air Force during Exercise Snowdrop, a battalion-sized airborne maneuver that provided Soldiers and airmen valuable training in deep snow and freezing temperatures. The Army then conducted Joint Exercise Combine III with the Air Force, Navy and Marines, which focused on coordination of bombardments, air support and airborne missions. Finally, Exercise Assembly in May 1948, the high point in the early development of joint training, was a division-size exercise conducted by 82nd Airborne Division and two Air Force troop-carrier groups. This was the first field maneuver at the division level in three years and a first for many of the new recruits.[8]

These exercises would fail to prepare the Army for the Korean War for two reasons. First, most units that would fight in Korea were executing occupation duty in Japan and were unable to participate in these exercises. Second, the units that would fight in Korea had not benefitted from the SSA yet and were still undermanned and ill-equipped.[9] Ultimately, following Task Force Smith's defeat at Osan, Korea, in 1950, the United States had to quickly increase the Army's authorized force levels and refocus on regaining its military expertise to adequately prepare additional units for the Korean War.

The Army had to spend years reconstituting itself following demobilization. The lessons are clear; civilian authorities will demobilize the Army following a war, but the Army cannot lose its mission focus, otherwise we risk being inadequately prepared for future conflicts. Following World War II, joint training exercises had the potential to be the mission focus the Army needed to maintain its military expertise. These exercises emphasized tough, realistic training that included the coordination and simultaneous employment of all three services. Unfortunately, it took nearly three years to begin this training, at which time the Korean War would start in less than two years.

Post-Vietnam

The Army experienced major transitions again following the Vietnam War. However, unlike post-World War II, the Army quickly shifted its training and mission focus to prepare for the Soviet threat in Europe. The publication ***Victory Starts Here: a 35-year History of the U.S. Training and Doctrine Command*** thoroughly describes two significant transition points following the Vietnam War. The first was establishment of U.S. Army Training and Doctrine Command (TRADOC), and the second was its revisions of Field Manual (FM) 100-5, ***Operations***.[10] Both these milestones made significant improvements to training and military development in preparation for future conflicts. These two actions, initially meant to prepare the United States for the Soviet threat in the Fulda Gap, would ultimately generate the tactical force that decisively defeated the Iraqi Army in 1991.

Upon conclusion of the U.S. Army's involvement in the Vietnam War, the Army created TRADOC to standardize and focus the Army's training for and development of future conflicts. At that time, TRADOC was charged with preparing the Army for the increasing Soviet influence across the globe. Amid the Soviet threat, GEN William E. Depuy, TRADOC's first commander, published the new FM 100-5, ***Operations***, recognizing the fact that the U.S. Army needed to be capable of fighting when outnumbered and win.[11] The initial version of FM 100-5 was defensive in nature, due to the extraordinary number of Soviet forces, and focused on the active defense with no consideration of subsequent operations. GEN Donn A. Starry, Depuy's successor, recognized this flaw while serving as V Corps commander in Europe. Along with the help of GEN Edward C. Meyer, TRADOC began revising FM 100-5 to focus on interdicting targets deep in the enemy rear to disrupt the Soviet second echelon by incorporating the U.S. Air Force, thus developing the AirLand Battle-focused FM 100-5, which the Army used until the end of the Gulf War.[12]

Nearly simultaneous with TRADOC's establishment, the Army reorganized itself, establishing the "ToE Army" to standardize deployable units according to the doctrine they were expected to execute. The Army established about 1,200 tables of organization and equipment (ToEs) for deployable combat units and tables of distribution and allowances (TDAs) for non-deployable units, most of which were dedicated to training.[13] The reorganization of TDA units included the creation of the combat training centers (CTCs) – the National Training Center (NTC), the Joint Readiness Training Center (JRTC) and the Joint Multinational Readiness Center (JMRC) – where units would conduct training rotations to be tested on

their military expertise.

This reorganization established TRADOC's Army of Excellence, a title and concept the Army used to describe the Army's force structure until the modular brigade combat team (BCT) transformation in 2006. The implementation of the Army of Excellence set the conditions for AirLand Battle doctrine, institutional training and, ultimately, established a mission focus that set the conditions for the Cold and Gulf wars.

The Army experienced a drawdown in forces following Vietnam as it did following World War II; however, having learned from the mistakes of the previous drawdowns, the Army embraced a smaller force structure that was focused on Europe's defense. While the Army's combat forces focused on training, its research and development divisions created the requisite advancements in military technology. Lessons-learned from the Yom Kippur War of 1973 significantly contributed to the development of weapons and equipment technology. This period invigorated one of the largest modernizations of equipment the Army has ever seen, highlighted by the Big Five: the M1 Abrams main battle tank, the M2 and M3 Bradley fighting vehicles, the Blackhawk and Apache helicopters, and the Patriot air-defense missile. These state-of-the-art weapons would further strengthen an Army focused on the Soviet threat.

The post-Vietnam-era Army made significant improvements that still affect the way the Army operates today. The creation of TRADOC helped synchronize the Army's mission focus and professionalized the way it trained for future conflicts. Multiple revisions of FM 100-5 demonstrated the Army's ability to adapt and ensured it had the best tactics for the Cold War's perceived threats. The addition of the Big Five ensured the Army held technological superiority over the Soviet threat. Significant to our analysis, these three developments were all based on the mission focus of containing the Soviet threat. Although the Army cannot simplify the complex environment of the future into a single threat as we could in the post-Vietnam War era, we should similarly focus on future missions to obtain the same level of military expertise the Army had in the 1980s and 1990s.

Current strategic guidance

The Army has begun crafting a vision for itself post-Afghanistan in its strategic guidance and the evolving operational environment encountered during CTC rotations. The National Security Strategy of 2010 highlighted the Army's near-term completion of its mission in Afghanistan and the need to begin preparing for the full range of military operations.[14] In turn, beginning the same year, the CTCs began executing full-spectrum operation (FSO) / decisive-action training environment (DATE) rotations.[15] These changes and discussions of their impact on training have begun to take place, but based on personal observations, they have yet to be universally recognized or incorporated across the force.

Following publication of the National Security Strategy of 2010, the White House published a second document, ***Sustaining U.S. Global Leadership***. This document expanded on the guidance given in the National Security Strategy by outlining regions of interest and prescribing the armed forces' primary missions. The Joint Chiefs of Staff and TRADOC took the guidance provided in ***Sustaining U.S. Global Leadership*** and crafted two more commonly known documents: ***Capstone Concept for Joint Operations: Joint Force 2020*** and TRADOC Pamphlet 525-3-0***, The U.S. Army Capstone Concept***. These documents outline the Army's required tasks and capabilities; however, they did not synchronize or prioritize the desired capabilities to ensure the Army is capable of fulfilling all the required missions.

Synchronizing and prioritizing capabilities will help ensure the Army is prepared to accomplish all future missions. For clarification, we define synchronizing capabilities as assigning mission capabilities to subordinate organizations to ensure the larger organization is capable of accomplishing all the required missions. Secondly, prioritizing capabilities is defined as rank-ordering the assigned missions to assist subordinate commanders in developing their own METLs. Both synchronizing and prioritizing can and should take place at all levels from the Army G-3 to company commanders as part of the METL development and approval process. Through synchronization and prioritization, senior Army commanders, in coordination with combatant commanders, could then ensure all types of missions are being prepared for in some mixture, while not broadening each unit's mission focus unnecessarily.

By not synchronizing or prioritizing the desired capabilities, the Army's current strategic guidance makes the Army susceptible to two negative scenarios. Without synchronizing desired capabilities across its units, the Army may find itself unable to accomplish a required mission if no commanders choose to prepare for a mission capability prescribed by senior civil or military leaders. In the absence of more specific guidance, tactical commanders at division and brigade will develop METLs and prioritize training independent of each other, allowing for the possibility that all units prioritize the same capabilities – therefore neglecting the other desired capabilities.

The second scenario is one in which units fail to prioritize capabilities. If the Army and its units do not prioritize its competencies through METL development, it consciously chooses not to focus its training. Mission focus is a key component to Soldiers' motivation and, subsequently, esprit de corps. In this regard, the current strategic guidance requires tactical commanders to make decisions regarding priorities and METLs that may have strategic consequences.

Current CTC environment

The Army made the strategic decision in 2010 to begin executing DATE rotations at the CTCs to prepare units for combined-arms maneuver and the full range of mission sets in a complex environment. Over the last 10 years, most CTC rotations were mission-readiness exercises focused on ongoing overseas contingency operations (e.g., COIN operations, battlespace integrators and/or security-force advise-and-assist teams). However, since then, all three CTCs have conducted DATE

rotations, and they are increasing in frequency as we continue to reduce troop levels in Afghanistan.[16] The challenge in preparing for these rotations is to ensure home-station unit training and the CTC training share a realistic and relevant mission focus.

A review of published feedback following DATE rotations reveals a number of challenges pertinent to our shift in mission focus. Although the lessons-learned have not yet been shared universally across the force, leaders have begun sharing these lessons through publications including those highlighted following. The 3rd Brigade, 82nd Airborne Division, executed the first DATE rotation at JRTC in 2010, and LTC Brian K. Flood *et al* captured some of their challenges in ***ARMOR***.[17] Flood's reconnaissance squadron was the first to execute decisive action at a CTC since the modular BCT transformation following the beginning of Operation Iraqi Freedom, and he made a number of suggestions for the employment of ground reconnaissance assets; synchronization of intelligence, surveillance and reconnaissance assets; and future modified ToE considerations.

A subsequent rotation by 1st Brigade, 4th Infantry Division, resulted in more feedback particularly relevant to our discussion of mission focus. In his after-action report, MG Joseph Anderson wrote: "The [opposing force] employed at CTCs replicate predominately conventional threats provided with matching capabilities across all warfighting functions, including [unmanned aerial vehicles], rotary wing, fixed wing … jamming, cyberattack and a myriad of accepted asymmetrical threat capabilities (improvised explosive devices, insurgents, high-end [anti-tank] systems, etc.). However, modular BCTs were never designed to combat this myriad of threats simultaneously."[18]

This critique highlights the hybrid threat the Army is likely to face in the future. More importantly, it challenges us to reassess our current task organizations, training and equipment to ensure we are capable of meeting this complex environment in the future. Transitioning from an Army experienced in COIN to an Army proficient in decisive action will not be easy, and we must be mindful in how we prepare ourselves for this transition. Many of the core combined-arms maneuver proficiencies required in decisive action have degraded over the last 10 years, and on top of that, the threats we are expected to face have become more complex.

Guidance and training have a tremendous impact on military expertise and the esprit de corps of our Army. As outlined in Army Doctrine Publication (ADP) 1, ***The Army***, a key component of esprit de corps is mission focus, which subsequently inspires discipline and motivation in our Soldiers. The transitions that will occur in the coming decade are going to be significant and challenging. To do so successfully, we must develop METLs and communicate a vision that ensures our Soldiers understand their purpose and know that they are being provided the conditions conducive to our evolution. There are many different components to developing the Army's capacity to win our nation's wars in a complex environment, and a vital part of this must be developing a mission focus.

Proposed mission foci

As the Army transitions from Afghanistan, its leaders must establish a mission focus to drive military expertise and inspire esprit de corps. There are many good courses of action to develop mission focus within our units, including regional alignment, focusing on our core competencies such as combined-arms maneuver, or focusing on enabling competencies including entry operations.[19] Senior Army Leaders have mentioned all these ideas within the last few years, but the challenge is crafting the desired outcomes — as defined in ***Sustaining U.S. Global Leadership*** — into a comprehensive vision that provides guidance and mission focus for all units.

Chief of Staff of the Army GEN Raymond T. Odierno laid out one solution to the question of mission focus in 2012 when he outlined the concept of regionally aligned forces — including brigades, divisions and corps. The plan is for regionally aligned BCTs to conduct an Army Forces Generation (ARFORGEN) training cycle culminating in a DATE rotation at a CTC. During the ARFORGEN cycle, the BCT could be alerted to deploy in support of their assigned regional command (e.g., U.S. Central Command, U.S. Africa Command, U.S. Pacific Command, etc.) as an advise-and-assist force to provide humanitarian support, or as a stabilization force, etc., as requested by the combatant commander and ordered by the commander in chief.[20] This solution by its very nature would include a strong mission focus based on regional challenges, contingency plans or threats in its assigned geographic region. The training cycle would include at least rudimentary education on regional events to increase our understanding and appreciation of the operational environment, thereby further enhancing mission focus and the applicable military expertise.

Another potential mission focus is entry operations. This is another very real requirement mentioned in ***Sustaining U.S. Global Leadership***. LTG Frank Helmick, then the commanding general of XVIII Airborne Corps, highlighted at the 2010 Maneuver Conference that after 10 years of conflict, proficiency in entry operations (airborne and air assault) has degraded significantly. Although entry operations comparable to Normandy are unlikely in the future, similar concepts have been used multiple times over the last decades: in 1983 for Operation Urgent Fury in Grenada, in 1989 for Operation Just Cause in Panama, in 2003 when 173rd parachuted into Iraq as part of Operation Iraqi Freedom; and in 2010 as part of Operation Unified Response following the catastrophic earthquake in Haiti. The units that specialize in these tactics would be well served to re-master these highly complex operations, and they could do so in concert with the Army's global-response-force tasking. Re-establishing proficiency in entry operations would not only provide mission focus but would regenerate esprit de corps through a renewed appreciation of these units' storied histories and unique skillsets.

Finally, as it did following Vietnam, the Army is likely to focus on re-establishing our dominance in combined-arms maneuver. However, there are two challenges we must address. First, as

an Army we must not neglect the requirement to maintain our other core competency, wide-area security. Although current strategic guidance places minimal emphasis on protracted stability operations – wide-area security – there is no guarantee we can avoid becoming involved in them in the future. Second, within the anticipated complex operational environment, we must ensure we enhance mission focus through realistic and challenging training environments. The Army recognizes the modern global operational environment is very complex, so we must be capable of addressing the myriad of threats.

We must define our mission focus soon, otherwise we risk our military expertise atrophying in a global environment that could require the Army's employment sooner than we would like, as Task Force Smith encountered. We must also recognize that the entire Army does not need to share a singular mission focus as we chose to do following the Vietnam War. After that conflict, most Soldiers and leaders consciously ignored the lessons we learned fighting a COIN as a stabilization force and focused solely on combined-arms maneuver. We should not risk the inability to execute unforeseen or undesired mission sets, as we did in Korea, and the initial phases of the Iraq and Afghanistan wars. Given the vast requirements laid out in ***Sustaining U.S. Global Leadership*** and the potential solutions reviewed here, the Army should synchronize and prioritize capabilities across the force. By doing this, we can preserve mission focus at the tactical level but remain adaptable to the strategic challenges of the future.

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[19] Ibid.

[20] ADP 1 defines the Army's core competencies to be combined-arms maneuver and wide-area security, while the enabling competencies are 1) support security cooperation, 2) tailor forces for the combatant commander, 3) conduct entry operations, 4) provide flexible mission command, 5) support joint and Army forces, 6) support domestic civil authorities, and 7) mobilize and integrate the Reserve Components.

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Acronym Quick-Scan

ADP – Army Doctrine Publication
ARFORGEN – Army Forces Generation
BCT – brigade combat team
COIN – counterinsurgency
CTC – combat training center
DATE – decisive-action training environment
FM – field manual
FSO – full-spectrum operations
HHT – headquarters and headquarters troop
JMRC – Joint Multinational Readiness Center
JRTC – Joint Readiness Training Center
METL – mission -essential task list
NTC – National Training Center
SSA – Selective Service Act
TDA – table of distribution and allowances
ToE – table of organization and equipment
TRADOC – U.S. Army Training and Doctrine Command

Ask the Right Questions, and You'll Get a Better Answer:

How Training in the Philosophy of Mission Command Will Enable Our Commanders to Get Staffs to Get It Right the First Time

by CPT Anthony M. Formica

In his 2012 book, ***Bleeding Talent***, economist Tim Kane uses the example of retired GEN David Petraeus to illustrate how the global war on terrorism has exposed a failing in the Army's leader-development systems. Kane states that Petraeus' relative demotion from U.S. Central Command commander to commander of the United States' effort in Afghanistan in 2010 "is something to interpret very positively for the man and very negatively for the institution."[1] Former Marine officer Renny McPherson similarly asks why no other generals were available to take the top job in Afghanistan. McPherson concludes that the U.S. military "had failed to produce enough leaders like Petraeus."[2] Both these men use the Petraeus example to argue that the Army needs to improve its capacity to grow top leaders to win the nation's wars.

This analysis focuses too narrowly on the top level of command. The fact that the Army's emphasis on waging modern war is almost entirely concerned with its highest-ranking commanders speaks more ill of the profession than does the alleged scarcity of general officers qualified to handle top commands. In an organization designed to deploy anywhere in the world and conduct unified land operations (ULO), it should not take a four-star general with a doctorate in international relations to figure out that providing basic services to a district of Baghdad reduces insurgent violence.

For the Army to develop and sustain a high degree of situational understanding while operating in complex environments against determined, adaptive enemy organizations, it must make its field-grade commanders as effective as its flag officers. It can accomplish this by working to fulfill two training goals. First, the Army needs to train its commanders to drive the operations process across all aspects of ULO. Second, the Army must train its staffs to implement commanders' intent universally well across ULO to increase commanders' ability at every level to make decisions in any operational environment. Achieving these two endstates will greatly increase the Army's ability to not only seize and retain the initiative in future conflicts but, more importantly, will empower subordinate commanders to gain the information they need to exercise disciplined initiative and exploit the windows of opportunity that characterize modern military operations.

What is supposed to happen

Uncertainty has always been a factor in military operations, but the battlefield of the future will only be more uncertain and complex. The Army acknowledges this in its Army Doctrine Publication (ADP) 6-0, ***Mission Command***, stating, "[M]ilitary operations are complex human endeavors characterized by continuous, mutual give-and-take moves and countermoves among all participants."[3] The interaction among friendly forces, the enemy and civilian groups on the modern battlefield produces results that "are often unpredictable – and perhaps uncontrollable."[4]

To respond to these exigencies, the Army has promulgated the philosophy of mission command, which ADP 6-0 defines 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 [ULO]."[5] Commander's intent enables disciplined initiative, and this is in turn dependent on commanders, subordinate leaders and their staffs achieving and maintaining a common understanding of their operational environment. While such understanding is difficult to achieve in modern war, staff exist to mitigate that difficulty, specifically by supporting commanders "in understanding situations, decision-making and implementing decisions throughout the conduct of operations."[6] One of the most critical responsibilities of a staff is to "[study] the operational environment, [identify] information gaps and [help] the commander develop and answer information requirements."[7] The Army considers information to be "good" if it is accurate, timely, usable, complete, precise and reliable.[8]

Commanders are expected to drive the operations process that characterizes staff work to generate commander's critical information requirements (CCIR). The organization should subsequently focus its intelligence-collection and information-generation efforts on answering the CCIR as they apply to friendly and enemy forces. The CCIR-generation process presumably takes into account both the traditional offensive and defensive characteristics of ground warfare and the ambiguities inherent in stability operations.

Staffs then devise methods for answering the CCIR to allow the commander to make decisions and to enable disciplined initiative for his junior leaders. Typically, this staff work takes the form of wargaming in the military decision-making process (MDMP) and allows the staff to develop a rolling estimate of the situation facing the organization. Implied in this staff responsibility is the staff's ability to creatively identify information gaps to meet both the commander's CCIR and intent. Also implied is the expectation that the robust human talent inherent in staff organizations will both produce "good" information and cause staffs to constantly challenge their own understanding of the operational picture to keep abreast of the complexities of modern warfare. All this activity ultimately allows Army organizations and commanders to develop and maintain the situational understanding necessary for making decisions and seizing the initiative.

What actually happens

My experience — and that of many of my peers — indicates that most Army organizations practice in a suboptimal manner the principles of mission command previously specified. Army commanders tend to embrace their responsibility to lead and direct their organizations but largely do not fully comprehend how their responsibility to understand, visualize, describe and assess drives the process that enables them to make decisions.

Part of this problem is cognitive. ULO requires that commanders balance high-intensity operations (offensive and defensive operations) with stability operations to win the nation's wars.[9] Most Soldiers quickly concede that most of the Army's activity in the war on terrorism focused on stability operations, the subset of ULO concerned with "activities conducted outside the United States in coordination with other instruments of national power to maintain or re-establish a safe and secure environment."[10]

If a sizeable portion of the Army's commanders understand that ULO requires a proper mix of high-intensity and stability operations, they have not demonstrated an equal understanding of applying mission command across all ULO domains, particularly where commander-staff coordination to produce meaningful CCIR is concerned. Staffs engaged in the war on terrorism conduct solid MDMP for high-intensity operations, such as battalion-sized air assaults into enemy strongholds, because this exercise is drilled into Army staff officers and the CCIR for high-intensity operations are relatively straightforward.

Wargaming and developing CCIR for stability operations usually require creative problem-solving and a more nuanced understanding of the operational environment, and it is here where many of today's junior captains – and tomorrow's company commanders – believe we need to focus our efforts on improving. Stability operations both have different objectives and require different decisions from commanders than do high-intensity operations, implying the need for different information. Identifying the composition, disposition and strength of an enemy mechanized battalion, and then identifying how to seize the initiative, is taxing but ultimately easy work for well-trained professionals. Figuring out how to bring stability to an Afghan district is seemingly more complex because it involves a host of variables that are harder to quantify than the number of enemy T-72 battle tanks, and because most units' commanders and staffs have not cognitively separated stability operations' CCIR and MDMP processes from high-intensity operations.

In spite of the obvious differences between them, most commanders allow their staff MDMP process to produce CCIR for stability operations that are identical to the CCIR they would produce for high-intensity operations. It is common for platoon leaders in Afghanistan to spend most of their time attending shuras, negotiating contracts for basic services or assessing the progress of the rule of law in their area of operations (AO). Nevertheless, CCIR for all these stability operations tend to read like the CCIR for an attack to seize an enemy stronghold: how many AK-47s were encountered, where is the enemy placing his improvised explosive devices and how many military-aged males are in the AO? The commander-staff interaction process does not typically account for the information-requirement discrepancies between high-intensity operations and stability operations.

This presumes that staffs constantly conduct MDMP and produce CCIR for their commanders during stability operations. More often than not, commanders exercise mission command to produce valid CCIR for high-intensity operations but fall back on static-state operations and quarterly line-of-operations reviews to maintain their

situational understanding in stability operations. Staff work rapidly degenerates into a complacent model of checking the box for weekly decision and command-and-staff briefs, and staffers cannot help but come to see their jobs as undemanding. As a result, organizations get staff officers who do not try to devise creative ways to overlay tribal affiliations with economic data and levels of violence in a battalion area of responsibility.

Another part of the problem is cultural. Simply put, the Army as an organization tolerates the notion that staffs are not the place for commanders to send their talented officers and noncommissioned officers (NCOs). This defies both history and math.

The denigration of staff work defies history because great armies have typically concentrated phenomenal talent in their staffs to achieve decisive results in war. Political scientist Samuel P. Huntington points out that one of the reasons the relatively small and weak state of Prussia was able to transform itself into a world-class military power in the span of a generation was through its development of a professional staff system.[11] Huntington notes that service on the Prussian General Staff "was the most coveted duty in the German army." Also, service on the General Staff came to signify an officer's possessing the "highest standards of knowledge, competence and devotion to duty."[12] Huntington also strongly insinuates that the French army's lack of an equivalent staff system strongly contributed to their defeat in the Franco-Prussian War of 1870.[13]

The denigration of staff work defies math because most of an officer's career is spent on staff. In a typical 20-year career, an infantry officer will spend perhaps four years leading Soldiers as a company-grade officer and perhaps two more as a battalion commander. He will spend a solid 70 percent to 75 percent of his remaining 15 years in one staff position or another. As a result, the Army needs to consider whether it wants to continue to allow a mentality that leads its officers and NCOs to consider their work as important only 25 percent to 30 percent of the time.

This cultural perception becomes problematic when it influences career decisions for promising leaders. The perception that assigning promising leaders to staff wastes their potential leads most commanders to turn their staffs into repositories of substandard performers. Commanders who have avoided staff work as best they can, meanwhile, are less likely to know how to properly wield a staff once they are given one. These cultural and cognitive factors produce, in the end, a decreased ability by the Army to fight and win the nation's wars.

The proof of this is in the prolonged execution of the war on terrorism itself: the Army has performed superbly in executing high-intensity operations against insurgent enemies but still grapples with creating and sustaining the situational awareness necessary for successfully executing stability operations.

Commanders have created shared understanding for high-intensity operations but not for stability operations. They articulate commanders' intent very well for traditional offensive and defensive operations but tend to allow the information requirements for waging stability operations to be recycled versions of their intent for high-intensity operations. Subordinate leaders are thus left with prolonged periods in stability operations where, through a combination of a lack of information and guidance, they are unable to exercise disciplined initiative to take advantage of windows of opportunity.

How to fix it

None of this is an indictment of staff personnel or commanders. The Army has demonstrated over the past 13 years of persistent conflict that it is very good at producing highly trained and highly educated leaders to meet its organizational needs. There is also scant indication that the Army is willing to "forget" the lessons of the war on terrorism as they pertain to stability operations: stability operations figure prominently in all major Army doctrine publications, constitute dedicated blocks of instruction in most major Army career qualification courses, and are incorporated into the training plans of most Army maneuver units. Success in tomorrow's wars requires translating the profession's experience in more than a decade of ULO to training mission-command-related best practices into all echelons in all units.

In mission command, the commander is the central figure. The Army needs to make sure that its commanders understand this means they drive the operations process in all aspects of ULO, and that the operations process characterized by commander-staff interaction pertains equally to ULO's high-intensity and stability-operations components. Moreover, the operations process needs to be distinctly tailored for high-intensity and stability operations.

The most basic change the Army can make to address this problem is to introduce the concept of *relevance* to its doctrinal characterization of information. A commander who is concerned with the role of relevant information in enabling decision-making will drive a staff to produce and answer relevant CCIR for all aspects of ULO. A commander who does not will be content with recycled products that may have no bearing on his current operational situation.

Another important doctrinal point for the Army to emphasize is the various components of effective CCIR. High-intensity operations tend to preoccupy staffs with the enemy-centric aspects of CCIR, also known as priority information requirements (PIR). However, in stability operations, friendly forces' information requirements (FFIR) are often as — if not more — valuable in helping commanders make decisions as are enemy-focused PIR. The ability to answer FFIR asking if host-nation government officials' policies complement military operations in an AO allows commanders to decide how they will try to shape their relations with those officials in the future through military operations, Commander's Emergency Relief Fund projects or wide-area security patrols. Good commanders drive their staffs to produce holistic CCIR so that they, and their subordinate leaders, are empowered to make more numerous and effective decisions across the full spectrum of ULO.

The human talent to conduct the analysis required for producing relevant and holistic CCIR for stability

operations is more than present at every echelon of command. Today's Army employs graduates of the world's premier universities and veterans of our longest war with near-limitless experience in fighting both the high-intensity and stability-operations fights. Moreover, our staff officers and commanders understand the basic informational elements inherent in stability operations such as counterinsurgency: 10 years of being drilled in population-centric operations, trend analysis and cultural understanding has ensured this. These skills must be applied to MDMP as consistently in stability operations as corresponding skills are applied to the MDMP for high-intensity operations, and with the same professional rigor to produce meaningful CCIR.

Commanders should not be satisfied with staff work that generates identical products for all ULO components. Instead, commanders must insist that their staffs use their knowledge, education and technology to produce the information they need to prevail in the complex environments that characterize stability operations.

This task will be greatly facilitated by staffs being drilled in the specific skill-sets that enable successful MDMP across all aspects of ULO. Most staff officers are familiar with basic statistical methods by virtue of their commissioning sources, and most staff NCOs are familiar with the informational requirements for stability operations. It would be worth commanders' time to hold MDMP drills with their staffs that are specifically focused on applying the information-collection techniques and data-refinement procedures that made retired generals Petraeus and Peter Chiarelli the celebrated strategists they are.

The doctrine, talent and experience to achieve better situational awareness is present across the force. What the Army needs now to fully realize the endstate expressed in this article is education and training. Focused education on mission command and intent orders at captains' career courses and Command and General Staff College — combined with combat training center (CTC) decisive-action rotations — helped the Army master the essentials for waging high-intensity operations in the 1980s and 1990s. MDMP for high-intensity operations is easy for staffs today precisely because of this organizational experience; the same experience can and should be replicated now for the totality of ULO. The Army's implementation of decisive-action rotations is the right step in this direction. Like the watershed of experience gained from initiation of the CTC program in the '80s and '90s, decisive-action rotations — staffed by cadre with a doctrinal foundation in mission command and personal experience in waging all aspects of ULO — should force Army units to perform well under all the conditions of the modern battlefield.

Finally, the Army must aggressively attack the stigmatized perception of staff work. It must do this to ensure that staffs become net attractors of talent, and to ensure that personnel comprising staffs understand the importance of their work and that they constantly seek to apply all their talents to furthering the organization's effectiveness. Skeptics may claim that it is impossible for an organization like the Army, where the primary effort lies in leveling lethal force against armed enemies, to make staff work seem glorious. Those critics miss the larger point, however. The goal is not to make staff work glorious; it is to make its practitioners aware of the importance of their function and to be motivated with pride in that importance. The Army has demonstrated that it has the ability to institute cultural shifts across the force before, whether on the strategic level, as seen in its eventual embrace of stability operations, or on the small-unit level, as seen in the adoption of physical-readiness training doctrine. The same process must now be applied to the force's perception of staff work. Doing so will ensure that the Army's units are primed with the motivated leaders it needs to win tomorrow's wars.

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Acronym Quick-Scan

ADP – Army doctrine publication
AO – area of operation
CCIR – commander's critical information requirements
CTC – combat training center
FFIR – friendly forces' information requirements
MDMP – military decision-making process
NCO – noncommissioned officer
PIR – priority information requirements
ULO – unified land operations

Fostering a Culture of Mission Command

by CPT David E. Blanton

Commanders use mission orders to communicate intent to subordinates. In turn, subordinate leaders frame their own mission orders around the commander's intent and exercise disciplined initiative to solve problems, seize the momentum and accomplish the unit's mission.

While the science of developing mission orders is consistently taught and refined throughout the Army's training domains, leaders struggle with training subordinate leaders in the art of exercising disciplined initiative to allow the best possible decision to be made on the battlefield. To enable leaders to more effectively train their subordinates in the foundations of mission command, we must understand what mission command is, why it is still relevant and, finally, how to apply mission command in the organization.

Let's start by analyzing the theory's core principles.

What is mission command? Many young leaders in the Army, including myself at one point, understood mission command purely as a warfighting function that provides a leader with a scientific system of mission orders used to communicate intent to subordinates. Then, as subordinate leaders execute their assigned tasks, mission command becomes a complex system of technological and redundant reporting procedures specified by a higher headquarters to understand conditions from the subordinate leader's standpoint on the ground.

In reality, mission command is something inherently misunderstood by young leaders in the Army, in part because the term and definition don't synchronize in their minds. Most Army leaders understand that in the absence of orders, they must make a decision to maintain the momentum of the mission; the issue, however, is how to make the best possible decision within the commander's intent.

Mission command is defined in Army Doctrinal Publication (ADP) 6-0 as "the exercise of authority and direction by the commander [leader] using mission orders to enable disciplined initiative within the commander's [leader's] intent to empower agile and adaptive leaders in the conduct of unified land operations."[1] Most Army leaders can agree mutual understanding of this concept but universally ask themselves the same question: "How can my organization become better at training and embracing the principles of mission command?" First, we need to look at the history behind the doctrine.

Mission command, or *Auftragstaktik,* has its theoretical seeds rooted in Prussian, post-Napoleonic military ideas. Originally proposed as an idea by GEN Gerhard Von Scharnhorst in the early 19th Century, *Autragstaktik* focused on subordinate leaders making decisions based on initiative and analysis of events happening on the battlefield rather than deferring those decisions to higher commanders and losing the initiative of the operation.[2]

Scharnhorst began developing and teaching this principle at the turn of the 19th Century as an instructor at the German military academy in Berlin. His pupils included none other than Carl Von Clausewitz and Helmuth Von Moltke. Both these military theorists furthered the idea of *Auftragstaktik* and broadened the concept's institutional reach not only to the officer corps, but also to the noncommissioned-officer corps. The framework was instituted and created a cultural shift in the German army from the stringent, orders-driven and rigid-decision structure of the Prussian army of the Napoleonic Wars to a more fluid, free-thinking and initiative-based structure of the German army of the 20th Century. This type of decision-making structure was unique and cutting-edge for any military in the world at that time.[3]

Von Moltke once wrote of *Auftragstaktik*, "The advantage of the situation will never be fully utilized if subordinate commanders wait for orders. It will be generally more advisable to proceed actively and keep the initiative than to wait to the law of the opponent."[4]

The U.S. Army adopted the mission-command principles to provide itself with a comparative advantage against the Soviet threat in Western Europe. Based on German success in World War II and the realization that the United States would likely fight against a numerically superior, near-peer threat like the Soviet Union, the new U.S. doctrine called "AirLand Battle" was developed by the U.S. Training and Doctrine Command commander, GEN Donn A. Starry, in the early 1980s to replace the "active defense" doctrine used since 1976. "AirLand Battle" was published in 1982 and revised to include operational art in 1986. The new doctrine placed a premium on a qualitative approach that was designed to "outthink" Soviet forces using our competitive edge in the training of the human element rooted in mission command to disrupt the enemy's decision-making process, or the *observe, orient, decide and act* loop.[5]

Why is mission command still relevant on the modern and future battlefield? As Army leaders, we ask ourselves, "Why is a leader decision-making process developed in 19th Century Prussia still relevant today or in the future?" Whether one believes the U.S. Army will continue to combat a decentralized and non-conventional enemy, a peer or near-peer nation-state, or a hybrid of both, mission command will continue to remain relevant in the current and future battlefield because it is inherently human and must be trained to be applied correctly and with sound judgment.

Mission command is intrinsically based on art, not science; therefore, a technological approach to command that

allows a computer using mathematical algorithms to make decisions in the absence of orders does not take into account the human factor necessary to take an exponential amount of variables into consideration instantly.

Some may wish to offer a different technological solution than a so-called super decision-making computer, in turn arguing for the implementation of more sensor and battle-command systems that would allow higher commanders to supplement or even usurp the decision-making authority of subordinate leaders on the battlefield. These technological solutions have three fallacies:

- First, when the U.S. Army fights against a near-peer or peer threat, how can we guarantee that the networks that transmit sensor and command-and-control information will remain intact to allow centralized commanders to make those decisions? The cyberthreat on the future battlefield is a real threat that should be taken into account at all levels of war.
- Second, if an enemy is able to harness similar technological capabilities for battle command and sensor systems on the battlefield — or even worse, contribute false information into our networks — what will allow our force to gain a competitive advantage against our foe?
- Third, many times the junior leader understands the cultural and historical trends in his operating environment much better than a higher-level commander is able to, as our recent experience while fighting a decentralized, non-nation state enemy has shown us.

Mission-command technology, like radio and digital communication, should be used to augment and enhance the human decision-making capability, not supplant it entirely. For these reasons, mission command remains a critical concept that must be trained and embraced by all Army leaders.

As a leader, how can I foster the application of mission command in my organization? The concept of mission command is commonly misunderstood by many Army leaders. Leaders must foster an environment that allows their subordinates to apply the mission-command principles and make initiative-based decisions based on the enemy situation and in the absence of detailed guidance. While a leader is "responsible for everything that happens and does not happen in his organization," this idea sometimes drives organizations with both experienced and inexperienced leaders to situational paralysis because that leader is either unwilling to make a decision or to allow his subordinates to make intent-based decisions. Many times a leader takes these actions and restricts mission command, believing a failure of the organization would be tied to the failure of that leader as well as his overall success and competency.

Changing the culture in an organization that's comfortable operating in this manner is neither a quick or linear process. Leaders at all levels can adapt an organization to believe in and practice mission command by creating a universal understanding of the concept, developing trust with subordinates and fostering a culture that enables mission command.

To drive an organization to change its operational culture, a leader must first create a universal understanding of the concept. The Army enables leaders to create this understanding in a few ways, including instruction of the theory of command in all its institutional-training domains, as well as publishing doctrine like ADP 6-0 as a framework to explain the theory.

Leaders who want to drive organizational change should use a second Army training domain, self-development, to further understand the conceptual roots of mission command. Once a leader develops a mastery of mission command, he should then communicate his understanding to his subordinates.

Many Army leaders accept that creating a universal understanding in an organization of mission command is difficult and takes personal commitment. As a tank-platoon leader, I found this was most easily accomplished by allowing my subordinate leaders to directly assist in my leader-planning scope and process at certain times. For example, instead of personally planning a simple event like an M-9 pistol range that my platoon was assigned to coordinate for company training, I used team and squad leaders in my organization to conduct troop-leading procedures for the training event as a collaborative-planning group under my instruction. Later, they would execute and refine the event based on the intent they developed.

By instructing these junior leaders in my platoon on tasks including conducting a leader's reconnaissance, writing an operations order, preparing a risk-management worksheet, developing an intent statement and conducting a rehearsal, I was able to teach my junior leaders not only leader tasks to use in their teams and crews, but also about considerations that were important to our entire platoon and the way I wanted them to think when we conducted a mission as an organization. With this interaction, my leaders and I were able to develop a shared understanding, using constant dialogue and a culminating after-action review, on the platoon-level operations process that served as the foundation for more complex situations in the future. With this knowledge, my junior leaders have a greater ability to conceptualize mission orders and use disciplined orders to accomplish missions given to them.

Another effective technique I used as a company commander to create understanding of mission command forced platoon leaders and Bradley vehicle commanders to seize the initiative of a tactical scenario under simulated conditions in the Close-Combat Tactical Trainer (CCTT). Developing scenarios that allow platoon leaders to fight past the objective and seize the initiative of an entire operation requires a great deal of in-depth preparation as well as the ability to communicate the conceptual situation of the battlefield environment from both the enemy and friendly perspectives. Using the battalion S-2, company intelligence-support team or company executive officer to develop the enemy situation and actively fight the enemy element in CCTT against the friendly platoon leader allows the platoon leader to make timely decisions based on the company intent and a constantly changing enemy situation.

For example, once a platoon moving on the offense completes its actions on the objective and begins consolidation and reorganization, the tactical scenario typically ends. Instead, leaders could present the platoon with a visual cue of a retrograding main body in an adjacent maneuver corridor in the area. Evaluate what actions the platoon takes based off the intent given from the company order. Does the platoon acknowledge and understand the enemy formation moving? Does the platoon leader maintain contact with that formation? Does he attempt to affect the retrograding enemy? Similarly, in the identical consolidation and reorganization scenario, present the platoon leader with visual contact of the enemy's support zone or logistics elements and evaluate his actions.

Although these scenarios may sound simple, many leaders may lack the conceptual understanding of the scenario or find themselves in a decision-making paralysis of information overload.

Secondly, developing trust between leaders and subordinates is one of the most important aspects of successful integration of mission command into an organization. Most leaders can agree that subordinates need to know that their leaders trust their decision-making and conceptual abilities. Developing trust between leaders and subordinates is often the most complicated part of developing a cohesive team that is grounded in mission command. Trust cannot be attained by leaders through grand gestures; rather, it must be developed over time using consistent behavior that earns respect.

A critical piece of developing trust in an organization is counseling. Counseling subordinates not only sets the foundation of expectations from the leader to his subordinates, but it also sets the tone for what a junior leader can expect from his senior leader. Counseling direct subordinates is incredibly important, but counseling subordinates to the lowest level possible is critical to developing trust.

"Counseling" can take many forms. I consider counseling everything from a prepared vision and counseling form in a sterile environment between a platoon leader and platoon sergeant all the way to sitting on the back deck of a tank for 20 minutes talking with the newest driver in my tank platoon who just arrived from basic training. The latter, in my opinion, is just as important as the former in developing trust in my organization. If Soldiers and junior leaders believe their leaders truly care about them, their family, their hobbies, their goals, etc., a leader will likely have an easier time achieving the level of trust needed in an organization to allow the unit's leaders to trust one another and use mission command in war.

The final element critical to developing an organization that practices mission command is fostering a culture that enables mission command. Developing a culture in an organization is one of the toughest tasks a leader is charged with. This can often take an immense amount of time and effort, especially if radical change is needed. The most important piece of developing a culture that fosters mission command is for an organization from top to bottom to share in its successes and failures as one. No leader in an organization should ever believe his individual success or failure was the most critical decision in whether the organization achieved its goals. The next time a leader is placed in that same situation in combat, he may feel handcuffed or restrained into mistakenly believing he is the single point of success or failure of the entire operation. This idea would likely force that leader to make a decision based on outside emotional factors rather than his understanding of his higher commander's intent and the current situation and problem presented to him.

At the same time, subordinates need to understand that leaders entrust subordinates to take control of the situation and make the best decision possible. I use the following saying: "Fight the problem, don't let the problem fight you" to express this to my subordinates. This idea should empower subordinates to take an active and forward-leaning approach rather than a passive and reactive stance to the problems and opportunities presented to them.

Lastly, subordinate leaders need to understand to use doctrine as a framework to make a decision to retain the initiative and exploit the enemy's weakness. Subordinate leaders should understand that a leader strays from doctrine because he knows what doctrine says, not because he is ignorant of it. As leaders, we empower subordinates to make the best decisions for their organizations based on training, but it is critical they understand the doctrinal approach to accomplishing a given mission.

In conclusion, many leaders in the Army today do not understand mission command, or even worse, are unwilling to allow subordinates the freedom to make decisions using disciplined initiative. Although it was developed more than 200 years ago, mission command will remain relevant in the future of war. Mission command can only be harnessed if leaders set the conditions for its implementation and success by creating a universal understanding of the concept, developing trust with subordinates and fostering a culture that enables mission command.

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Notes

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Acronym Quick-Scan

ADP – Army Doctrinal Publication
CCTT – Close Combat Tactical Trainer

Elite Mechanized Formations in an Age of Expeditionary Operations

by 1LT Kier Elmonairy

As recent events in Syria and elsewhere demonstrate, the need for a military ready to respond to contingencies on short notice will not subside in the near future. While the particulars of a given conflict are subject to change and uncertainty, what will not change is the solemn obligation of the military to fight and win the nation's wars. In a future conflict, America may not have the luxury of fighting from afar with missiles and drones, and may be instead required to put "boots on the ground." The Army and the Armor Branch in particular have a critical role to play in preparing for this future.

This article will discuss a prospective organizational scheme for such a formation. I will also cover how the formation would expand the portfolio of capabilities available to policy-makers in contingency operations; the role of such a formation in conventional conflicts; the potential for the unit to serve as a laboratory for advanced armor and cavalry tactics; and the unit's ability to act as platform on which to develop an Armor Branch-specific leadership course and morale-building flagship formation for the branch.

Elite formation

To provide a meaningful contribution to the joint team's ability to win the nation's wars in an uncertain future, Armor Branch must focus on developing capabilities and formations that increase the force's flexibility and adaptability. Capabilities and formations must support a broad set of missions in a variety of environments. Because of this uncertain future operational environment, the Army and Armor Branch should seriously consider the creation of an elite armor/cavalry regiment, patterned on and taking inspiration from the Ranger Regiment, as a highly flexible formation with the ability to function as an important force-multiplier in future conflicts.

Concerning an organizational scheme for an elite armor/cavalry regiment, this article only proposes a general outline to provide a basis for further discussion. With an eye toward providing as broad an array of capabilities as possible, an elite armor/cavalry formation should be composed of battalions/squadrons that reflect the Armor Branch's diversity. A regiment comprised of an armor battalion, mechanized cavalry squadron and light cavalry squadron would provide the regiment with the full spectrum of tactical capabilities available in the Armor Branch.

The armor battalion would serve as the principle offensive implement of the regiment. The mechanized reconnaissance element would provide the regiment with an element capable of fighting for intelligence and provide security in a high-threat environment or, when the situation calls for it, would act as a combat formation in its own right. The light cavalry squadron would provide a stealthier means of intelligence-gathering and would be

optimized for situations in which speed of deployment and reducing support requirements are paramount concerns.

Additional units such as organic fires, transportation, engineers and perhaps even organic aviation and dedicated strategic lift assets would serve to further round out the formation's capabilities. While other organizational schemes are certainly worth considering (dropping the armor battalion or organizing the regiment along the lines of the late armored cavalry regiments come to mind), the general outline provided here serves the purpose of grounding the rest of the discussion.

While the central role armor plays in combat operations in locales such as Fallujah and Sadr City demonstrates that armor can be a critical contributor in select counterinsurgency operations, the impression gained in examining these examples is that only in the context of a much larger operation can armor be brought to bear. This clearly cannot serve as the model for a formation aiming to expand the capabilities and flexibility of the Army in the future. A more enlightening example can be found in Operation Serval, the recent French deployment to Mali to combat Islamist militants associated with al-Qaida.

While newscasts of the conflict were dominated by the exploits of the French Foreign Legion and North Atlantic Treaty Organization (NATO) aircraft, the *1er Régiment d'Infanterie de Marine* and the *Régiment d'Infanterie Chars de Marine* provided much of the muscle necessary to liberate northern Mali from extremist control. Each of the regiments, part of mechanized brigades designed to deploy on short notice, deployed a squadron of AMX-10 RCs (a wheeled, amphibious light reconnaissance vehicle) in support of Operation Serval. These vehicles, mounting 105mm cannon, gave French commanders the ability to strike with a high level of firepower, survivability and tactical mobility. These capabilities proved critical as they provided French forces with an asymmetric advantage over their opponents and allowed them to rapidly shift overwhelming combat power across Mali's vast plains. The successful conclusion of Operation Serval in five months of combat validates the concept that rapidly deployable armored and mechanized forces can play a key role in limited contingency operations.

An elite armor/cavalry regiment, trained to partner with other "first responders" — such as the units of Special Operations Command or the global response force — and given priority for strategic lift assets would provide American policy-makers with a broader menu of landpower options when faced with the need to mount a contingency operation. Infantry-centric formations from units such as 82nd Airborne could be supplemented by detachments from an elite armor/cavalry regiment and provide an intervention force with a much higher level of lethality and survivability.

Such an enhancement to the nation's rapid-intervention capabilities is warranted by recent developments. As the conflicts in Libya and Syria illustrate, contingency operations against state actors or non-state actors with access to advanced weaponry is becoming a distinct possibility. In such an operation, the unique capabilities of armored and mechanized forces would provide a twofold advantage. The superior speed and firepower associated with these formations enables combatant commanders to achieve decisive results in shorter timeframes while maintaining a level of contact on the human plane not provided by precision airpower. The enhanced protection offered by armored platforms within these formations would lead to lower casualty rates than would be expected in purely light formations.

In short, an elite armor/cavalry regiment would provide the ideal landpower option for contingencies in which minimizing casualties and the duration of combat operations were leading concerns.

The contributions of an elite armor/cavalry regiment would be just as profound in a conventional conflict. Elite armor and cavalry formations have long histories in foreign armies. In the Soviet Union, shock and guards tank armies were expected to spearhead formations at the front of major offensives or to serve as a counterattacking reserve to be committed as an enemy offensive reached its culminating point. Named armored divisions in Heer and Waffen SS served a similar role for German forces in World War II. Such formations also served to increase the morale of standard units in their area by virtue of their reputation as crack units.

A unit along the lines discussed here would be suitable to fulfill these roles in any conventional conflict U.S. ground forces might find themselves engaged in. Also, the units' focus on high readiness and rapid deployability would avoid repeats of the situation faced in Desert Shield where U.S. Army light-infantry formations stood opposite the Saudi border from the heavily mechanized Iraqi Republican Guard for weeks without meaningful mechanized capabilities.

Tactics lab

The utility of an elite formation such as the one discussed in this article goes well beyond its effects on the battlefield. The U.S. Army Ranger Regiment serves as a laboratory for advanced infantry tactics, provides the Army with its premier leadership school and increases the capability of the Infantry Branch as a whole through the diffusion throughout the force of Ranger-qualified personnel and former members of the regiment. Also, there is the difficult-to-quantify-but-impossible-to-ignore effect on the Infantry Branch's esprit that the Ranger Regiment has. Slots at Ranger School are coveted training opportunities and are highly sought after by junior infantry Soldiers.

An elite armor/cavalry regiment can, over time, provide all these benefits to the Armor Branch. The prestige attached to slots at the school and service in regiment would serve as a performance motivator and matter of pride within the branch.

Realistic training simulating combat conditions is expensive. When armored vehicles are thrown into the mix, the bill for training escalates rapidly. The elite armor/cavalry regiment's own training, insulated from budget pressures in much the way the Ranger Regiment is, would ensure that tactics and best practices do not stagnate when training funds in the larger force are scarce. Through publication of

training manuals similar to the ***Ranger Handbook***, and the eventual dispersion of the new regiment's personnel across Army formations, the regiment would disseminate the experience of more demanding training and more frequent deployments to the Armor Branch as a whole. In this way, the elite armor/cavalry regiment would repay the investment in its preparedness by keeping alive the development of best practices for the branch, even in times of strict budgetary constraints across the larger force.

While Ranger School has become increasingly open to the Army as a whole, it is no doubt an infantry-centric school. From the instructors to the course material to its culture, Ranger School portrays its infantry roots. This is as it should be. Ranger School's most important function is to provide Ranger-qualified personnel to the Army. The elite armor/cavalry regiment would have a similar requirement. A leadership school providing armor/cavalry qualification would become necessary to provide a steady stream of personnel.

Armor Branch could leverage existing schools such as the Army Reconnaissance Course, Tank Commander's Course and Mechanized Leader's Course to provide the required training and develop the new school while minimizing costs. As an added benefit, armor and cavalry officers and enlisted Soldiers would have access to a leadership school more in line with Armor Branch's requirements. The branch would benefit from receiving graduates of the school across all armor/cavalry units. In a few short years after the school and elite armor/cavalry regiment had stood up, the branch would again benefit as former members received follow-on assignments throughout the Army. The prestige attached to slots at the school and service in regiment would serve as a performance motivator and matter of pride within the branch.

For the Army and the Armor Branch, the future holds uncertainty. Budgetary concerns and evolving security requirements ensure that the road forward is full of challenges. What will not change is the obligation for the U.S. Army to provide adaptable, flexible and decisive landpower to fight and win the nation's wars when necessary. As the Armor Branch finds it must make do with less, an elite armor/cavalry regiment along the lines discussed here would serve as a force multiplier and ensure that the Armor Branch continues to make a dynamic contribution to the nation's warfighting abilities.

Author's note: *Since this article was written, events in Ukraine have served to show how a force like the one discussed here can provide policy-makers with a broadened array of options. An elite mechanized formation could have been deployed to Eastern European states as a show of solidarity with our NATO partners. The unit's enhanced combat power and elite status would have provided strategic messaging opportunities not inherent in the units stationed in Europe or in the Army at large.*

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Cavalry: the Mounted Arm of Maneuver

by MAJ Thomas A. Rebuck

With the demise of the horse as a primary instrument of war, there has been a great deal of confusion regarding the proper role of cavalry in the post-horse era. Unlike the Germans, who discarded the term entirely except to denote organizations actually mounted on horses, the U.S. Army chose to retain it as a designation for units dedicated to what were considered as "traditional" cavalry missions. While the intentions behind this decision were laudable — perpetuating the traditions and lineage of the cavalry — in a practical sense, there was no sound conceptual basis provided for its retention.

This is not to say one doesn't exist. In fact, over the past 74 years, wartime experience indicates that "cavalry" rather than "armor" provides a more accurate characterization of the scope and functions of the mounted-maneuver arm of service. Unfortunately, with the creation of the armored force in 1940 and the assumption of "armor" and "armored (mechanized) infantry" as the primary instruments of mounted maneuver, cavalry has been marginalized as a reconnaissance-centric asset. The result has been a bifurcation of mounted-warfare development that has muddied the doctrinal waters for more than seven decades. Even the adoption of the armored cavalry regiment (ACR) — which represents the Army's closest approach to recognizing the true legacy and purpose of modern cavalry — failed to resolve the issue.

It is time to bring clarity to the discussion of what constitutes "cavalry" in the U.S. Army to introduce coherency into our doctrine, training, force structure and operational philosophy. This article will attempt to resolve this confusion by making the following observations/recommendations:

- View cavalry units as mounted general-purpose combat formations; organize and train cavalry units to execute the full spectrum of mounted operations.
- Recognize the fundamental differences between mounted and dismounted maneuver by refocusing the training, organization and operational philosophy of infantry and armor/cavalry toward their respective operational functions (i.e., dismounted and mounted combat).
- Reverse the precedence of branch designation between armor and cavalry and flag all mounted-maneuver formations as cavalry.

These recommendations provide a commonsense approach and long-overdue rationalization of the mounted-warfare branch while allowing the Infantry Branch to focus on its core function: dismounted maneuver.

Cavalry's true legacy

It could be argued that horse cavalry reached the apogee of its development

during the American Civil War. The Union and Confederate armies, unfettered by the traditions of Old World militaries, adopted a pragmatic approach to mounted operations that resulted in the flexible and utilitarian use of mounted units. Neither side saw the need to separate cavalry into light, medium and heavy arms, or to assign doctrinal tasks based on these classifications. Instead, each forged general-purpose combat organizations capable of functioning across the full spectrum of military operations.

For example, during the first year of its service in Kentucky and Tennessee, 7th Pennsylvania Cavalry executed a range of missions, including convoy escort, route security, provost-marshal duty, counterinsurgency (COIN) operations and the suppression of non-governmental actors (bandits and outlaws). Later, it transitioned to high-intensity operations, including operational reconnaissance and several successful mounted charges against deployed Confederate formations.[1] This level of adaptability is further underscored by the successful dismounted assaults made by Union cavalry against Confederate entrenchments during the battles of Nashville, TN (Dec. 15-16, 1864), and Selma, AL (April 2, 1865).

The evolution of mounted units into general-purpose combat formations represents the true legacy and proper function of modern cavalry. Unfortunately, this continuity of growth and development was brought to a halt with the creation of the armored force and the assumption of "armor" and "armored infantry" as the primary instruments of mounted maneuver. Subsequently, the only apparent option for retaining cavalry as an operational arm was to pigeonhole it as a reconnaissance-centric asset. This led to the common perception that its primary – if not sole – function was information collection. Wartime experience has invariably proven this approach faulty.

Fallacy of reconnaissance-centric cavalry

Reconnaissance is neither a branch-specific nor a doctrinally isolated task. Every unit in the Army is responsible for information collection, and both reconnaissance and security are closely related in purpose and function. As pointed out in pre-World War II German army regulations, "Good ground reconnaissance also contributes to good security. Conversely, the actions of a security unit provide a certain amount of reconnaissance."[2]

A similar assertion was expressed on Page 39 of Field Manual 17-1, ***Armor Operations*** (1963): "Reconnaissance and security complement each other and cannot be readily separated."[3]

Sustainment units conducting logistical packages provide intelligence regarding route conditions, enemy activity and atmospherics along main supply routes / alternate supply routes. Infantry-manned observation posts / listening posts and dismounted patrols are methods for both collecting information and providing security. Even the M1A2 Abrams tank is capable of conducting passive surveillance using its enhanced optics.

Thus, doctrinally orienting and equipping units for the purpose of information collection is a fallacy and only serves to create one-dimensional units unable to fulfill multiple tactical functions. As pointed out by the commander of 6th Cavalry Group during the campaign in northwest Europe (1944-45), "Efforts and doctrine directed toward making the cavalry squadron exclusively a reconnaissance unit ... is faulty. It is evident that there is no occasion, no opportunity and justification for the maintenance ... of such an extremely costly, highly trained organization simply for the purpose of executing reconnaissance."[4]

Post-war analysis of 4th Cavalry Group operations indicated that pure reconnaissance missions constituted only 3 percent its employment, with security, defense and special operations (i.e., rear-area security, mobile reserve and information service) constituting the bulk of its mission set.[5]

Combat experience since World War II not only underscores the fallacy of reconnaissance-centric cavalry, it has expanded the arm's sphere of activity even farther. In Southeast Asia, 11th ACR and various divisional cavalry squadrons were effectively used as conventional maneuver formations. During the liberation of Kuwait, although ostensibly operating in a doctrinal role as corps-level reconnaissance/security elements, 2nd and 3rd ACRs proved to be extremely lethal instruments of mounted combat against Iraqi armored and mechanized units. Thus, cavalry has consistently ***and*** effectively operated beyond the narrow scope of its perceived doctrinal functions.

The designation of cavalry as the Army's primary reconnaissance asset made sense before the introduction of wireless technology and the internal-combustion engine since mounted units alone possessed the capability to rapidly acquire and, just as critically, convey information to higher headquarters. However, specifically aligning cavalry with reconnaissance in the post-horse era should cease since its functionality extends well beyond the collection of information. What truly differentiates cavalry is its flexible utility as a mounted-maneuver force – a general-purpose combat formation – not its perceived association with particular types of missions. Cavalry is not merely a component of the combined-arms team; it is, in and of itself, a combined-arms organization capable of functioning across the full spectrum of military operations.

Objective force

The universal adoption of the internal-combustion engine across all branches of the U.S. Army narrowed the mobility gap between the arms of service, particularly between cavalry/armor and the infantry. As a result, it has also seemingly eliminated functional differences between the maneuver branches and led many theorists to advocate the wholesale transformation of the combat arms into an "objective" force. This view essentially envisions the fusion of "light" (dismounted) and "heavy" (mounted) maneuver units into a single "medium weight" organization equipped with a common vehicular platform.

Theoretically, it would be extremely convenient if the Army could develop such "one-size-fits-all" units. The Army would no longer have to engage in any in-depth analysis over troops-to-tasking or worry whether equipment and

organization matched specific mission requirements. Administratively, it would add both predictability and flexibility into deployment cycles since the Army could schedule rotations and ship units off in sequence, or rapidly exchange them, also without regard to specific mission requirements. This convenience would extend to the area of supply and maintenance, since sustaining a single-type of modified table of organization and equipment with common vehicular platforms is obviously easier than supporting a multitude of organizations and equipment.

The medium-weight concept also conforms to the perception that the U.S. Army will function in the future primarily as an international constabulary/security force – rarely, if ever, engaging in sustained ground combat. In this environment, a medium-weight unit would be more than adequate to deal with COIN or other low-intensity threats while, in the unlikely event that high-intensity warfare does occur, network-centric technology will more than compensate for the absence of "heavy" maneuver organizations. Unfortunately, not only is this vision of future conflict unrealistic, it ignores conceptual differences between infantry and armor/cavalry that cannot be bridged by an "objective" force.

Dismounted vs. mounted maneuver

The motorization/mechanization of infantry and its incorporation into mounted formations has led to misconceptions regarding the nature of both dismounted and mounted combat. Exemplifying this confusion is the assignment of deployment missions to units that contravene their operational purpose; light infantry has been sent to Iraq and motorized, while armor units have gone to Afghanistan and operated as light infantry. While rebalancing the Army's force structure between dismounted and mounted formations based on the contemporary operating environment is understandable, assigning missions outside their respective functional areas is not.

Although dismounted and mounted maneuver may share common tactical principles, each arm of service fulfills a specific function: "The distinction between infantry and cavalry was that the former fights on foot and the latter fights mounted. This distinction is basic and fundamental."[6]

However, this assertion should not be confused with advocating a "death before dismount" mentality: "The distinction does not, nor did it ever, imply that cavalry could not (or should not) often fight dismounted."[7]

Elements of mounted units will be called upon to engage in dismounted maneuver, and the need for both reconnaissance and security will require tank crewmen to regularly "unhorse" their Abrams. It is also not intended to deny the infantry the benefits of the internal-combustion engine. However, mounted units use dismounted maneuver for fundamentally different reasons than the infantry, and the purpose of equipping infantry units with vehicles is distinct from that of mounted formations.

Infantry formations are provided vehicles to facilitate the rapid movement of personnel and equipment to the fight, but not into or through the fight itself. Vehicles are ancillary to the infantry's mission of dismounted combat. Analogous to this is the relationship between air-assault infantry and the helicopter. While these platforms need to provide a certain level of mobility and protection to their occupants, they do not require the level of sophistication – and by implication, the expense – of a Bradley Fighting Vehicle or Stryker. Vehicle platforms equipping mounted units, on the other hand, represent the essential element of their fighting power since these units fight mounted. Dismounted action by mounted units primarily serves to facilitate freedom of maneuver and provide security; it is not the central tenet of their purpose.

This explains why the incorporation of infantry into mounted formations has had unfortunate consequences. Rather than associating armored/mechanized formations with the mobility and flexible utility of their horsed progenitors, this relationship has encouraged their use as alternate instruments for the meticulous and deliberate execution of combat operations that has characterized U.S. Army methods since 1918. During World War II, armored divisions were often broken up to provide tank support to infantry divisions or were themselves used to conduct setpiece, limited-objective attacks. The scheme of maneuver for Operation Desert Storm had more in common with the steamrolling methods of the St. Mihiel and Meuse-Argonne offensives than with the slashing operational maneuver traditionally associated with mounted units. Finally, while the drive on Baghdad by 3rd Infantry Division and the reconnaissance-in-force conducted by its 2nd Brigade upon reaching the city was the embodiment of mounted warfare, in retrospect these events now appear anomalous. Operating out of forward-operating bases rather than using continuous maneuver "outside the wire" represents the COIN equivalent of trench warfare. Although the incorporation of tanks and infantry into a single formation may conform to a combined-arms ***organization***, it doesn't mean their use will conform to the dynamics of mounted combined-arms ***warfare***.

While some may argue that the distinction between dismounted and mounted maneuver has been invalidated by modern technology and the nature of 21st Century conflict, enough separation exists to justify maintaining the unique emphasis of each branch. Yet rather than appreciating the functional differences between dismounted (infantry) and mounted (armor/cavalry) formations, as well as their respective strengths and weaknesses, the Army has chosen to view maneuver organizations as a homogenous pool of units to be assigned deployment missions based on administrative expediency rather than operational suitability. This approach not only impedes the effective prosecution of operations, it degrades the long-term technical and tactical proficiency of units in their respective functional areas.

Mounted Warfare Branch

While the establishment of the Armor Branch in 1950 – along with its absorption of cavalry – seems to have achieved the consolidation of mounted-warfare development into a single

agency, it is, in fact, an unsatisfactory solution. The term *armor* is an inadequate, if not inaccurate, expression of the true extent and purpose of a branch that should be responsible for mounted-warfare development as a whole. While use of the term was almost inevitable – given the word's close association with the tank and the latter's status as the primary symbol of mounted warfare in the modern era – heavy armor represents only a single, albeit extremely critical, instrument of mounted combined-arms maneuver.

The primary excuse for removing mounted-warfare development as a whole from the Cavalry Branch was its perceived conservatism at the time the decision was made, a perception held by many within the mechanized cavalry itself: "Beset by serious opposition to the conversion of horse units by horsemen of his own branch and even by congressmen, … [MG Guy] Henry made relatively slow progress in mechanizing the Cavalry Branch. The slow pace of mechanization within the Cavalry Branch tended to confirm the belief of both [COL Daniel] Van Voorhis and [BG] Adna Chaffee that mechanization could not succeed under cavalry sponsorship and that it develop as a separate agency or arm under the War Department."[8]

It could be argued, however, that these views were as much the product of internal branch politics and professional rancor as an evolutionary necessity.

The 7th Cavalry Brigade (Mechanized) made considerable progress in formulating a comprehensive philosophy of mounted combined-arms warfare during the late 1930s. In fact, its efforts rivaled that of the Germans and placed it on the cutting edge of armored/mechanized theory and development, including advances in wireless communication, mission-command philosophy, maintenance/recovery and ground-air coordination.[9] Quite clearly, the U.S. Army possessed a sound theoretical basis and practical foundation for armored/mechanized operations within the Cavalry Branch. Residual resistance by the "horse lobby" could have been overcome had the War Department and Army ground forces simply exercised the same level of effort and decisiveness in ordering the wholesale mechanization of cavalry as it did in creating an entirely new agency (i.e., the armored force).

Reversing the precedence of branch designations between armor and cavalry would also eliminate the lingering vestiges of professional parochialism within the mounted arm as observed by LTG Bruce Clark: "I believe that today's Regular [Army] Armor-officer career structure still suffers from the pre-[World War] II 'branch clubs' that characterized Regular officer career structures of that era. There is no place, no requirement, in today's armor force structure for such career-structure imprudence. The need in today's armor force is for armor generalists, not armor specialists (armor, cavalry)."[10]

This applies to the enlisted ranks as well. Soldiers need to look beyond the bounds of their military occupational specialty and see themselves primarily as mounted warriors, not technical specialists.

Regardless of why the decision was made to remove armored/mechanized development from the cavalry, its causes no longer apply. Although mounted-warfare development needs to be united under a single agency, consolidating it under the auspices of armor rather than cavalry perpetuates an artificial separation within the mounted arm. To individuals within and outside the branch, the term *armor* equals tanks. Using *armor* to designate the branch aligns its identity with a specific type of vehicle rather than with mounted organizations, equipment and methods as a whole. On the other hand, the term *cavalry* provides both evolutionary continuity and an accurate characterization of the role and methods of mounted-maneuver organizations as general-purpose combat formations.

Conclusion

The creation of the armored force; the assumption by armor and mechanized infantry as the primary instruments of mounted maneuver; and the absorption of cavalry by the Armor Branch in 1950 has sown confusion within the mounted arm for seven decades. This confusion centers on three distinct issues:

- Failure to appreciate the true purpose of cavalry organizations as general-purpose combat formations and their subsequent marginalization as reconnaissance-centric assets;
- Misconceptions involving the functional differences between infantry and armor/cavalry (i.e., dismounted and mounted maneuver);
- Alignment of the branch with a specific vehicle platform rather than mounted maneuver as a whole.

Since World War II, cavalry formations have operated consistently and effectively beyond the narrow doctrinal scope assigned it in the post-horse era. The inevitability of this trend began during World War II with cavalry units executing a broad range of missions beyond information collection, including security, defense and special operations. The subsequent performance of 11th ACR and divisional cavalry squadrons as conventional maneuver formations in Southeast Asia, as well as the proven lethality of 2nd and 3rd ACR in the Gulf War, further demonstrates the absurdity of marginalizing cavalry as a reconnaissance-centric asset.

The association of infantry with mounted units has had adverse implications for both the maneuver branches. Rather than associating armored/mechanized formations with the mobility and flexible utility of the horse cavalry, the integration of infantry has encouraged their use in the meticulous and deliberate (one might add grinding and risk-averse as well) execution of combat operations that has dominated the psyche of the U.S. Army since World War I. It has also distracted the Infantry Branch from focusing on its proper function of dismounted combat by requiring it to support the development of sophisticated and expensive vehicles like the Bradley and Stryker (as opposed to a simple armored carrier) as well as the associated methods for their use.

Finally, reversing the precedence of branch designations between *armor* and *cavalry* provides a far more accurate description of an agency

responsible for mounted-warfare development as a whole, not just a single vehicular platform. This would maintain the technical, tactical and doctrinal aspects of mounted operations under the auspices of one branch. At the same time, it would end the doctrinal confusion, evolutionary dislocation and professional parochialism that has afflicted the mounted arm for 70 years. Although Clark took for granted the pre-eminence of the term *armor* in identifying the branch, his vision would be better served by the use of *cavalry* as the umbrella designation for mounted units.

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Notes

[1] Sipes, William B., ***The Saber Regiment: History of the 7th Pennsylvania Veteran Volunteer Cavalry, 1861-1865***, 2nd edition, Huntington, WV: Blue Acorn Press, 2000.

[2] Condell, Bruce, and Zebecki, David, editors, ***On the German Art of War***, Mechanicsburg, PA: Stackpole Books, 2001.

[3] Cameron, Robert S., ***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, 2013.

[4] Ibid.

[5] Ibid.

[6] Grow, Robert, "The Ten Lean Years," ***ARMOR***, January-February 1987 edition.

[7] Ibid.

[8] Ibid.

[9] One of the exceptions to such innovation was the cavalry's refusal to recognize that tanks would inevitably end up having to fight enemy tanks. This inhibited the installation of a high-velocity gun on American tanks and led to their being undergunned when facing late-model German tanks.

[10] Clark, Bruce, "An Estimate of the Armor Situation," ***ARMOR***, November-December 1986.

Acronym Quick-Scan

ACR – armored cavalry regiment
COIN – counterinsurgency

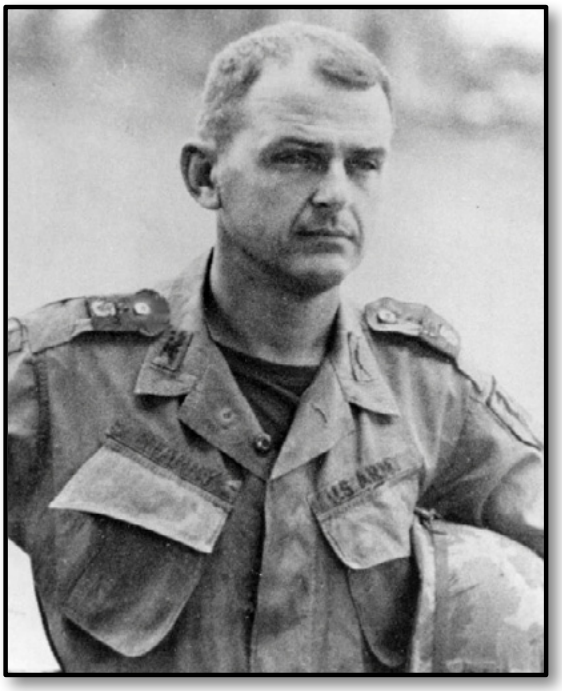
2014 General Donn A. Starry Writing Competition

The "General Donn A. Starry writing competition" will evaluate and recognize outstanding writers from across the Army who demonstrate clarity and vision about the future of the mounted force.

SCOPE OF THE MANUSCRIPTS:

• The intent behind this competition is to challenge officers, non-commissioned officers, Soldiers and Department of the Army civilians to think about the future of the Armor Branch and to offer insightful, forward-thinking concepts to improve the force. The officer, NCO, Soldier or DA civilian will offer ideas and potential courses of action for consideration and/or implementation by the Chief of Armor.

• Articles for 2014 will address the topic: How can we improve the capabilities of our cavalry squadrons to ensure they meet the demands of the Army of 2025 and beyond?



AUTHOR ELIGIBILITY:

• Writers will be an active duty, National Guard or Reserve Soldier; a DA civilian; or retired/veteran.
• The Soldier or civilian does not have to be in the Armor Branch, but he or she will write on future/enduring challenges facing armor and cavalry.

AWARDS:

(Awards presented during the 2014 Maneuver Warfighter Conference at Fort Benning, GA)
• $400 check from the Cavalry and Armor Association.
• 1911 pistol from the Draper Leadership Foundation.
• Army Commendation Medal from the Chief of Armor, as applicable.
• Possible publication in ***ARMOR*** magazine.

FORMATTING AND LENGTH:

• Type article in an 8½ x 11 format, Arial font, size 12.
• Indent paragraphs five spaces or place 6 points of space between each paragraph.
• Number the pages.
• Article should be no less than 2,500 and no more than 3,000 words.
• Include email and mailing address and phone number with submissions.
• Articles will have cover sheet attached to article.

Participation confirmation due NLT June 30, 2014. Article submissions due NLT July 31, 2014.

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• Submissions will be electronic (via email acceptable) and the packet complete when submitted.

• Packet includes manuscript and biographical worksheet. Please query for the biographical worksheet from usarmy.benning.tradoc.mbx.armor-magazine@mail.mil.

• Submit articles NLT July 31, 2014 to usarmy.benning.forscom.mbx.genstarrywritingcomp@mail.mil and usarmy.benning.tradoc.mbx.armor-magazine@mail.mil, subject: Starry Writing Competition; Author's Name entry.

• Submit application cover sheet with each entry (found on Starry competition homepage under application tab, http://www.benning.army.mil/armor/starry/)

Operation Citadel (Kursk)

by CPT Claudio R. Innocenti

The combined-arms breach has fallen by the wayside in recent years as our doctrine has focused more on counter-insurgency operations. This needs to change to restore our ability to dominate future battlefields through combined-arms maneuver. The U.S. Army now is smaller but still retains various commitments around the world. Our Army must also retain the capacity to rapidly deploy and defeat our enemies on their own territory.

With the success of insurgents employing improvised explosive devices (IEDs) in recent conflicts, the principles of breaching are extremely relevant to future Army training. In particular, combined-arms breaching allows armored and mechanized forces to rapidly mass multiple combat elements at the point of penetration.

The current training program at the Maneuver Captain's Career Course (MCCC) tries to fix this fundamental gap in the U.S. Army's return to unified land operations. Officers need to view breaching not just as an engineer concept but also as the critical point on a battlefield where a friendly force will likely suffer its largest casualties. This makes the combined-arms breach applicable to not just breaching operations, but also to the movement and maneuver of all combat elements. An organization capable of successfully conducting a combined-arms breach will have the experience and training to conduct maneuver warfare. By making the combined-arms breach the central aspect of our future training, we can create organizations capable of dealing with the challenge of fighting offensive action with limited resources.

Figure 1. The Eastern Front at the time of Operation Citadel. Orange areas show the destruction of an earlier Soviet breakthrough (Third Battle of Kharkov). Green areas show German advances on Kursk. (*Map from Wikimedia Commons***) (Link here for more detailed U.S. Army maps of Eastern Front and German penetration during the Battle of Kursk.)**

Combined-arms breaching at Kursk

One can see this focus on combined-arms breaching principles has parallels in history. For example, in preparation for the Battle of Kursk in 1943, the Germans revamped the way they prepared armored breakthrough elements for attacking Soviet defensive positions. The Germans, fielding a smaller army and needing to achieve a rapid offensive victory on the enemy's soil, recognized the need to focus on combined-arms breaching principles to drive their training.

Although Kursk was a strategic defeat for the Germans overall, the Germans used innovative breaching tactics to attack a heavily fortified enemy. Faced with the prospect of a continued war on multiple fronts against vastly superior enemies, the Germans opted to take the offensive on the Eastern Front. Operation Citadel was an attempted two-pronged envelopment to eliminate the Soviet forces inside the Kursk salient, providing the Germans a respite from the coming Soviet summer offensive.

Unlike the fluid, mobile battles of 1941 and 1942, the Germans knew they would face prepared Soviet defensive positions supported by strong armored counterattacks. Also, a German shortage of infantry meant that armored elements would need to secure their own flanks, something that would rapidly wear down the German spearheads. The Germans knew that to overcome these weaknesses, they needed to enhance the survivability of their panzer divisions, which would lead the coming offensive.

The overall situation in July 1943, especially following the German defeat at Stalingrad, seemed to greatly favor the Soviet army. The 1942-1943 Soviet

winter offensive drove all the way to Kharkov before suffering a severe setback due to a German counterattack in March. This led to the creation of the Kursk salient. In an effort to shorten their defensive lines, the Germans launched a focused offensive aiming to envelop Kursk from two directions. The Germans delayed their attack until July, allowing them to mass nearly 900,000 men and 2,700 tanks for the operation.[1]

The Soviets concentrated elements of four fronts (army groups) to defend the Kursk bulge with 1,300,000 men and 3,300 tanks.[2] The Soviet overarching strategy was to grind down the German offensive, then immediately shift over to a counteroffensive against the exhausted German attackers. The main Soviet belts stretched to nearly 37 miles in depth, with the first battle line of three trench systems totaling about three to four miles deep. Seven more defensive belts stretched back throughout the Kursk area of operations, guarded by nearly 400,000 anti-tank and anti-personnel mines.[3] These were dotted with anti-tank strongpoints that had four to six anti-tank guns, anti-tank rifles, mortars and a mobile detachment of engineers that could rapidly lay mines.[4]

Soviet LTG Nikolai Vatutin's Voronezh Front, totaling 625,591 men and 1,704 tanks, occupied the southern flank of the Kursk bulge.[5] COL GEN Ivan Konev's Steppe Front of 573,195 men and 1,639 tanks positioned itself behind the Soviet lines as the strategic reserve to blunt any German breakthrough.[6] Also, the Soviets benefited from fighting on the defensive behind prepared positions. These positions were there to force the Germans to canalize their attacks onto narrower fronts, eventually making them vulnerable to counterattacks.

German training plan

The Germans needed to develop a training focus to deal with the problem of armored breakthrough elements attacking enemy strongpoints. With limited manpower available to them, the Germans believed it was more important to gather their own strength first, even at the cost of facing much

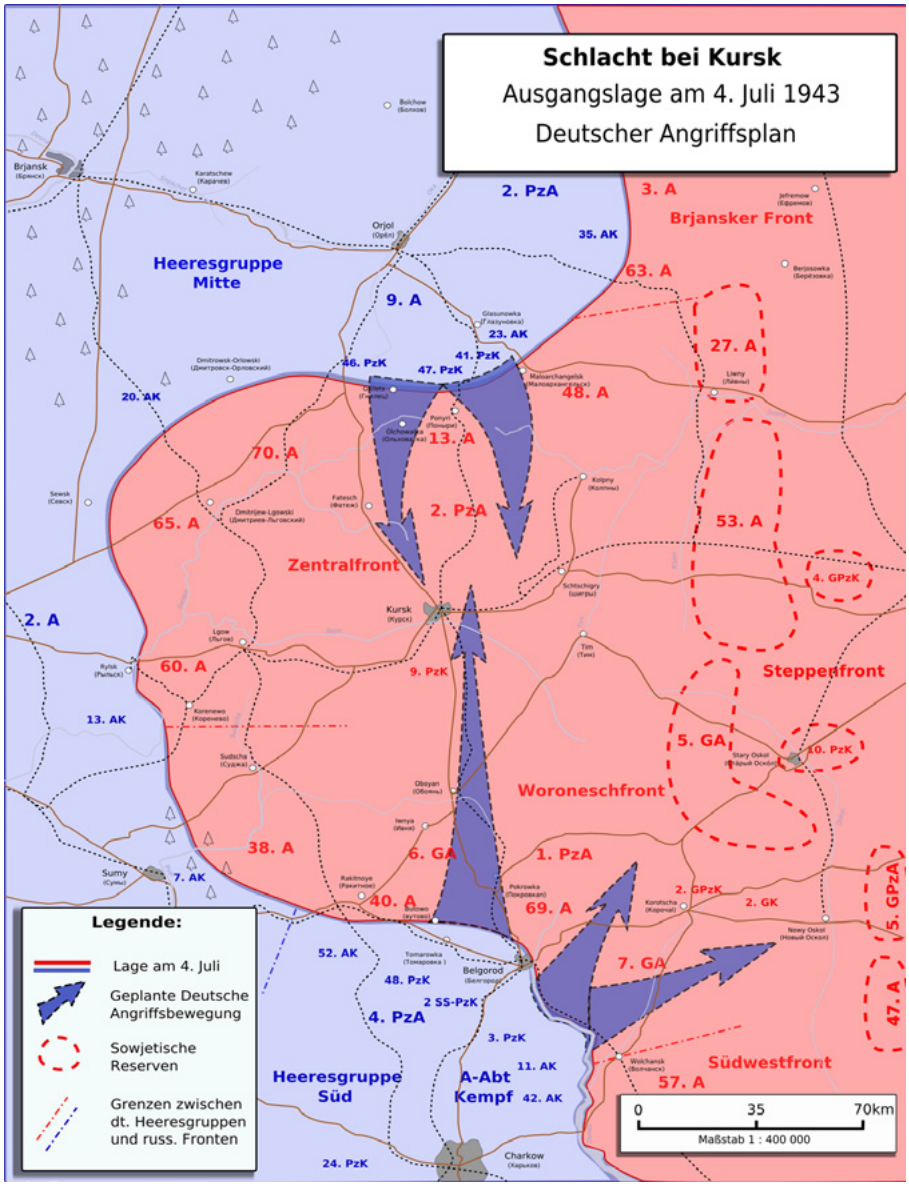

Figure 2. German plan of attack. *(Map from Wikimedia Commons)*

stronger Soviet positions. Since 1940, every German summer offensive of the war had met with overwhelming success against numerically superior forces. The Germans believed if they broke through the Soviet defenses and into open country, they could encircle and destroy Soviet forces. The spearhead of the offensive's southern prong was the Fourth Panzer Army, led by II SS Panzer Corps and 494 armored fighting vehicles (390 of them tanks).[7]

The SS Panzer Corps had led the Germans to victory at Kharkov following the disaster at Stalingrad, but after the heavy fighting around Kharkov in early 1943, the Waffen SS arm badly needed time to train its new reinforcements. The corps, organized into three panzer divisions, (1st Leibstandarte Adolf Hitler (LSSAH), 2nd Das Reich and 3rd Totenkopf) now consisted of veteran formations. However, the divisions still included a significant number of new recruits. Even 2,500 Luftwaffe personnel had been transferred to the II Panzer Corps to serve as infantrymen.[8] Knowing the Germans would need to defeat strong Soviet defensive positions, they adopted a different training program to prepare their recruits for the complexity of combined-arms operations against a heavily fortified enemy.

The LSSAH division created a new training program as it began refitting in April. This schedule included two sets of five-week basic training

Figure 3. German soldiers make paper models for vehicle-recognition purposes during the build-up to Operation Citadel. (*Bundesarchiv photo*)

modules to transform raw recruits into soldiers.[9] Each training program culminated in a battalion-level exercise conducted in gas masks that incorporated armor and artillery support. The introduction of the Tiger tank meant that operators needed to quickly learn the differences between the massive Tigers and the older Panzer III and IV models. Because of the limited resources available for Tiger tank training, platoons had to move up to positions on the Donets River and shell known Russian positions on the far bank as a way to continue training.[10] Such exercises slowly attuned new soldiers to some combat action on the Eastern Front before their first real bloodletting.

Localized tank actions against Soviet positions also involved coordination with scout plans to pick out targets. Additional tank training depended on concealment and the ability to rapidly reposition behind micro terrain.[11] This allowed the tanks to engage from different and unexpected positions, blunting the superior number of tanks the Soviets could bring to bear. Finally, German tank crews also conducted radio and technical examinations of their crew, and even graded their soldiers on their results, ensuring that each soldier kept a sharp mind on the mechanical aspects of his vehicle.

Tests like these, and against real-life Soviet positions, brought up the confidence of both new and veteran soldiers before the offensive. Without the benefit of a large manpower pool or time to train their soldiers methodically, the Germans brought soldiers to the front and trained them during their deployments. High-quality replacement soldiers gave the Germans the ability to overcome the quantitative advantage of the Soviet defenses.

The change in the pace and complexity of unit training reflected an overall shift in emphasis from the German Wehrmacht's leadership. COL GEN Heinz Guderian, the inspector of armored troops, banned all drill and classroom exercises as well as sequential training from squad to battalion level; instead, German soldiers trained on a weekly rotation, with one day dedicated to squads, one to platoons and so on.[12]

Rather than taking the time to slowly build up their teams over months of training, the Germans quickly integrated different organizations together to prepare them for Operation Citadel. By the second and third day, new recruits focused on the most difficult aspects of combat, especially night and dusk operations. All training focused on ruthless repetition of camouflaging, firing and digging in every night. These tenets of German training sought to counter the Soviet penchant for frequent counterattacks. Even during training, German soldiers needed to maintain cover and concealment; if they were spotted by observers, a red flag would go in the air, and the exercise would have to restart.[13] Such training brought an element of realism to the new soldiers and eliminated the "end of exercise is called; we can all relax" mentality of soldiers tired of training. Rather than putting forth their best effort until an exercise concluded, German soldiers needed to deal with the concept of an ever-present enemy during their training.

Because of the added realism of German training, combat-support elements trained for longer periods with better-prepared recruits. The Das Reich division even reconstructed Soviet defenses based on reconnaissance photos. First, the engineers used these models to practice individual breaching techniques; then, the engineers worked with line units, allowing platoons and companies to train on these same models.[14] On June 5, the division validated its training regimen by launching a local offensive against a Soviet defensive position at Hill 183.[15]

The attack started with a reconnaissance operation, which called for fire against the Soviet bunkers; then, as the infantry approached, dive-bombers targeted Soviet positions. As the artillery shifted toward the rear of the Soviet positions, the infantry suppressed the bunkers with small arms, allowing the engineers to breach trenches and destroy bunkers with flamethrowers. Once the hill was secured, the attack was called off, since it was intended purely as a training exercise.

The Germans, with their limited resources and facing the need for a rapid victory, had scrapped all the nonessential elements of their training program. The Germans had narrowed their training to increase the survivability of their precious soldiers and tanks.

With their shortened training schedule, II Panzer Corps focused its efforts

on developing the combined-arms tactics to conduct breaching operations. Once the Germans broke through the Soviet lines, they could resort to maneuver warfare on the open steppes and encircle Kursk. However, they recognized the need to rapidly conduct breaching operations at the point of attack to reduce the Soviet defensive advantage.

Because the Fourth Panzer Army only had one infantry division attached to it (167th Infantry), the German panzer divisions needed to prepare to conduct their own breaching operations.[16] These divisions included combat engineer battalions that could rapidly advance with the armored formations. A typical engineer squad had five soldiers, 50 mines, explosive satchel charges, mine detectors, entrenching tools and flamethrowers.[17] Engineers accompanied reconnaissance squadrons before the operation, enabling them to scout out obstacles as needed.[18] However, this was only useful for the first series of defenses, and a more flexible approach was necessary for the multi-layered Soviet positions.

Once the offensive began, the engineers rode on trucks or halftracks behind the heavier tanks, which would creep forward to find the forward edge of a minefield. Some tanks even had wooden rollers attached to the front to detect mines. As the tanks provided suppression to the front, the engineers employed smoke pots ranging up to 20 kilograms to obscure themselves as they filled in tank ditches, removed mines and cleared lanes for the tanks to continue their movement.[19] By employing smoke and suppression, the engineers were able to rapidly reduce Soviet obstacles, allowing the expertly trained German tank commanders and mechanized infantry to attack through the breach.

With their more focused training plan, the Germans developed new tactics and techniques to handle the unique situation of Soviet defenses near Kursk. The Soviets pre-positioned more than 20,000 artillery pieces to defend the Kursk salient, and they were able to engage the assembly areas of the German offensive. Because the Soviets could concentrate fire at pre-sited locations, the Germans developed the tactic of spreading out their support by fire elements during breaching operations.[20] This diluted the concentration of Soviet direct and indirect fire, and prevented catastrophic losses even if a tank was knocked out. As the tanks drew Soviet fire toward themselves, the engineers could focus on reducing the obstacles in front of them.

At the same time, Stuka dive-bombers suppressed Soviet forward positions. Kursk saw the first use of a strictly anti-tank dive-bomber when the Germans mounted twin 37mm anti-tank cannons on their Stukas.[21] This not only enabled German engineers to rapidly breach the first series of Soviet defensive belts, but the bombers also engaged any Soviet armor counterattack against the German line of penetration.

Combined-arms breach training forced infantry, armor, artillery, engineers and aviation assets to work together daily. Such an environment fostered the creation of new ideas to solve the unique problems facing the German attack. This was critical because the Germans knew that breaching the Soviet defenses would not be enough; II Panzer Corps alone needed to defeat elements of three different armies before it could reach the rear of the Soviet defensive lines.

The focus on breaching operations worked in favor of the Germans since they had planned for follow-on operations after penetrating each belt. Critical to this was the German army's belief in the principle of mass. Although outnumbered by the Soviets, the Germans could concentrate their forces at the point of penetration and gain a local numerical advantage. The Soviets expected the main German thrust to come north of Kursk, rather than in the south where II Panzer Corps attacked. However, the Soviets' main positions in the south still included three infantry armies (Sixth, Seventh Guards and the Sixty-Ninth) and the First Tank Army operating behind the defensive belts.[22]

Offensive begins

The Soviets prepared for a German attack on either side of the Kursk salient, even if they did not know the exact start of Operation Citadel. The attack began with 800 dive-bombers attacking Soviet fortifications on the afternoon of July 4 to soften them up for the start of the offensive the next day.[23] A German deserter tipped off the Soviets on the night of July 4, and they launched a pre-emptive strike against possible German launching-off points near Belgorod.[24] The Germans used counter-battery fire to check the Soviet artillery. Denied the element of surprise, the Germans continued their planned operation. With suppression established by aircraft and indirect fire, the Germans were able to start the obscuration and assault of the first Soviet positions.

Figure 4. Two Tiger tanks of Totenkopf and a StuG assault gun carry infantry. *(Bundesarchiv photo by Cantzler)*

The assault began with select infantry squads crossing streams in rubber boats and seizing a foothold on the far bank, giving the engineers enough time to reduce the steep slopes of both banks.[25] Once this was accomplished, the tanks forded the stream and established hasty support by fire positions. The tanks were also equipped with specially made smoke shells that could obscure the infantry as it advanced.[26] Then the infantry and engineers destroyed Soviet bunkers with flamethrowers and cleared Soviet trenches with hand grenades.[27]

Once the engineers created a breach, the Germans were able to engage the rest of the Soviet lines with enfilading fire, making those positions untenable. The Das Reich division, during its advance near Worskla, came upon a tank ditch in front of Hill 220.5 on the first day of the battle.[28] Its infantry suffered through heavy fire from Soviet artillery, rockets and dug-in tanks. The Germans responded by rapidly digging in their infantry while covered by their tanks and assault guns. This suppression element gave the engineers time to breach the ditch, then allowed the German infantry and tanks to fire and maneuver their way northeast to seize the hilltop. Just seizing this position took five hours of fighting.[29] As each position was reduced, the Germans wasted little time in gathering the next armored element and pushing it through the breach to seize far-side objectives. However, every hour spent reducing a defensive position allowed the Soviets time to bring up their massive reserves.

Although the Germans encountered extremely heavy Soviet opposition, by the evening of July 6, the Fourth Panzer Army, spearheaded by II SS Panzer Corps, was 11 miles into the Soviet positions.[30] This distance was hardly a decisive breakthrough, especially considering the depth of the Soviet defenses, but it was certainly an operational success when compared to the strength of the Soviet positions. Against the German massed armor in the south, the Soviets then tried to counterattack before the Germans could achieve a larger breakthrough.

Faced with the slow but steady penetration of their positions, the Soviets were forced to resort to operational warfare to stem the German attack. By July 7, II SS Panzer Corps passed the second Soviet defensive belt. This triggered the Soviet decision to commit their tank armies to halt the German attack. First Tank Army suffered heavily in a series of running battles, with one of its tank corps losing 150 out of its 200 tanks.[31] The Soviets moved their II Tank Corps southwest to stem the tide, but it never even reached the battlefield, losing 50 tanks to German dive-bombers alone.[32] By July 10, II SS Panzer Corps reached the outskirts of Prokhorovka, a vital hub on the Belgogrod-Kursk highway. The Totenkopf Division crossed the Psel River north of Prokhorovka and created a bridgehead. The Psel was the last natural obstacle between the Germans and Kursk.

Worried about the progress of the Germans against their well-developed positions, the Soviets committed LTG Pavel Rotmistrov's Fifth Guards Tank Army. With several other corps attached to it, Rotmistrov was able to bring almost 850 armored fighting vehicles (500 of which were T-34s) to bear at Prokhorovka.[33]

Figure 5. German Tiger I tanks spearhead the assault in the northern sector. *(Bundesarchiv photo by Cantzler)*

Figure 6. Soviet troops follow their T-34 tanks during a counterattack. *(Fotoreporter sovietico sconosciuto photo, Ukraine)*

The Germans, due to the heavy fighting against the Soviet defenses, lost a number of vehicles during the operation, mostly due to anti-tank mines. They had used a tactic of bringing tanks to find the edge of the minefield. While this enhanced the survivability of their engineer assets, it was at the cost of wearing down their panzer divisions. Thus, once the Germans broke through the main Soviet lines, their breakthrough elements were much weaker than at the start of the offensive. By July 11, II SS Panzer was down to 267 tanks and assault guns, even though a number of their damaged vehicles were recoverable.[34] The Germans kept their recovery and maintenance sections forward with their units, enabling them to hastily repair damaged vehicles. Heavier vehicles like the Tiger had been able to take several hits and still could be easily repaired. The Germans spent the rest of July 11 on vehicle maintenance and preparing for their assault on Prokhorovka.

With one corps facing the largest tank army in the Soviet order of battle, the German focus on combined-arms breaching operations paid off handsomely at Prokhorovka. The Soviet and German armored formations both went on the offensive on the morning of July 12, and the Germans eventually drove back the initial Soviet waves with a combination of tanks, assault guns, rocket artillery, half-tracks, dive-bombers and dismounted infantry using satchel charges. A final Russian reserve attack in the late afternoon stopped the German counterattack.

The Russians lost nearly 400 armored fighting vehicles at Prokhorovka, and Fifth Guards Tank Army could not conduct offensive operations until it underwent retrofit.[35] The Germans lost 48 armored fighting vehicles, but a number of these were recoverable after the battle.[36] Despite the overwhelming success of the Germans at Prokhorovka, they lacked the forces available to rapidly exploit their victory. Combined with the Allied invasion of Sicily July 10, Adolf Hitler decided to cancel Operation Citadel and moved the bulk of II SS Panzer Corps to Italy to bolster its defenses.

Most studies of Kursk focus on the strategic failure of the Germans, who launched a two-pronged assault on an obvious bulge in the Soviet lines. Historians discuss the quantitative superiority of the Soviet war machine, particularly in tanks and artillery, as well as the experience of its soldiers fresh from victory at Stalingrad. Against the overwhelming defensive positions around Kursk and the massive Soviet reserves, the Germans could not achieve a decisive victory. But this discounts the fact that the southern German prong advanced rapidly enough to force the Soviets to commit their reserves, reserves which were supposed to be used for the Soviet's own summer offensive.

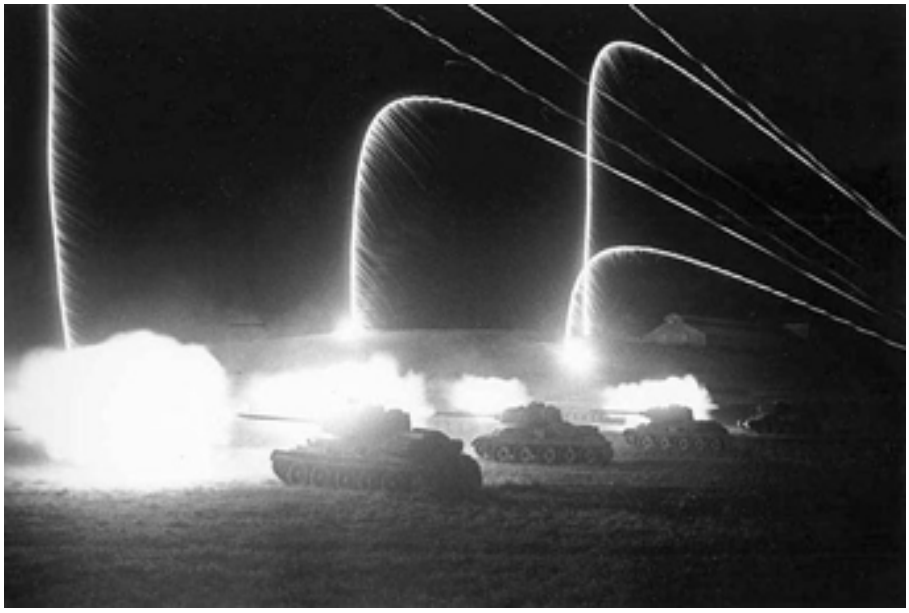

Figure 7. Soviet forces use signal flares to illuminate the battlefield during the Soviet counterattack in the battle for Kursk.

Ultimately, the Soviets possessed enough of a material advantage that their own offensive was not seriously delayed. Critical to the initial German success was the training and tactics the Germans used to penetrate one of the largest defensive belts ever created. The superiority of German tank quality and armored tactics remained as strong as it was during the heyday of blitzkrieg in 1940 and 1941. The relatively slow pace of the German advance and the failure to exploit their successes seems more suited to something from the pages of World War I. The German attack was consistently worn down, but they were still able to achieve a significant penetration using combined-arms breaching, and even an exhausted panzer corps was enough to defeat two tank armies by massing its elements at the point of penetration. Ultimately, this was not enough to offset strategic deficits such as the lack of surprise, the deficit of supporting infantry to guard the flanks of the spearhead, and the inability of the northern prong to penetrate through the Soviet lines.

With the war in Afghanistan winding down, the U.S. Army faces a much smaller budget and size restrictions, but it must still be prepared to operate in key hotspots such as eastern Asia, the Middle East, Eastern Europe and Africa. Faced with manpower shortages, the need to launch local offensives on enemy soil and with many responsibilities throughout the world, we need to change our training focus to combined-arms breaching operations. This will increase the survivability of our armored formations during offensive operations against a defensive enemy. Once we achieve the penetration and force our enemies to fight us in the open, we can rely on our technological and tactical overmatch to destroy them in place.

In its most recent conflicts, the United States has had this same sort of advantage. In response, our opponents fought from the defensive employing cheap obstacles such as IEDs. As our army slowly developed into a series of

platoons and companies fighting out of patrol bases, the ability to conduct the combined-arms breach was left behind. The success of the insurgents to slowly wear down American forces over time means that we should expect these same tactics, techniques and procedures even in high-intensity conflicts. If insurgents can easily seed key routes and protect key infrastructure with IEDs, armies with the resources of a modern nation behind them will employ obstacles to even greater effect. To counter this, the combined-arms breach must become the principle focus of our training cycle. It will not only allow us to conduct offensive operations in any theater of conflict, it will integrate every combat branch together to make combined-arms maneuver more effective.

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Acronym Quick-Scan

IED – improvised explosive device
LSSAH – Leibstandarte Adolf Hitler
MCCC – Maneuver Captain's Career Course

Sustaining the Squadron: Sustainment Lessons-Learned at National Training Center

by CPT Matthew M. Randi II

In February and early March 2013, I served as the logistics officer for a cavalry squadron (5th Squadron, 4th Cavalry Regiment) in an armored brigade combat team (ABCT) conducting a decisive-action training exercise at the National Training Center (NTC). I have never learned more in a two-week period than I did during our rotation. Our squadron was relearning how to engage near-peer conventional forces while also conducting wide-area security operations more in line with what we have done during the past 12 years. By training logistics during our platoon and troop-level training exercises at our home station of Fort Riley, KS, we went to NTC with some confidence and systems already in place. Many of these systems worked; many did not. However, by the end of the rotation at NTC, we had the utmost confidence that we would be able to sustain ourselves.

There are three main areas I believe need to be addressed: how we communicate our logistical situation, mission and requirements to higher, lower and adjacent units; where our logistical assets are located and who is located with them; and finally, how the current structure of our logistical units could be improved.

Communicating the logistics fight

During our training in preparation for NTC, the squadron ensured we did not "hand-wave" sustainment operations. Our forward maintenance teams moved with their troops just like they would at NTC, and we exercised our distribution platoon, so it was familiar with operating at night off the road. The squadron did not conduct maintenance in the motor pool during training at Fort Riley but, instead, pushed the unit maintenance collection point (UMCP) out into the prairie to operate in the field in support of all major squadron training events. Like most units, my unit made a determined effort to ensure that tactical and logistical training situations were always as realistic as possible. We also trained our logistical communications in much the same way in the squadron, so when we finally received all our equipment and were finally prepared to conduct the training at NTC, we had already rectified many of the kinks in our logistical communications from our extensive train-up at Fort Riley.

When we first began to train up for the NTC rotation, we did not have an established standard operating procedure (SOP) that prescribed or provided an outline of how we were supposed to communicate the logistical situation on the battlefield. This was no fault of previous staffs or chains of command. They stood the unit up and deployed it to Iraq twice where a decisive action-oriented SOP would have done little. Therefore, we had to start from scratch and get a working product in the roughly eight months we had prior to shipping our equipment to NTC. What worked for us was to keep the report formats as simple as possible and to ensure that the means in which we were communicating were available at the lowest level possible. The other sustainment leadership and I came together and discussed how the squadron could meet my information requirements in ways that were efficient for all parties. We continued to rework these report formats throughout the duration of the train-up and into the rotation. This led to constant refinement of our reporting procedures.

Beginning with humvee and Cavalry Fighting Vehicle (CFV) crew qualification, we laid the groundwork for how we would report and track the battlefield situation. We started with basic reports that described what the troops had on-hand in terms of fuel, food and ammunition once a day. Once we mastered that, we moved on to two times a day, and the reports became more specific. By the time we arrived at our platoon situational-training exercises (STX) in October, the troops were not only reporting what they had on hand, they were forecasting what they would need 24, 48 and 72 hours out. By the troop STX in November, the squadron had become efficient at the report. What we did wrong during our training at Fort Riley was that we did not require reports while the units were conducting tactical operations, and I should have done a much better job at requiring the reports in a timely manner.

When we first began our decisive-action rotation, we had one logistical status called an "Orange 3." This report

ORANGE 1	
TYPE	GRN/AMB/RED/BLK
CLI MRE	
CLI W	
CLIII (B)	
TOW	
JAV	
25 AP	
25 HE	
7.62	
5.56	
OTHER	
SLANT	M1/M3/M7/M1151/M1064
	/ / / / / /
NOTES	

Figure 1. Orange 1 format.

was extremely detailed, but it was also very cumbersome. The troops were able to complete these reports once or twice a day if they were in static positions and not in contact with the enemy. What we quickly found out was that this was rarely the case. We needed to develop another report format that could provide me with all the information I needed so I could provide it to the squadron commander, other members of the staff and higher headquarters. We called what we came up with "Orange 1." (See Figure 1.) It was short, just several lines, and contained only the most time-sensitive and pertinent information. The troop executive officers would report it to me every few hours when it was practical for them to do so. If they were in heavy contact with the enemy, it was only necessary to report changes that affected their ability to fight. Orange 1 contained the type of vehicles they had operational by type; their fuel, ammunition, water and food status; and any special or emergency requests they needed prior to receiving their next scheduled resupply.

By the end of our rotation, we became extremely efficient at reporting. Part of that was the creation of the refined reports; the other part was that timely and accurate reporting became emphasized by all levels of command. The troops would keep me constantly updated with the "Orange 1" report and, daily, or twice a day if possible, the "Orange 3" report. My comfort with my understanding of the logistical picture increased from Day 1 until the end of the exercise.

One example of a report we did not exercise during our home-station train-up was our battle-damage assessment report (Orange 5). This report came from the troops and provided me with information pertaining to one or more vehicles that had been "destroyed" by the enemy, so our higher headquarters could notionally replace them. I would then collect and analyze this information, prioritize the vehicles destroyed and send my own squadron-wide Orange 5 to the brigade. Early in the rotation, the amount of information the troops were sending was far too much and included such things as the actual vehicle serial numbers. This slowed down their reporting and my analysis of the reports, so the result was that our replacement vehicles were arriving far too late. By the end of the training rotation, we had shortened the report significantly so that it only included one piece of information: the vehicle's bumper-number. From that one piece of information, I could ascertain all the other pertinent information, and the result was that we became so efficient that we had vehicles being replaced in the same fight in which they were destroyed.

The squadron's logistic leaders were able to maintain near-constant situational awareness because we determined during the train-up at Fort Riley to keep most of our logistical reporting on a simple system that did not require battlefield Internet and that was readily available. We used the Blue Force Tracker (BFT), and it is excellent for communicating the logistics fight. It can be found in almost all tactical vehicles and command posts to send email-like typed messages, report formats and battlefield graphics. It also has a chatroom-type feature. All our "orange" reports were formatted like an Excel table in BFT, so all we had to do was refine those reports or create simpler reports like the "Orange 1" report.

During the initial stages of home-station training, we attempted to use other systems such as Battle Command Support and Sustainment System and the Command Post of the Future. Both these systems offer excellent capabilities, but we realized they were often in different locations than logistical leaders and had to be stationary for periods of time we deemed unacceptable.

I believe we began the rotation with some level of proficiency in this area due to the combination of already refined reports and a common system to report them. We also discovered another way to leverage the abilities of the BFT's chatroom function; we could use it to conduct our daily logistical synchronization meetings. The chatroom function is just like it sounds. Different logistical leaders, typically the troop first sergeants, executive officers, forward-support-company (FSC) commander, maintenance officer and I would enter the chatroom in our BFT role-names. We would then conduct the meeting according to a predetermined format with the endstate being that all of us were on the same page in terms of our current situation, which led to the refinement of the next two resupply operations to ensure that, as their higher headquarters, we were providing everything in our power to provide.

Placing logistics leaders and assets on the battlefield

Aside from communications, we also had to learn where to place our logistical leaders and assets on the battlefield as we transition to a battlefield that does not have preset forward-operating bases and other semi-permanent infrastructure. There are three primary logistical nodes and two medical nodes whose locations and composition need to be addressed. There are many different ways to achieve the same end; here are a few I saw work, and some I saw fail.

In much the same way as we trained communications, we began rehearsing and training our nodes during the humvee and CFV crew qualifications. The squadron leadership decided to bring our logistical nodes to the gunnery complex and exercise setting them up, tearing them down, moving them and doing it all over again. We did this despite the fact that the gunnery complex has hardstand buildings with built-in Internet, lighting and everything else one would ever need to conduct qualifications and plan for the next training event. The decision to operate out of the armored command vehicles and associated tents in the dirt of the motorpool proved invaluable.

When we moved on to the platoon and troop STXs, we became even more efficient at conducting sustainment operations with nodes, building protective obstacles and entry-control points, and conducting parallel planning with the tactical-operations center (TOC) located miles away. We also experimented with what our logistics nodes would actually look like by placing them in various locations with varying constructs. We learned some valuable lessons concerning what did not work during home-station training as well.

For instance, during the squadron's culminating training exercise, we gave each troop its own fuel truck to move with its troop trains. This proved far too cumbersome, and after the first day of the exercise, with some excellent advice from the troop first sergeants, we moved the fuel trucks back to the FSC.

The troop trains are the farthest forward logistical elements (FLE). They directly and continuously support their specific troops in terms of limited casualty evacuation, vehicle maintenance and supply. Typically, they would contain the troop's first sergeant, with his vehicle, another casualty-evacuation vehicle and the troop's administrative vehicle, and a small maintenance section that could perform rudimentary repairs and vehicle evacuation. That barebones organization is what worked the best for us.

When we got into trouble, it was usually because I would push additional assets – such as fuel (as mentioned above) or ammunition trucks – forward and not give the troop adequate time to return them. The result would be that those assets would not be able to replenish themselves or would be destroyed because they were large and cumbersome, and too close to the front lines. When that happened, they were not available to support the rest of the squadron for 12 to 24 hours, which complicated matters significantly. These troop trains were located anywhere from 250 to 500 meters behind the scout platoons on the front lines, or behind some form of terrain feature such as a ridgeline, which gave them protection from the enemy's direct-fire weapon systems.

Moving backward, or away from, the front line, the next logistical element is the combat trains. This provides the squadron with a more robust supply and maintenance ability, close enough to the front line that it can support the reconnaissance troops in a expedient matter. The combat trains perform three more specific sustainment functions: maintenance, supply and sustainment command and control (C2).

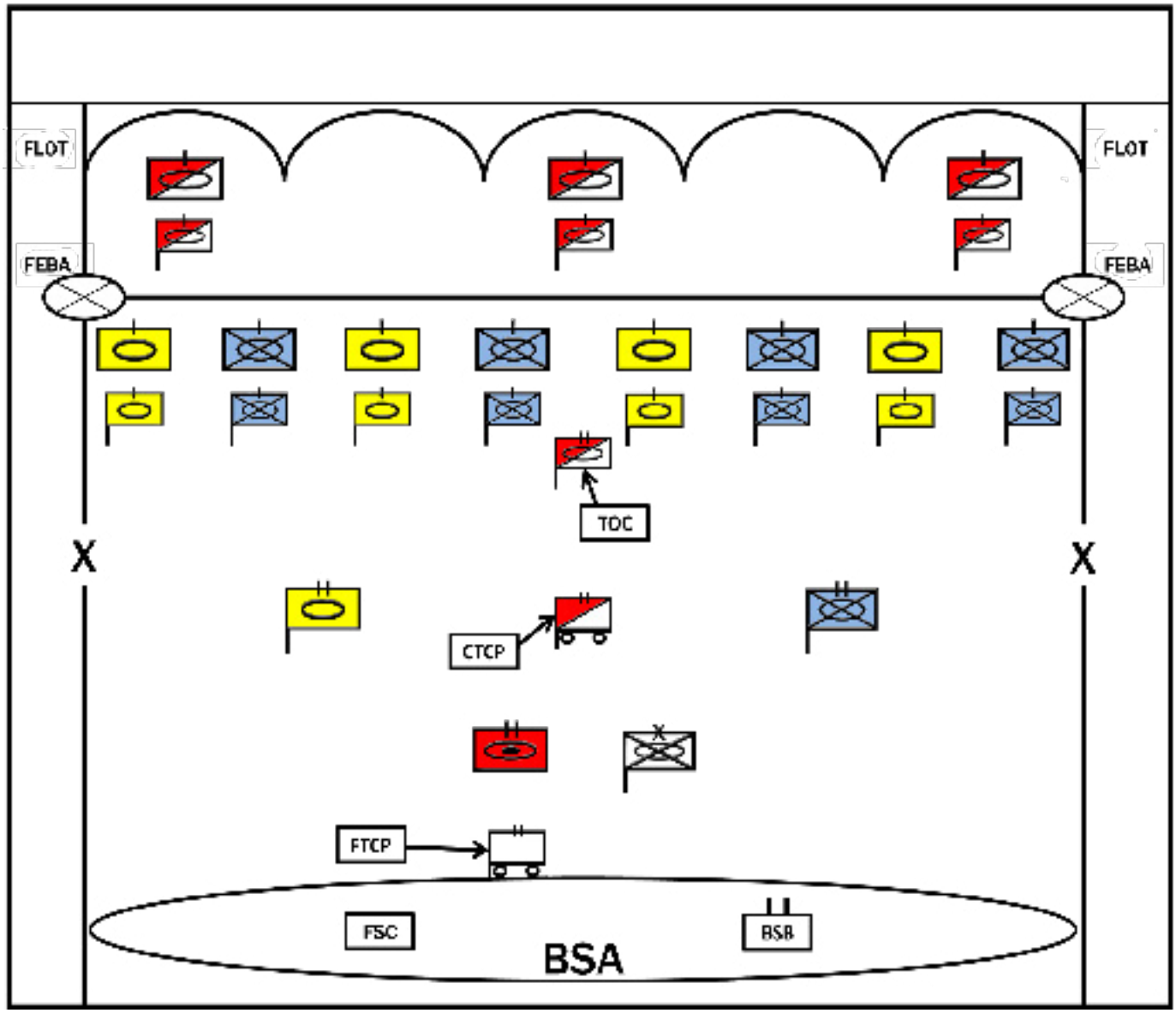

Figure 2. Basic battlefield geometry.

For maintenance support, the combat trains contained the UMCP. This is really where most of the squadron's organic maintenance assets, the actual systems and mechanics who could perform more sophisticated repairs, and another vehicle-recovery vehicle were located. The squadron maintenance officer was also located at the UMCP. As his title suggests, he is in charge of all maintenance operations within the squadron. We failed during the first half of our rotation to NTC to correctly position the UMCP. Instead of positioning it forward with the combat trains, we kept it farther back with the field trains.

This was probably our largest logistical failure during the entire rotation. It resulted in our complete inability to repair any of our vehicles that became damaged due to the simulated enemy fire or from actual breakdowns. We had some of our most critical vehicles sit in one place for nearly a week until we were finally able to move the UMCP forward. Once this was done, it took the mechanics several long and hard-working days to catch up, but for the last few days of the rotation, we were able to return critical combat power back to the front lines where it was needed.

We would also keep a small emergency resupply at the combat trains. For us, this consisted one fuel truck and one cargo vehicle with a trailer that carried the types of ammunition I anticipated would be of greatest importance. I guessed lucky and anticipated that mortar rounds and missile rounds for both the tube-launched, optically tracked, wire-guided (TOW) and Javelin systems would quickly come close to running out, and we used our emergency supply on three occasions. The emergency fuel supply was never used. I was able to respond quickly to the needs of the troops that required ammunition when we had the emergency resupply, and thus the combat trains located as close to centrally as practical. At one point, we had the combat trains located up to 15 kilometers from one of our troops. The result was that it took more than an hour to get the troops the mortar ammunition, and they nearly ran out while engaging the enemy. It is always said that logistics should be transparent to the battlefield; in other words, it should occur without having a negative impact, and I came close to violating that during that situation.

The remaining element we had at the combat trains was the combat trains' command post. This included the headquarters and headquarters troop (HHT) leadership, the squadron personnel officer and often me (as well as the maintenance officer as described previously). The reason we decided to place this grouping of individuals here was because they are all critical to logistics functions. Maintenance, supply and medical personnel (covered by the HHT commander) are all represented. As such, much of the logistical specific mission planning could be accomplished in one place, and then I could move to the TOC closer to the front lines, where the rest of the staff was located, and input the logistical plan into the overall squadron order. It streamlined the planning process and worked well for us. This element also controlled the logistical operations for the squadron, to include planned resupply, vehicle recovery, casualty evacuation, emergency resupply, personnel replacement and processing, and chemical decontamination operations.

There were three main mistakes we made with the combat trains:

- First, as previously described, we did not always locate them so they could support the entire squadron. As a squadron, we fell into the trap of looking at it first as an alternate C2 node instead of a sustainment node. We quickly realized our error and continuously placed the combat trains in the correct place for most of the rotation.
- Second, also described previously, we began with a maintenance package that was too light in the combat trains. This had some severe consequences for a time, although, like all good units, we learned from our mistakes and rectified them.
- The third thing we could have done better was to do a better job manning the combat trains. We found it very difficult to secure ourselves and the assets we had, especially when the mechanics were working. I'm not suggesting half the TOC, but even six to eight Soldiers to aid in radio operator and guard duties would be a significant help.
- Also, the chemical officer should have served in the combat trains. This officer should have helped the planning process, as most of the chemical considerations were planned in the logistics portion of the order. This would also have provided another battle captain to assist in the C2 function of the combat trains, as the ones there "burned out" quickly while they served several roles simultaneously.

All that being said, I believe we did a good job overall with our combat trains. We learned, adjusted and became stronger through the course of the operation. The same can be said of our medical assets.

The rearmost logistical node for the squadron was our field trains. This was primarily composed of our FSC, Dakota Troop. Like the combat trains, we organized the field trains into several smaller elements, all under the command of the Dakota Troop commander. We placed the remaining maintenance team, the distribution platoon (supply, to include the other troop-supply sections), the maintenance-control section (which orders repair parts) and the Dakota Troop headquarters in the field trains.

We did a few things differently than most units with our field trains. First, we located them within the brigade-support area (BSA) with the rest of the brigade support battalion (BSB), as opposed to locating them forward in-between the BSA and the combat trains. The first reason we decided to do this was because they would have had a difficult time securing themselves had they been located alone. The cavalry squadron FSC is a smaller organization than in the combined-arms battalions, with fewer security assets, and by co-locating it with the BSB, our FSC had mutually supportive security. Dakota Troop now required fewer Soldiers to pull security, and the troop could still put its supply convoys on the road and conduct other tasks with more manpower.

The second and more important reason was so we would not have to rely on the BSB to "push" supplies to our field trains. We recognized that it was understrength in terms of manning and would have a difficult time supplying our field trains and the field trains of the other battalions. By placing Dakota Troop in the BSA, the troop could literally drive from its area to another area within the same perimeter to replenish its fuel trucks. Likewise, it could go to the ammunition holding area and draw the ammunition directly. The same can be said of the other supplies such as parts, food, water and nearly anything else. Having the troop commander there also assisted in direct coordination with the BSB leadership. We were able to work through a lot of confusion and smooth out a lot of issues that otherwise would have been much more complicated by keeping the field trains in the BSA.

One downfall to having located the field trains in the manner we did was the distance between the BSA and the rest of our squadron. Sometimes this distance exceeded 30 kilometers, which meant that it took Dakota more time to conduct resupply operations, which were often conducted at night using night-vision devices. That distance is a long way to drive at 10 miles per hour, then conduct a two-hour resupply, return and prepare to do it the next day. The other downfall was that we had no radio communication with the field trains for most of the rotation and had to exclusively rely on the BFT. While the BFT is a great system, there is nothing more clear than actually talking to another person.

The squadron, like most battalion-sized maneuver elements, has two nodes for medical support: a forward aid station (FAS) and a main aid station (MAS). For the squadron, composition of both is very similar. A large command track and its associated tents make up the actual aid station. Each one also had several ambulance vehicles to assist the troops in moving casualties from the front line to either the MAS or FAS or to the next level of care at the BSB. The medical platoon leader and surgeon would be at the MAS; the platoon sergeant and physician's assistant were at the FAS. The mission responsibility of these locations is to stabilize casualties so they can be evacuated to the next level of care that can either treat or further stabilize.

We came away with one major learning point in terms of our FAS and MAS: they needed to be positioned to support the squadron in breadth, not depth. Our frontage often approached 30 kilometers, and at first we had a difficult time evacuating casualties to the FAS or MAS in the first hour, resulting in alarmingly high died-of-wounds rates. I believe the main reason was that we were, at first, tied to the idea of attaching those assets to the combat trains or TOC.

We quickly learned that course of action was not working. What we eventually ended up doing was assigning the FAS or MAS to one of the troops. For example, toward the end of the rotation, our Apache Troop was located to the north of the squadron's area of operations. To remedy the situation, we assigned to FAS to Apache Troop. The downside was the FAS was closer to the front line and potentially in

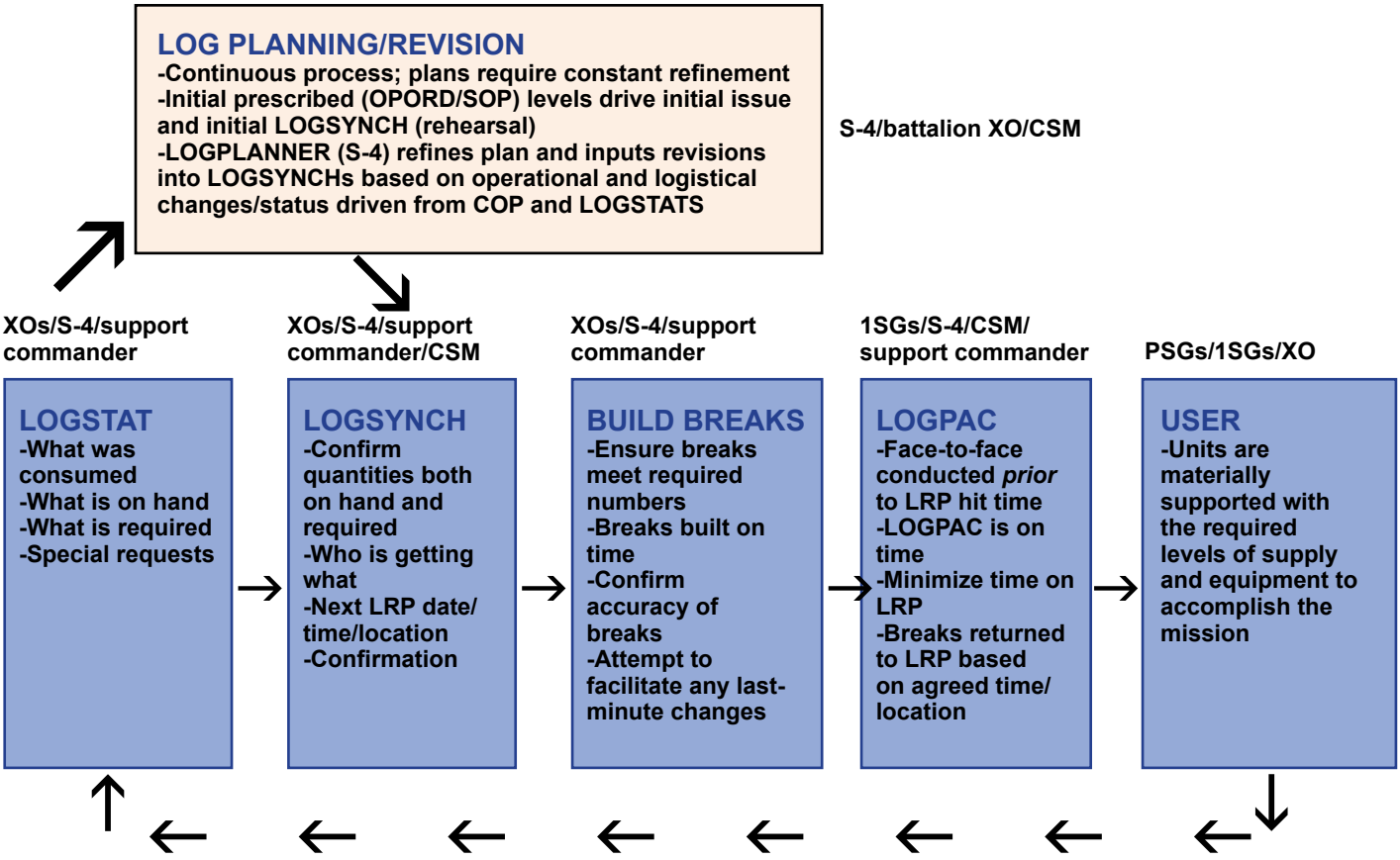

Figure 3. Flow of logistics information to supplied unit.

greater danger, but the plus side was apparent – Apache was able to successfully evacuate its casualties.

These are not definitive answers for where to place the logistical leadership and assets for a cavalry squadron, but where placed assets and leaders can make the situation work for us. Some of our sister units did things significantly different – like combining their field and combat trains – and, like us, learned and improved throughout the course of the rotation. One thing we could not change, but had to become clever on how to make it work, was the FSC's organization.

FSC organization downfalls

The single greatest challenge we had during both our train-up to NTC and our rotation itself was the organic organization of the FSC assigned to cavalry squadrons. During training or, potentially, future real-world operations, this company cannot support the squadron without significant augmentation in terms of equipment and crews for the additional equipment. In terms of fuel trucks, supply trucks and security, there were significant gaps that need to be addressed, and we had to find interesting fixes to accomplish our mission.

There are three fuel trucks (M978s) found organically in the cavalry FSC. In terms of gallons-to-vehicle, having three M978s is sufficient to supply the squadron during maneuver operations. However, when the squadron is spread over an operating environment 30 kilometers wide by 40 kilometers deep, resupply cannot be done in a tactically feasible way without running resupply operations nearly 24 hours a day. Three M978s can support three reconnaissance troops, but this doesn't take into account the TOC, combat trains and the need to have a forward emergency resupply of fuel. If a large fuel-thirsty attachment, like a tank company, is attached, there is no way three M978s will work. Yet, during our rotation, we had a tank company, and no one ever came close to running out of fuel.

How we accomplished this was by acquiring two more M978s from the BSB's distribution company. The company couldn't man the vehicles and we needed them, so it worked out for both sides. There was some significant gnashing of teeth from several parties about this, but in the end, we got our vehicles, and it did not take away from the capabilities of anyone else. I believe that by showing the necessity of these vehicles during our training at Fort Riley, we were able to convince all parties in the end that we needed them. We would be able to maintain one M978 forward, as discussed in defining the combat trains. The remaining four would operate out of the field trains and come forward during resupply convoys, typically once a day. Each reconnaissance troop would receive one M978, while the remaining one would resupply the TOC and/or combat trains while also acting as a reserve in case of mechanical issues or enemy activity toward the other three.

When a tank company was attached to us, which was the case for the entire rotation, it came with a logistical package of two more M978s as well as tank-specific mechanics. This is not an organizational concern but a point for logistical leaders that significant assets must come with adequate support if they are to be effective.

Incorporating lessons-learned from the past 12 years, we fought a complex enemy who had conventional assets as well as insurgent-type forces (the hybrid threat). With this in mind, it is hard to imagine a convoy of supply vehicles moving 40 kilometers without some form of protection. With the FSC's current organization, that is exactly the case. There are no escort vehicles in the organization, and many of the supply vehicles that have the ability to mount weapon systems have not been issued the equipment to do so. To properly protect our assets, we assigned three unmanned humvees with gun turrets from the reconnaissance troops to Dakota Troop. Although this fixed the problem of security for our supply convoys, it created problems as well.

The field trains were located in the BSA but were not static for the length of the rotation. In fact, the BSA jumped (moved location) or pushed forward a FLE on four occasions, and each time Dakota jumped with it. The three escort humvees required nine Soldiers to man them. Those nine Soldiers could have manned an additional four cargo trucks of various types. As it stood, Dakota was unable to jump itself in one move and conduct resupply operations at the same time. This is a serious shortfall because as it stands, the field trains cannot remain mobile and accomplish their primary mission at the same time. Luckily, we were able to either make several trips while moving, or schedule resupply for non-conflicting times.

By either augmenting their organic organization to include escort vehicles, fielding the equipment to mount weapons on the supply vehicles, or increasing the number of supply vehicles, this problem could be addressed. We were able to successfully protect our convoys for the duration of the training event and to move everything we needed to move, but we were fortunate that the necessity to jump in one move, or to conduct resupply while jumping, was never faced.

Conclusion

NTC rotations are meant to be learning events, among other things, and for 5th Squadron, 4th Cavalry Regiment, the objective of learning from our successes and mistakes was achieved. There is no doubt in my mind that after the rotation, although not perfect, we were a much better unit than the one that put its equipment on the railcars in January 2013. Due to adaptability and by training logistics during all training events, we were able to sustain the squadron for the duration of the fight, and to do so in a more efficient manner as time progressed.

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Maneuver Captain's Career Course and Cavalry Leader's Course. He holds a bachelor's of science degree in military history from the U.S. Military Academy at West Point, NY.

Acronym Quick-Scan

ABCT – armored brigade combat team
BCT – brigade combat team
BFT – Blue Force Tracker
BSA – brigade support area
BSB – brigade support battalion
C2 – command and control
CFV – Cavalry Fighting Vehicle
FAS – forward aid station
FLE – forward logistics element
FSC – forward-support company
HHT – headquarters and headquarters troop
MAS – main aid station
NTC – National Training Center
SOP – standard operating procedure
STX – situational-training exercise
TOC – tactical-operations center
UMCP – unit maintenance collection point

Figure 1. If you were around in the '90s, you may remember the XM-8 Armored Gun System (AGS). *(Photo courtesy of BAE Systems)*

Strike Now:
Why the Armored Gun System Must Be Purchased in This Fiscal Climate

by CPT Josh T. Suthoff

The proposed Fiscal Year 2015 Department of Defense budget released Feb. 24, 2014, is dismal. Both services and branches stand to lose projects, formations and personnel as funding is restricted, but the Armor Branch does not have to. We have the ability to exploit the political terrain.

Secretary of Defense Chuck Hagel, during the budget press conference, stated that ground forces should be able to support air and naval forces against an adversary and focus on developing the next-generation vehicle platform.[1] Defense and Army leadership over the last few years continue to stress the need for a rapid and flexible deployable force that can be used in anti-area denial and access scenarios.[2] Currently the Army does not have an armored platform that fits that need. However, a platform that can be rapidly deployed by air in support of infantry conducting joint-operation access already exists. It is the X-M8 or Armored Gun System (AGS).

A history

Until 1997 and the closing of 3-73rd Armor Regiment (Fort Bragg, NC), the Army had a light armor capability in the M551 Sheridan. The tank proved its effectiveness in Vietnam in direct support of infantry. Its smaller size proved effective in Vietnam's restrictive terrain. Most importantly, 3-73rd distinguished itself in two events during Operation Just Cause. First, it conducted a successful air land with one platoon into Howard AFB, Panama. The second was a heavy drop of 10 Sheridans in support of 1st Brigade, 82nd Airborne. Eight Sheridans remained operational after the drop and provided more firepower for the brigade and conducted traditional cavalry operations. The Sheridan provided the commander flexibility and showed a true combined-arms team.[3]

Again, the Sheridan's size and direct-fire capability (152mm) proved effective as combat moved into the restrictive areas of Panama City. Due to the rules of engagement in Panama City, the Sheridan was the platform that light infantry relied on for accurate and timely fire; aviation and indirect fires

were less effective on an entrenched enemy in the dense urban environment.[4]

The Sheridan was slated to be phased out and replaced with a new AGS. The initial development started in 1978 and continued until a contract was awarded in 1992 to FMC Corporation. Critical design requirements included the need for the platform to 1) be deliverable by low-velocity air drop; 2) use a XM35 105mm as its main gun (with auto-loader); and 3) be able to fight immediately after de-rigging. All tactical heavy-lift aircraft in the inventory could deliver the platform: C-130s could carry two, C-17s could carry three and C-5s could carry five platforms.[5]

The AGS was titled the XM-8. It also carried a M2 machinegun for the tank commander and a 7.62 coax machine gun. The XM-8 had a three-man crew, a ground speed around 45 mph and an estimated 300-mile cruising range on a 150-gallon gas tank. Perhaps most importantly in a fiscally austere environment, the XM-8 was designed with multiple parts already in the Army supply system. The power supply was a modified Heavy Expanded Mobility Tactical Truck, or HEMTT, engine, and the power-control handles and transmission were the same as a Bradley. Additional passive armor can be added onto the vehicle and comes in three stages, with Level I (the lightest level) intended for airborne operations.[6] Today more modifications to the XM-8 would have to be specified by the Army, drawing from 13 years of conflict in Iraq and Afghanistan.

The AGS was designed to support airborne or light infantry in contingency operations, either during seizure of an airfield or roll-off operations (air-land) and support of ground force in a combined-arms roll providing lethality and maneuver.[7] The XM-8, like the Sheridan, gave the infantry direct-fire support in combination with other fires provided by close air support (CAS) and close-combat attack (CCA). It would also allow for precision direct fires on targets that may be surrounded by sensitive and high-collateral damage areas, something that cannot be guaranteed by air platforms. As an all-weather platform, it can also guarantee continued support if CCA, CAS and unmanned aerial vehicles are degraded by weather.

Figure 2. One of six preproduction versions of the XM-8 AGS going through extensive testing. *(Originally published in **ARMOR** September-October 1994 edition)*

Figure 3. The XM-8 AGS fires its 105mm cannon in a California test.

The U.S. Army purchased six XM-8s and began testing them in the early 1990s. The XM-8 was canceled in 1996 due to budget restraints, leaving the Army without a rapidly deployable armor package and infantry without direct fire support.[8,9]

Continued need

The question and need for mobile firepower was again raised to Armor Branch by the current 82nd Airborne Division commander, MG John W. Nicholson Jr. He succinctly sums up the capability gap that currently exists for one of the U.S. Army's main missions: "The idea of having mobile protective firepower that can be delivered by air – whether air drop or air land – and get into the fight immediately enables us to retain the initiative we gain by jumping in. But if all we're doing is jumping in and then moving at the speed of a World War II paratrooper, we're going to rapidly lose the initiative we gained by conducting a strategic or operational joint forcible entry. If we instead get a force on the ground that's mobile and has firepower, we can retain that initiative and achieve decisive results against the enemy."[10]

This type of mobile and lethal force with multiple methods of infiltration behind enemy lines is the true essence of the cavalry concept. This capability added to an airborne unit is a strong deterrent to our nation's enemies and a powerful diplomatic weapon for any U.S. president. A true combined-arms team would be deployable anywhere in the world in 96 hours. Imagine the

psychological and physical effect on the enemy if a force of AGS was successfully parachuted into an enemy area to disrupt and destroy targets of opportunity.

Employment

There are multiple ways the XM-8 could be incorporated into today's combat formations. MAJ Martin Stanton in a 1994 ***ARMOR*** article recommended building assault gun battalions with three AGS companies, totaling 44 weapon systems (two for battalion headquarters and 14 per company). The companies would be manned and equipped like a standard heavy tank company. Stanton recommends that each airborne or light division receive an assault gun (AG) battalion with three AGS companies.[11]

I believe that if approached from a battalion concept, planning should start with four battalions. One battalion would be positioned at Fort Bragg to support 82nd Airborne Division with one company for each brigade. A second battalion would be stationed at Fort Benning, GA, to support 75th Ranger Regiment and other Special Operations Forces. A third battalion would support 173rd Airborne Brigade, and a fourth battalion would be positioned in Alaska to support 4-25th Airborne Brigade and operations in the Pacific. These battalions would fall under a regimental headquarters, providing oversight and training guidance, and be co-located with one of the battalions. This would provide the Army with a total of 12 AG companies and approximately 176 AG platforms.

However, with fiscal constraints and to meet the Secretary of Defense's intent, a more tailored approach could be feasible with seven AG companies — or about 98 AG platforms. Each airborne brigade combat team (BCT) would receive an AG company, allotting three to Fort Bragg and one to 173rd. This would at minimum task-organize a platoon of XM-8s to an airborne battalion as necessary. In this scenario, an Alpha or Bravo cavalry troop would be replaced in the squadron with an AGS company. This would give the airborne BCTs a versatile formation, with one squadron controlling a motorized scout troop, an AGS company and a dismounted scout troop. This organic relationship would also allow a closer working relationship with the AGS company, scouts and infantry.

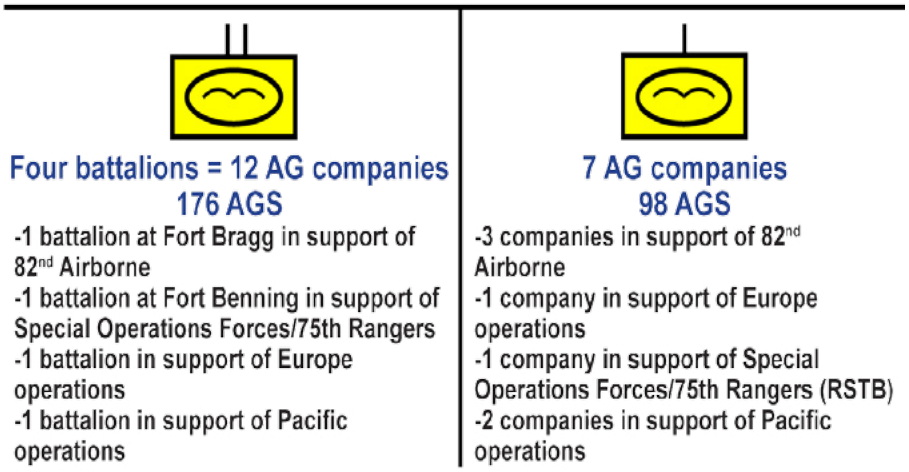

Figure 4. Recommended AGS formations.

One company would be added to the regimental special-troops battalion (RSTB) to support Special Operations Forces and 75th Ranger Regiment. With the "Pacific rebalance," it would make sense to add two AG companies to the airborne cavalry squadron in 4-25th Airborne BCT. Any scenario still allows the brigade commander to tailor his combined-arms force as he sees necessary (see Figure 4).

Conclusion

Compromising the maneuverability and lethality of the forcible/joint entry forces should never have been allowed when the Army canceled the XM-8 in 1996, but this platform is critically needed today as joint forces look for a light and lethal force. This smaller tank provides a critical gap during the time it takes to move main battle tanks into a theater. The XM-8 has already been designed, saving time and money, and only needs to be upgraded to take advantage of almost 20 years of technological advances and 13 years of conflict.

The Secretary of Defense wants to see what future vehicle concepts look like. The XM-8/AGS is the answer. The addition of this tank would provide an armored fist anywhere in the world, as well as a true armored-cavalry shock force against the nation's enemies.

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Acronym Quick-Scan

AG – armored gun; assault gun
AGS – Armored Gun System
BCT – brigade combat team
CAS – close air support
CCA – close-combat attack
RSTB – regimental special-troops battalion
SAMS – School of Advanced Military Studies

Figure 1. Emperor Napoleon Bonaparte looks over the field at the battle of Wagram, July 5-6, 1809. *(Painting by Horace Vernet)*

Napoleon Bonaparte's Contributions to Modern Warfare

by MAJ Jon Chavous

Napoleon Bonaparte participated in an important evolutionary period in modern warfare that occurred from about 1760 to 1914. During this period, warfare transformed from relatively small-scale limited warfare fought by poorly trained conscripts and a handful of mercenaries to global, fully industrialized total war. This evolution began with Frederick II of Prussia and his establishment of the canton system that effectively marked the beginning of standing, trained militias. The evolution culminated with World War I, which was the first fully industrialized total war on a global scale. This evolutionary period is important to modern warfare because many of its effects on warfare have endured well into the 21st Century.

Revolution in military affairs

The late 18th Century through the early 20th Century was a period of astounding change in politics, economics, culture and warfare. These changes were gradual but nearly constant over a period of roughly 160 years. Several changes in military tactics, organization and technology — as well as political and social aspects of warfare — occurred from the late 18th Century to the early 19th Century that constitute a revolution in military affairs (RMA). The synergy of the French Revolution and the leadership of Napoleon Bonaparte

caused this RMA. The French Revolution created the favorable conditions in the social, political and military realms, but it took the dynamism, organizational skills and military genius of Napoleon Bonaparte to bring the RMA to fruition.

There is not one agreed-upon definition of an RMA. The definition of RMA used for this article is "the assembly of a complex mix of tactical, organizational, doctrinal and technological innovations to implement a new conceptual approach to warfare or to a specialized sub-branch of warfare."[1] The elements of an RMA are characterized by changes in the nature of and purpose(s) of war itself. More than the advent of a particular technology, an RMA is normally the outcome of underlying processes — ideological, political, social, economic and demographic.[2] Similarly, an evolution in warfare changes how wars are fought, driven by the same underlying processes but taking a much longer time to occur. A simple way to quantify this is that an RMA occurs within a lifetime, and an evolution in warfare occurs over a longer period.

The evolution of modern warfare began with the Seven Years War from 1756 -1763, which involved most of the great powers of Europe and provided the impetus to sustain the practice of maintaining a standing military force. The Age of Reason throughout the 18th Century — which emphasized reason and individualism rather than tradition — promoted scientific thought, skepticism and intellectual interchange. The Age of Reason also had a catalytic effect on scholars of politics and warfare. Men such as Clausewitz and Jomini were doubtless affected by the Age of Reason and produced the foundations of modern military doctrine.

The American Revolution from 1775-1783 represents a transitional period between the limited wars in Europe in the 18th Century with small professional armies and limited goals, and means and the advent of the mass national warfare that arose during the French Revolution. The French Revolution from 1789-1799 was driven by radical social change and political upheaval, and had a fundamental impact on French history as well as modern history worldwide by introducing mass politics and mass warfare to Europe — and ultimately to the world. The Napoleonic Wars of 1803-1815 were propelled by mass national warfare and can be considered the first total war.

The Industrial Age circa 1760-1830 resulted in a transformation from hand production to machine production as well as a flurry of technological, economic, social and cultural changes that resulted in a permanent impact on warfare. The Industrial Revolution changed both why and how warfare is conducted. The temporal overlap of the Napoleonic Era and the Industrial Revolution allowed Napoleon to make advancements in equipment and weapons.

The American Civil War from 1861-1865 exemplified the requirement for an industrial base to conduct large-scale sustained combat. The American Civil War was observed by military leaders from Europe, who took the lessons-learned from that conflict and applied them to their own militaries. An example of this is the Prussian army. The Wars of German Unification from 1862-1871 generated technological advancements in transportation, logistics and weapons, but, more importantly, it produced the modern staff as well as the modern command-and-control system. This further served to professionalize the military as well as to develop the organizational structure and systems that would be used by European militaries at the start of World War I.

The evolution culminated with World War I from 1914-1918, which resulted in the first fully industrialized total war on a global scale. The scope of the war and the technological advancements it bore were unimaginable prior to its commencement and were of a level of significance that serves to simultaneously mark the end of an organizational evolution in warfare and the beginning of a technological evolution in warfare. The RMA caused by Napoleon is a critical element to this evolutionary period because of the changes he implemented in the conduct of war from 1803-1815.

Napoleonic Era

It is almost impossible to discuss the RMA caused by Napoleon Bonaparte without first discussing the French Revolution because the two are inextricably linked. The social, political and military elements brought about by the French Revolution made Bonaparte's ascension to power possible. He likely would not have made captain, let alone colonel, had not the hereditary norms of French society been undone by revolution.[3]

The French Revolution had a profound, lasting impact on European politics, society and economics. It brought mass politics and mass warfare to Europe and ultimately to the world. Furthermore, it replaced the old nation of king, nobles and the church with a new nation of citizens who were theoretically free and equal under the law and had an ethnic identity.[4] The desire for liberty and the societal discontent with feudalism spread across Europe and irrevocably changed political structures across the continent. The sense of nationalism specifically would have profound effects on warfare in raising large armies and fueling the conflicts into ever-larger scale. The French Revolution and Napoleonic Wars called for a mobilization of the population. Not only would young men participate, but also women, old men and even children would participate in the war effort by producing weapons, uniforms and supplies. This marked a significant milestone in military history and is considered by many as the first total war.[5]

One of the most obvious changes during the Napoleonic Era was the increase in size of the French army and subsequently that of other European countries. Under Napoleon, French resources were devoted to the military with unprecedented consistency. From 1800-1811, Napoleon raised 1.3 million conscripts and 1 million more from 1812-1813.[6] "The *levee en masse* gave France a numerical superiority over her enemies, a seemingly inexhaustible reservoir of manpower which allowed her two or three times as many losses as her opponents," according to Hew Strachan.[7] The vast size of Napoleon's army drove the requirement for a better system of organizing and employing it. Napoleon implemented the corps system, which

became one of his most enduring achievements.

Although the concept of organizing armies into division and corps was developed before the French Revolution, Bonaparte was able to make the corps system work more effectively than it had previously. He did this through decentralized maneuver and centralized control. By moving the corps separately, but within supporting range, Bonaparte was able to increase speed of movement, decrease the speed of employment in battle and decrease the burden of logistic support. Also, Bonaparte developed an effective staff that could manage the flow of communication between the separate elements and effectively control them. These new corps were organized as combined-arms units and consisted of cavalry, infantry and artillery. Because of their structure and supporting staff, the corps operated effectively, both as individual units and in concert.[8] Both Napoleon's system of organization and tactical-maneuver techniques are still studied and used in modern militaries.

The classic Napoleonic maneuver technique was the so-called *manoeuvre sur les derrie`res*. In its ideal form, one corps, having made contact with the enemy, would conduct a feint to the enemy's front, while the main force would fall on the enemy's rear.[9] Although Bonaparte was not the first to conceive of this maneuver, he was the first to consistently gain success by its employment with a large force — due primarily to his ability to maneuver more quickly than his adversaries as well as to his improvisational leadership style. Also, Bonaparte combined speed, firepower and protection in a lethal combination. He achieved speed through his rapid deployment from movement formations into maneuver, firepower by massing forces at the decisive point and protection by masterfully using terrain such as rivers or hills to protect his flanks and rear.

An artilleryman himself, it is not surprising that Napoleon was a strong supporter of the employment of artillery. The artillery arm's major contributions include increased mobility, improved quality of the cannons and more effective employment by means of combining the effects of artillery with that of infantry and cavalry.[10] Under the Napoleonic system, artillery became a decisive arm and was used to spearhead an assault by creating a breach in an enemy's line, which could be exploited by infantry and cavalry.[11] As in other aspects of the RMA, Napoleon exploited the changes in government resulting from the French Revolution, which allowed the nation to mobilize the industrial base for warfare. The government controlled prices and wages in the arms industry, which also increased the number of state-run weapons factories. Scientific research was systematically put at the service of the national defense industry.[12] The result was that the French army would be equipped with a greater quantity and quality of cannons relative to its adversaries.

The immense size of Napoleon's army created new challenges for logistic support. It could not remain stationary for very long and requisition enough food and other supplies to sustain it. Napoleon wrote, "To know … how to draw supplies of all kinds from the country you occupy makes up a large part of the art of war."[13] The French army, therefore, became very skilled at foraging during campaigns. Also, a revolution in agricultural techniques occurred in Europe during the early 18th Century, which increased productivity. The potato was grown in larger quantity and proved a portable, ready-to-eat food source.[14] This allowed the army to move more quickly and cover greater distances than before. Easing the burden of logistics was a critical enabler to Napoleon's style of maneuver.

Another critical enabler to Napoleon's style of maneuver was an increase in the experience and professionalism of his soldiers and their leaders, which would allow decentralized maneuver and increased speed on the battlefield. The army under Napoleon mirrored the cultural shift away from civil aristocratic leadership during the French Revolution. The practice of merit-based promotion was introduced and expanded during this era. Many French officers at the beginning of Napoleon's reign were promoted from the lower ranks, which provided an unprecedented level of professionalism, experience and motivation in the French officer corps. Napoleon personally benefitted from this system, which allowed his own ascendance in the ranks and therefore made the RMA possible.

Viewed from a holistic perspective, the Napoleonic RMA was the result of a combination of many factors. Some of the elements were present in the late 18th Century such as French tactics, equipment and artillery doctrine. The French Revolution provided the context with which social and political change could coexist in a synergistic fashion with military reforms.[15] Mass politics and warfare propelled the Napoleonic Wars and ultimately changed modern warfare. As we revisit the definition of RMA ("the assembly of a complex mix of tactical, organizational, doctrinal and technological innovations to implement a new conceptual approach to warfare or to a specialized sub-branch of warfare"), it is clear that Bonaparte's contributions did in fact constitute a revolution in military affairs.

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[12] Strachan.

[13] Paret, Peter, editor, "Napoleon and the Revolution in War," ***Makers of Modern Strategy from Machiavelli to the Nuclear Age***, Princeton, NJ: Princeton University, 1986.

[14] Strachan.

[15] Liaropoulos, Andrew N., "Revolutions in Warfare: Theoretical Paradigms and Historical Evidence – the Napoleonic and First World War Revolutions in Military Affairs," ***The Journal of Military History***, No. 2 (04, 2006); from http://search.proquest.com/docview/195631605? accountid=14746.

Acronym Quick-Scan

MCCC – Maneuver Captain's Career Course
RMA – revolution in military affairs

Planning Assumptions:
Are They Really Necessary and Valid?

by retired LTC George Hodge

We have seen mission-analysis briefings for years that include a slide titled "Facts and Assumptions." The facts (bearing on the problem) are generally easy to identify and make sense of, primarily because they are just that, facts — evidence that stands on its own merit and needs no other confirmation because it is provable. Assumptions, on the other hand, are not currently provable but are based on sound logic, high probability of occurrence and applicability to the problem set.

However, it is common to dismiss many of the initial facts or assumptions because they are neither ***necessary*** nor ***valid*** once we look critically at them. This article expounds on the criteria of ***necessary*** and ***valid*** and proposes that the best venue for addressing assumptions is actually at the beginning of course-of-action (CoA) development rather than during the mission-analysis briefing.

Defining 'necessary' and 'valid'

In a typical practice scenario where U.S. forces are moving into a contested area during an irregular-warfare environment, typical assumptions often include comments such as "The guerrilla forces will attempt to interdict and disrupt coalition forces with complex ambushes and improvised explosive devices," or "The host nation will be able to provide potable water to meet our unit's needs."

While both of the assumptions may be true and even valid, they do not meet the requirement of "necessary," thereby making them of no real value to our decision-making process at this point. Usually the facts and assumptions listed during the mission-analysis briefing rarely pass the "so what" test. The purpose of listing them is to allow the commander and staff to continue with the planning process in selecting a CoA.

The U.S. Army's ***Commander and Staff Officer Guide*** (Army Tactics, Techniques, and Procedures (ATTP) publication 5-0.1) defines facts and assumptions: "A ***fact*** is a statement of truth or a statement thought to be true at the time. Facts concerning the operational and mission variables serve as the basis for developing situational understanding, for continued planning and when assessing progress during preparation and execution. In the absence of facts, the commander and staff consider assumptions from their higher headquarters and develop their own assumptions necessary for continued planning. An ***assumption*** is a supposition on the current situation or a presupposition on the future course of events, either or both assumed to be true in the absence of positive proof, necessary to enable the commander in the process of planning to complete an estimate of the situation and make a decision on the [CoA]."

This begs the question: "Why then are assumptions listed during the mission-analysis process when we have not yet begun any planning of CoAs?" Perhaps they should be one of the first items briefed during CoA development instead. The reason for this is CoAs are often based on certain conditions being present for the CoA to be feasible, suitable or acceptable. Since CoAs should be distinctly different from one another, they will usually be predicated on distinctly different assumptions.

Example: In a CoA where a light-infantry battalion is considering an air-assault operation, a key assumption might be made about the amount of aircraft available for the mission. This assumption will normally not be encountered during mission analysis but will rather be determined when the unit begins planning possible CoAs, therefore making a validity check on the feasibility of this assumption necessary to proceed with CoA development. Since this is necessary to continue planning the mission, the staff must

Figure 1. U.S. Army UH-60 Blackhawk helicopters assigned to 1st Battalion, 189th Aviation Regiment, 36th Combat Aviation Brigade, line up for night air-assault training with Soldiers assigned to 1st Brigade, 4th Infantry Division, at Udairi Army Airfield, Kuwait, Sept. 6, 2013. CoA training helps establish the validity of assumptions. *(U.S. Army photo by SGT Mark Scovell, source: http://www.dvidshub.net/image/1018853/air-assault-night#ixzz2mzjmXK1e)*

now ensure the planning figure is valid. So what constitutes the validity check?

The American Heritage Dictionary defines ***valid*** as "Containing premises from which the conclusion may logically be derived. Correctly inferred or deduced from a premise." Using this as our standard for ***valid***, the way to check for a valid planning figure of the number of available aircraft would be to seek expert advice (correctly inferred) such as from the brigade aviation officer (the logical person to ask).

'Bell curve' planning

The trick here, as with any assumption, after proving that it is necessary to continue planning, is to make a judgment call on the "degree of validity." Just how many aircraft (and crews) will be available for the air assault three days from now? Figure 2 represents a way to look at determining the validity of an assumption; view it as a "bell curve"-style graph.

The horizontal axis (*x*) represents the number of resources available (aircraft and crews). The vertical axis (*y*) represents the likelihood of occurrence (degree of probability). The curve represents the degree of probability of any likelihood of occurrence. At the left end of the chart, there is a low occurrence the unit would have less than 10 aircraft available (<25 percent). At the far-right end, there is a still-low-but-somewhat-higher chance of having all 30 available. Each end of the curve represents figures that would likely make the assumption invalid because of the low likelihood of occurrence. Somewhere in the middle is the greatest likelihood of occurrence.

In this case, the brigade aviation officer believes that based on current operating tempo, maintenance schedule and crew management, there is a 75-percent-and-higher likelihood they should be able to put up between 23-28 aircraft for the mission three days from now. In the meantime, he recommends the brigade use a planning estimate of 25 aircraft (peak of validity) for CoA development. Thereby the assumption is listed as "The aviation battalion will have 25 aircraft available for the air-assault mission." This assumption is now considered valid.

The same "bell curve" principle can be applied when making other assumptions. Example: In a situation where an advancing armored force is facing whether or not enemy forces will blow the bridge-crossing sites before its arrival, one of its CoAs is based on capturing the bridges intact, but a second CoA has as an assumption: "The enemy will blow the two Class 100 bridges leading into the objective area." (In this case, the statement might well be determined during the mission-analysis process since the intelligence officer developed it during intelligence preparation of the battlefield, but it requires further exploration to determine its full impact on the unit. This will occur in CoA development.)

In this case, planning a river-crossing contingency is now necessary, and the check for validity is "Do we have the available means and resources to conduct a river-crossing operation without using the two Class 100 bridges? If so, what are those means and resources?"

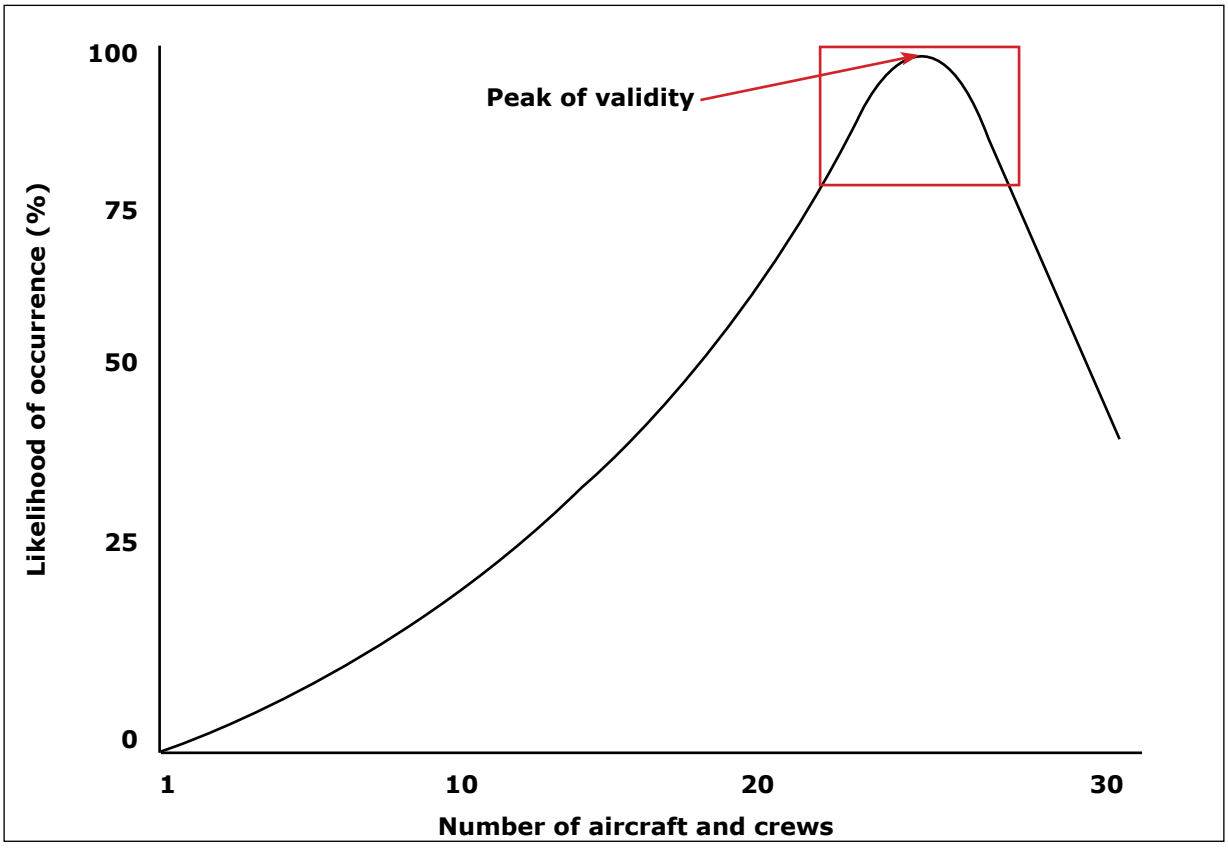

Figure 2. 'Bell curve' planning, where the horizontal axis (*x*) represents the number of resources available (aircraft and crews), the vertical axis (*y*) represents the likelihood of occurrence (degree of probability) and the curve represents the degree of probability of any likelihood of occurrence.

The advancing armored force must now determine what gap-crossing assets are available to its force. (Everything from helicopters to secure the far side to rubber boats and assault float bridging.) The type and amount of resources available will then determine the unit's possible CoAs.

Using the bell-curve principle, the *x* axis would be the amount of each resource (helicopters, boats or bridging), and the *y* axis would be the likelihood of getting those assets, and how many of them. After coordination with the appropriate liaison officers, a planner can then determine the valid planning figures for CoA development. In this example, planners consulted with the appropriate liaisons and developed their list of valid assumptions that read:

- No helicopters will be available to secure the far side.
- We will have 12 eight-man rubber boats.
- We will receive operational control of a multi-role bridge company from X Corps.

Key points

Based on this information, the staff begins developing CoAs based on current facts and assumptions because they are necessary to continue planning. Unless the resources change, the CoA must be planned within the limitations of available resources. Any CoA using planning factors outside the current assumptions invalidates the CoA. What makes the assumption valid is the research that planners did with outside units to see what the likelihood of occurrence would be for the force to get those assets.

Key points:

- An assumption is ***necessary*** to allow the unit to move forward with planning.
- An assumption is ***valid*** when some reasonable amount of research has been done to determine the likelihood of its occurrence.

Figure 3. U.S. Army Reserve Soldiers of 652nd Engineer Company, located in Hammond, WI, remove tension in bridge bays before disconnecting them on the Arkansas River as part of a training event at River Assault 2011 at Fort Chaffee, AR, July 26, 2011. The exercise culminated in the construction of a floating improved ribbon bridge across the Arkansas River. Resources and partnerships can be trained after proper CoA development. *(U.S. Army photo by SPC Brittney Bradley, 343rd Mobile Public Affairs Detachment, source: http://www.dvidshub.net/image/435931/river-assault-bridge-crossing#ixzz2mzl8jYm7)*

It is unlikely these assumptions would have been fully developed during the mission-analysis process, therefore since each CoA is different and is based on different assumptions, we should consider saving the "Facts and Assumptions" slide for the beginning of CoA development, where we would have uncovered more detailed and meaningful information.

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Notes

[1] ATTP 5-0.1, ***Commander and Staff Officer Guide***, Sept. 14, 2011.

Acronym Quick-Scan

ATTP – Army Tactics, Techniques and Procedures (publication)
CoA – course of action

TACTICAL DECISION EXERCISE

Tactical Vignette 14-01: "Battle at Narrow Bridge"

***ARMOR** publishes tactical vignettes, or tactical decision exercises, to generate professional dialogue. Scenarios may seem vague and lack pertinent information to mimic the confusion of battle. There are no "right" or "wrong" answers. Use your doctrinal knowledge and educated assumptions to determine "What's Your Next Move?"*

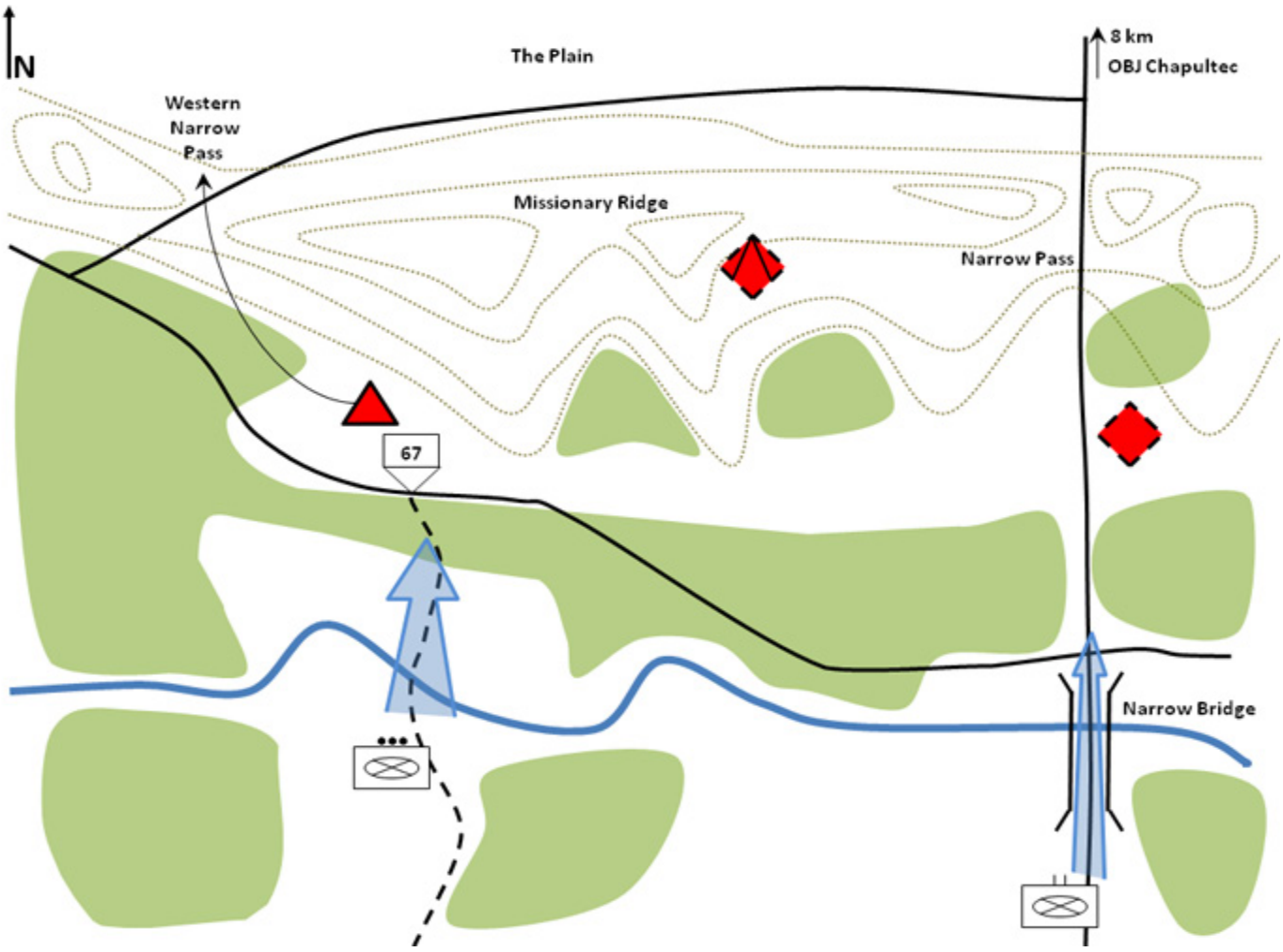
Situation

You are the mechanized platoon leader of 1st Platoon, Company A, 2-81 Armor (a combined-arms battalion). You are task-organized with two infantry squads in M2 Bradley Fighting Vehicles (BFVs) and two M1A2s.

The 1-502 Infantry Battalion (Air Assault) is attacking north to destroy enemy forces vicinity Objective Chapultec and has already air-assaulted a rifle company in the plain south of Objective Chapultec. Reports indicate that a superior force has decisively engaged the rifle company.

Your battalion's mission: 2-81 Armor follow and support to assist 1-502 Infantry attack to destroy enemy forces vicinity Objective Chapultec. On order, attack to destroy enemy forces vicinity Objective Chapultec to prevent their southward advance.

Your battalion commander's intent is to force passage onto the plain. The terrain south of Missionary Ridge is generally rugged and undeveloped with thick vegetation and severe relief. The enemy you are fighting is



primarily infantry with point obstacle and anti-tank capabilities augmented with small numbers of armored vehicles – a mix of T-72, BRDMs and BMPs. It is 2315 hours; there is a full moon. Your platoon advances along the battalion's left flank with the following task and purpose:

Task: Screen the battalion's western flank.

Purpose: Enable the battalion to follow and support 1-502 Infantry.

Your platoon moves parallel to a trail – but not on it – and you cross a dry, rocky gully about three to four feet deep and 20 meters wide without making contact. As you approach Checkpoint 67, your lead M2 BFV makes visual contact with what appears to be a listening/observation post that immediately flees northwest toward the Western Narrow Pass.

Your battalion is in contact to your east. Your best guess from listening to radio transmissions and monitoring Blue Force Tracker (BFT) is that the engagement is taking place near Narrow Bridge. You cannot tell whether your battalion has negotiated the bridge, but you can hear explosions and assume that vehicles are taking casualties. From your position, you can see an enemy machinegun and anti-tank fire on the ridge to your northeast.

On the battalion command net, you hear the battalion S-3 directing supporting fires onto enemy positions near the bridge. Looking at your BFT, the overall tactical situation is unclear, but it appears the battalion is attempting a right flanking movement against the enemy position. Except for the listening post that fled, there is no sign of enemy activity in your area.

What's your next move?

Decide what to do and issue your fragmentary order as if you were speaking on the radio or via BFT message. Following your initial FRAGO, take time and clearly define the problem(s) as you see them. Submit both your initial FRAGO and discussion of the problem, assumptions and rationale for your solution to ***ARMOR***. The author's solution will be published in the May-June edition of ***ARMOR***; select solutions and a more thorough discussion will follow in the July-August edition. Submit solutions to usarmy.benning.tradoc.mbx.armor-magazine@mail.mil no later than 30 days after this edition (March-April) is posted on-line.

Acronym Quick-Scan

BFT – Blue Force Tracker
BFV – Bradley Fighting Vehicle
FRAGO – fragmentary order

Partnership at Troop Level is Essential Element in Joint Distributed Operations During Drawdown Transition from Counterinsurgency to Foreign Internal Defense

A case study based on the experience of a battlespace owner in Kandahar City, Afghanistan, during Operation Enduring Freedom 12-13 and on combat-adviser experience in Sadr City, Baghdad, Iraq, during Operation Iraqi Freedom 08-09

by MAJ Michael J. Kelly

The wars in Iraq and Afghanistan over the last decade – Operation Iraqi Freedom (OIF) and Operation Enduring Freedom (OEF) – have used counterinsurgency (COIN) doctrine. Solidified at U.S. Army Training and Doctrine Command, first usage of COIN doctrine was during the surge in Iraq and then in Afghanistan. However, at some point in operations, we must transition from COIN to foreign internal defense (FID); we do this with less success because of a gap in doctrine.

Please note that in this article, I speak from my experience in operations before COIN was implemented (OIF 2005-06) and during COIN employment in the transitional drawdown to FID (OIF 2008-09 and OEF 2012-13). My transitioning experience in drawing down these wars came during OIF 2008-09 as a military-training-team (MiTT) member combat adviser, advising an Iraqi army brigade in battlespace control of Sadr City, Baghdad, and more recently, as a battlespace owner (BSO) commanding a cavalry troop in Kandahar City in OEF 2012-13.

Combat advising

During OIF 2008-09, Multinational Forces-Iraq (MNF-I) set June 30, 2009, as the day U.S. forces would "be out of the cities," allowing Iraqi forces to take the lead. Similarly, during OEF, the International Security Assistance Force (ISAF) set July 1, 2012, as the official Afghan National Security Forces (ANSF) "in the lead" day.

Consequently, MNF-I went from two brigade combat teams in East Baghdad during my tour in OIF 2008-09 to two battalion-task-force elements with five brigade-level MiTTs and one division-level MiTT. The maneuver units' key task became strategic overwatch, with U.S. forces ready to: 1) reinforce Iraqi units to target insurgents and 2) enable Iraqi units as a quick-reaction force against their forces' strategic failure. In essence, the task was to allow Iraqi forces to maintain the lead while ensuring their success at security operations. I will not divulge the specifics of the conflict set in Kandahar City, but a similar effort is taking shape; the notable difference is that the ANSF is able to maintain the relative stability maintained by previous ISAF units even through the "fighting season."

The U.S. Army eventually answered this change in tasks as it took on the topic of combat advisers, restructuring MiTTs' role into security-force assistance teams (SFATs). These redesigned teams are made up of more field-grade officers and fewer company-grade officers. SFATs were tasked with the responsibilities of advising and assisting the higher-echelon partnered forces while relying on the brigade to provide a security element for the team.

Another change was the SFAT's pre-deployment training. SFATs began to train with the deploying brigade before deployment (MiTTs did not train with the brigade or coalition forces unit they would work with before deploying). However, both the SFAT's and MiTT's primary mission is the same (and therefore training should be similar): they are in working partnerships and advising roles with foreign security forces in the security line of effort (LoE).

Since our transition point to drawdown is a critical point in time, the questions I want to discuss or provoke thought on are:

- Why are strong partnerships essential in transitioning at the troop- and combat-adviser level?
- What are joint distributed operations (JDOs), and how can partnerships and enablers "bridge the gap" from COIN to FID?
- How do we transition between COIN and FID?
- How does the troop or company commander and SFAT chief task-organize for the mission?
- What tasks should pre-command captains focus on while in the Maneuver Captain's Career Course (MCCC) to prepare for this mission?

Definitions

Before we can discuss transitioning from COIN to FID, JDOs or irregular warfare, we have to agree on the doctrinal definitions of each. (Figure 1.) We need a basic understanding of terms in relevant readings that include

joint terminology and doctrine such as Joint Pamphlet (JP) 3-24. David Kilcullen's "28 Articles" and David Galula's analysis on insurgency and cultural information provide an understanding of the insurgency but also that of partnership and its importance in a transition to drawdown.

Similarly, the human terrain is paramount in COIN success in that the indigenous population must trust the coalition forces as well as the host-nation forces more than they trust the insurgency. As these concepts are not hard to comprehend, most barriers to implementing a successful campaign through transition are commanders or combat advisers who are unwilling to take the necessary steps to ensure a strong partnership at their level. Partnership is the quintessential element that enables the BSO or combat adviser to transition the host nation into the lead.

Questions/ discussion

Why are excellent partnerships essential in transitioning to drawdown for company/troop teams and combat advisers?

Before a host nation is able to lead security operations, the higher command (battalion and above) must facilitate the host nation's ability to take the lead. Previously, when brigades and divisions deployed in the war on terrorism to OEF or OIF, they prepared for their specific mission(s) in a specific allotment of time – the unit's endstate did not envision the war's endstate and thus the eventual handover of security and all other LoEs to the host nation. This shortsighted viewpoint led to weak or non-existent partnerships between host-nation forces and BSOs and/or combat advisers. Intuitively, success for the host nation is paramount. When the BSOs' primary concern was that of their own statistics, or tasks associated with securing themselves, host-nation forces were unprepared for the demands of combat once transitioned to the lead.

Much of the effort to enable our host-nation partners rests on the personalities of the BSO commanders and combat-adviser teams (MiTT or SFAT) in a unity of effort across the operational environment (OE). If commanders or combat advisers are not willing or able to make the partnership work with the host nation, the next unit will have to fix it, leaving the deployment with an endstate of failure. Granted, as a BSO there are many tactical gains achievable on our own without enabling the host nation and, for some BSOs, that is their only reward. However, what is the point of losing blood and treasure on these tactical gains if the gains are not sustainable and transferable?

In this state of transition, commanders and platoon leaders must carefully match as partners to our foreign counterparts. Otherwise, they can easily deteriorate what may have been a strong partnership if they do not have the right adviser-like qualities. (Figure 3.) Commanders must embrace these qualities since the transitioning-phase BSOs will provide overwatch and work closely with the host-nation forces. Also, depending on the number of partners and the OE's size, operational gains can be multiplied by working together and dividing security tasks with the host nation.

When you start working with a new partner, you must complete a certain amount of reconnaissance to assess your partner's capabilities. Once you determine strengths and weaknesses, you can make a training plan to help improve their weaknesses and initiate a planning effort to take advantage of their strengths. An example would be a host-nation police unit that is excellent at checkpoint operations but lacks tactical knowledge on conducting dismounted patrols in an urban environment. A simple patrolling class can be assembled to help the host-nation police develop their dismounted patrolling techniques while a sizable amount of the partnered force maintains checkpoint operations.

Equally, the higher command must ensure similar units are partnered – for

Definitions

Counterinsurgency: Comprehensive civilian and military efforts taken to defeat an insurgency and address any core grievances. (U.S. Joint Forces Command Draft Concept 3-24, 2009)

Distributed operations: Operations characterized by forces widely dispersed in multiple domains throughout an operational area, often beyond mutually supporting range and operating independently of one another because of distance, differing missions and capabilities, but supported by a variety of nonorganic capabilities. The critical distinction between distributed operations and joint distributed operations is the level and responsiveness of external support to the distributed units. (U.S. Joint Forces Command Draft Concept 3-24, 2009)

Foreign internal defense: Participation by civilian and military agencies of a government in any of the action programs taken by another government or other designated organization to free and protect its society from subversion, lawlessness and insurgency. (Joint Publication 1-02, 2009)

Insurgency: The organized use of subversion and violence by a group or movement that seeks to overthrow or force change of a governing authority. Insurgency can also refer to the group itself. (U.S. Joint Forces Command Draft Concept 3-24, 2009)

Irregular warfare: A violent struggle among state and non-state actors for legitimacy and influence over the relevant populations. Irregular warfare favors indirect and asymmetric approaches, though it may employ the full range of military and other capabilities, to erode an adversary's power, influence and will. (Joint Publication 1-02, 2009)

Operational environment: A composite of the conditions, circumstances and influences that affect the employment of capabilities and bear on the decisions of the commander. In other words, the operational environment is everything, everybody and every event around you. (Joint Publication 1-02, 2009)

Figure 1. Doctrinal definitions.

Figure 2. U.S. Soldiers of the attached military-police platoon share an Eid meal with ANSF soldiers at PSS 7 in Kandahar City before ISAF disembedded.

Recommended adviser traits

Army

- Courage
- Commitment
- Candor
- Competence

Officer evaluation report (ones in bold hold primacy)

- Attributes: mental, physical, **emotional**
- Skills (competence): conceptual**, interpersonal,** technical
- Actions (leadership): **communicating**, decision-making, **motivating**, planning, executing, assessing, **developing**, **building**, learning

The Noncommissioned Officer Evaluation Report is not currently formatted for easy identification of adviser traits in prospective candidates. The same traits apply to all advisers, rank immaterial.

Combat experience when possible. It brings instant credibility among the advised forces.

Figure 3. Recommended adviser traits.

instance, partnering a military-police unit with an Afghan police unit and an infantry company or cavalry troop with an Afghan National Army unit. A structure such as this will prevent maneuver units from conducting maneuver operations with a police unit, for which the police unit would not be prepared or equipped.

Another example would be that of police units who use warrant-based operations, whereas our military-intelligence cells do not – instead they use targeting to interrogate suspects. Unfamiliar with military-intelligence tactics, the partnered police units may be hesitant to detain someone without actual evidence that uses the rule-of-law process they are trying to follow. Ensuring we leave the host nation with sustainable gains entails that we continue to facilitate our partners' education and training.

Certainly, participating in joint patrols with your partners builds trust in the relationship that both units are willing to maneuver through the same dangerous areas together. However, there are pitfalls in only performing joint patrols, as the perception that we are untrusting of or unwilling to allow our partners to take the lead may solicit host-nation resentment of us. Therefore, it is important that host-nation forces are planning and leading patrols. This demonstrates that you will follow their lead and will build your "wasta" with your partners. Therefore, our forces must not just "show up" for the mission; although other forces' pre-mission planning is less deliberate than our troop-leading procedures or military decision-making process, one must remember it is their mission to lead and our role to support as necessary.

Empowering the host nation to conduct missions means relinquishing control but respectfully continuing to give advice. Using degrading tones and insults – especially in front of subordinates – or any other demeaning management style in a partnership will never work in this effort and simply works against the endstate. I have personally witnessed these negative types of partner relationships by BSOs and combat advisers, and they certainly do nothing to help either party – and probably lead to negative green-on-blue instances (or vice versa). In light of the current situation, another advantage of a strong partnership is the likelihood it will decrease green-on-blue incidents; a close partner would not allow this to happen.

Ultimately, having strong partnerships works toward the ultimate endstate of the host nation's full control, but for that to happen, the host nation must take the lead. A unity of effort of all BSOs and combat advisers must constantly be working toward that goal.

How do we transition between COIN and FID?

The widespread use of COIN doctrine as a U.S. military effort has only come about during the war on terrorism, although it certainly existed before that. One of the major differences between COIN and FID is that military power in COIN involves the use of many conventional forces, whereas FID relies mostly on a small conventional force and Special Forces or "other governmental agency" (OGA) capability. Both include an array of OGAs' involvement, but as with the military in COIN, the Department of State (DoS) and U.S. Agency for International Development (USAID) package is much larger during a COIN effort. With both OEF and OIF, a large portion of the international community was involved, helping along all LoEs; this adds to the host nation's credibility.

In both OIF and OEF, COIN involved a

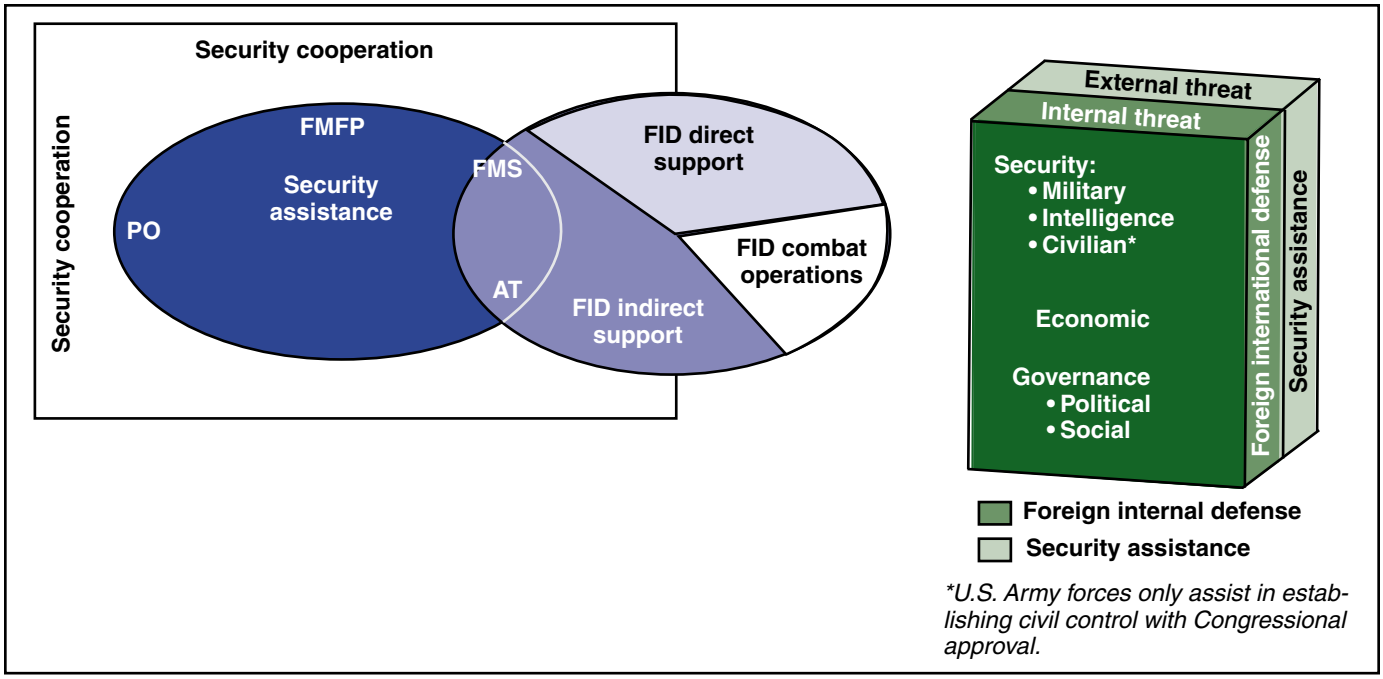


Figure 4. Security cooperation, security assistance and FID.

surge of forces, with focus on the security LoE, which gave the host nation the capacity to train an armed force to assume the security LoE once the surge was complete. Working in concert during the surge, we focused on the governance and economic LoEs as well, with the stabilizer being security. Another major difference in FID is that the host-nation government is mostly in control, and the level of subversion is less, so that a smaller element can help with the problem. Unfortunately, as seen in both OEF and OIF, a complete revamp of all governance – rebuilding these countries from the ground up – was necessary.

The rationale in transitioning from COIN to FID is the premise that the host nation – with some assistance from the supporting coalition – is strong enough to maintain control and the lead on all LoEs (governance, security, economics). The ability to do this is created by a surge of forces that enable the host nation to build capacity. Moreover, this capacity created by the surge of conventional forces is where many of the governance and economic LoEs are able to expand their influence.

Correspondingly, the surge presents an opportunity for the coalition and local populace to build an enduring relationship built on trust. The host nation's people must believe that coalition forces are trustworthy and will protect them from insurgent retribution. The host nation must recognize that when coalition forces hand over responsibilities, ensuring its local populace is protected from insurgent activities must remain the highest priority – if this happens, trust is created and subsequently strengthened between host-nation and coalition forces. Unfortunately, there have been a few instances where individuals or small groups of service members have created doubt as to what our priorities are as portrayed in the media.

In the big picture, to move into the FID role, a capable governmental, economic and secure state that has the people's trust must be in place. Once capable-government capacity is reached, partnerships can be passed from the bottom up, starting at the company/troop level through combat advisers to eventually draw down coalition ground forces to let host-nation forces begin to lead.

With these drawdowns comes a massive supply exodus of equipment out of theater. Since the coalition governance, Special Operations, intelligence and combat-adviser elements are already operating in theater during COIN, there is no need to push more assets into theater, as they are already there. Simply put, removing larger conventional forces accelerates a FID operation if stable conditions for host nations are set.

What are JDOs, and how can partnerships and enablers "bridge the gap" from COIN to FID?

For the first time in military history, the conventional military has adapted largely over the last decade to using more enablers in operations. Previously, preparing units for war meant most units had very little in the way of enablers at company or troop level – or even at the battalion level. For instance, it was unprecedented that at the troop, company or battalion level, the unit became involved in LoEs such as the influence of governance or economics. Before deployment, units were allocated with the necessary equipment to complete the tactical tasks they were assigned.

In addition, we had to enable units to fight along all LoEs, and much of this was not kinetic fighting. Progression was necessary not only in security but also in the economic and governance LoEs. Fortunately, JDO allows the smallest command element to fight across all LoEs. A company or troop in a JDO has added enablers normally used at the battalion level or higher to facilitate the unit in fighting along all LoEs.

The station a JDO must occupy requires that the company or troop element

must be physically located away from the battalion headquarters. Seen in both OIF and OEF with the implementation of COIN were the use of an array of platoon- or company-level combat outposts (COPs) – i.e., joint-security station or personnel-security support (PSS), depending on the operation. In essence, COPs allowed company- or troop-sized elements or smaller to operate in and among the people thereby providing security in an area, whereas prior to COIN doctrine, units would "drive to work."

In my last deployment as a combat adviser, I worked with Company A, 2-5 Cavalry, in Sadr City, who had more enablers in the JDO than any other JDO I've personally witnessed. The level of priority and the foreseeable impact that success in Sadr City would have on the war were the reasons that enablers were added to this specific OE. The JDO to which I am referring was a COP near Sadr City that included an infantry company, MiTT, provincial reconstruction team (PRT) (DoS or USAID), civil-affairs (CA) team (CAT), tactical psychological-operations team (TPT), human-intelligence control team (HCT), aerostat (balloon with camera) and multifunctional team (MFT) (signals intelligence), who worked together along all LoEs to transition to a drawdown of coalition forces and to enable Iraqi forces. Likewise, this company regularly supported Special Forces missions in the OE that conducted targeted kinetic raids with Iraqi forces. Subsequently, Company A was the main effort for MNF-I during this tour to OIF and was the premier example of what JDOs can accomplish.

For instance, in East Baghdad in January 2009, there were two brigades that decreased to two battalions by July 2009; more enablers were added to the company to help maintain the coverage of intelligence assets and to enable host-nation partners. Eventually during a drawdown, the sharing of intelligence assets must occur, but there is a very delicate balance of what intelligence assets we are able to share with our host-nation partners to enable them to assume the lead as we slowly decrease our operations. As the transition initially starts, coalition forces sharing enablers – combined with the human intelligence our host-nation

Figure 5. A joint patrol enables Afghan police with mine detectors. Enablers include the Explosive Ordnance Detachment (EOD), a working dog and HCT.

Figure 6. U.S. Soldiers go over the route with their Afghan partners on a 'transformative application.'

forces have – many times will yield initial tactical-level victories, as the enemy never expects when the host nation will gain these advantages.

When most units prepare for deployment, they do not train with this variety of enablers at the company/troop level. Most will only see a select few of these during a deployment. Since the employment of COIN doctrine, most units have a company intelligence-support team (COIST), who works to provide intelligence information up and down the chain of command as well as left and right to other company-/troop-level elements around the battlespace. Predeployment training at combat training centers (CTCs) conducted at brigade-and-below mostly focuses on the maneuver unit's ability to shoot, move and communicate. There is not enough focus on a unit's ability to master the art of COIN with joint-enabler assets in the JDO. Unless there is prior experience within the JDO, learning to operate in the JDO will usually be conducted in combat. Some of these enablers are rare, so the military is unable to train with these elements

before deployment; a large step in the right direction is with SFATs and their rotation to CTCs with conventional units.

One large difference between embedding assets from OIF to OEF is that PRTs, CA and TPT were not embedded in parts of OEF, whereas in OIF they were almost always embedded. Embedding these enablers is a key step to improving along the governance and economic LoEs because it 1) allows the PRT to see the problem sets from the closest battlespace and 2) allows the team or enabler to get the common operating picture. Embedding enablers at the lowest levels follows COIN guidance from JP 3-24 (DoD follows this, but DoS and USAID do not), so one must ask the question: in COIN-like wars, should DoS and USAID have to follow certain DoD joint doctrine when it comes to embedding to improve unity of effort? COIN was more efficient in OIF than OEF from the PRT perspective simply because PRTs were embedded. This does not only apply to PRTs in OEF but enablers as a whole. While OEF is still a JDO, it is more degraded because of the lack of enabler distribution to lower-level maneuver units, even in key terrain areas.

Joint patrols with partners is one area in which joint enablers can demonstrate to our host-nation partners the advantages of what our enablers bring to their forces. These enablers help improve survivability and, as research suggests, allow us to defeat the enemy. Furthermore, enablers can be requested by all units maneuvering the battlespace, but are ever-changing with the enemy's changing tactics. For example, since the war on terrorism began, we have gone from using the standard unarmored humvee to upgraded mine-resistant, ambush-protected vehicles. In addition, enablers can include unmanned aerial vehicles, mine detectors, air-weapons teams, MFTs, HCTs, EOD, route-clearance teams (RCTs), intelligence-surveillance-reconnaissance, TPTs, CATs, Special Operations forces and more.

How does the troop/company commander and SFAT chief task-organize for the mission?

Task-organizing for drawdown transition is a phase where the guidance from higher can be somewhat murky (at best). There is little doctrine to go by, and where there is doctrine, it is limited. Field Manual 3-07.1, ***The Modular Brigade Augmented for Security Force Assistance***, provides the best way forward on how this should work, despite the manual's limited details. Ultimately, it is the brigade commander's decision on how to task-organize units. Figure 7 shows a company element under operational control (OPCON) to the transition team.

There are a couple of different ways to task-organize for the mission to a company element: OPCON, tactical control (TACON) or direct support to the SFAT or MiTT. I have seen all three types of control, and all can work. In some cases, the SFAT chief is the BSO over a task-force-like scenario. In my case, the SFAT chief served as the *ad hoc* battalion commander and is the O-5 level of clearance for all units a normal battalion commander would serve. In any situation, there is always push-and-pull from the SFAT chief's roles and responsibilities to the company or troop through the normal battalion chain of command.

As a troop or company going into this mission, you will either be tasked with direct support, OPCON or TACON, or will be responsible to an adviser chief who partners at the next level above the company or troop. In any case, there is limited training where a company or troop can prepare for these scenarios, and these command relationships are not developed until deployment despite the SFAT's arrival at units before CTC rotations and deployment.

What tasks should pre-command captains focus on while in MCCC to prepare for this mission?

There is very little instruction dedicated in MCCC to the actual transition phase of a COIN effort. The company-level operations-order phase that focuses on COIN is much more involved in tactical maneuver than in the subtleties of advising foreign forces. However, for a company or troop that will be OPCON, TACON or direct-support to an SFAT, one can think about a few common tasks.

One of your platoon elements will be dedicated as a security force to the SFAT, and that will take away a platoon of combat power, or roughly 15 Soldiers at minimum. When you deploy, your company or troop will still have to occupy the tactical infrastructures for force protection or base defense, and this will most assuredly deplete

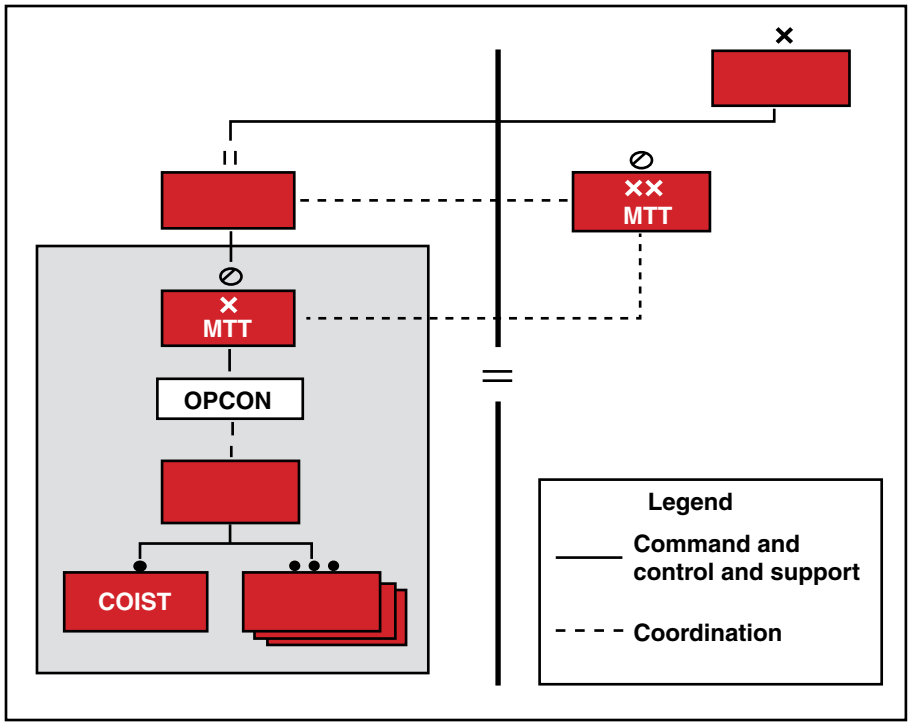


Figure 7. A company element under OPCON to a military transition team.

combat power. What is left after that is usually what the company or troop has to conduct actual partnered patrols and missions.

In addition to being tactically proficient at cordon and search, clearance operations, tactical checkpoints and air assault, it is also good to be proficient at key-leader engagements, shuras, negotiating and even being prepared to run a training course on our "shoot, move, communicate" task to host-nation forces. During a drawdown, as discussed earlier, there most likely will be more enablers accessible to the company or troop than in other situations. However, one cannot guarantee this; thus it is always prudent to obtain as much information before deployment on the capabilities and limitations of joint enablers so they can be more efficiently used. For instance, having the company or troop go through cultural-awareness training for the area of deployment will also make a well-trained team that can appreciate the local populace's customs and norms.

Lastly, during a transition to drawdown, the only way to gain trust with the local populace and partnership with security forces is to maintain the moral high ground. If there is a hint of corruption detected by either entity, trust will be lost.

Conclusion

OIF and OEF have both followed the same general COIN template during the war on terrorism; through technology, we have been able to record the data points for both of them more accurately than for previous wars. Partnership at all levels, with unity along all LoEs, is the key factor to moving the transition of COIN forward to FID. However, there is still a large doctrine gap in what is expected of company or troop elements, particularly when working under an SFAT chief and in training that would best enable a troop or company commander to be successful during a transition to drawdown.

Joint enablers allow higher-level commands to remain as involved during a transition to drawdown as they were before the decrease in units. Joint enablers also allow company or troop elements to continue to push momentum forward across economic, governance and security LoEs while a transition to drawdown is taking place.

Moreover, at no other point in a war is restraint as important as during the drawdown. It is especially important to let the host nation carry the fight in an overwatch status to assess its effectiveness. Maneuver commanders must restrain themselves from going out and initiating conflicts while championing their counterpart's lead role during the battle. The U.S. maneuver commander must ignore his basic instinct to fight if an opportunity presents itself; instead, he must somewhat assume a backseat-view understanding – to leave a thriving security force, it is imperative to let the host nation lead the fight before our exit and transition to FID.

If more commanders knew the importance of how to employ JDOs and how important their partnerships with their host-nation counterparts are, the more successful they would be in conducting a transition from COIN operations to FID during a drawdown.

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Acronym Quick-Scan

ANSF – Afghan National Security Forces
BSO – battlespace owner
CA – civil affairs
CAT – civil-affairs team
COIN – counterinsurgency
COIST – company intelligence-support team
COP – combat outpost
CTC – combat training center
DoS – Department of State
EOD – explosive ordnance disposal
FID – foreign internal defense
HCT – human-intelligence control team
ISAF – International Security Assistance Force
JDO – joint distributed operations
JP – joint publication
LoE – line of effort
MCCC – Maneuver Captains Career Course
MFT – multifunctional team
MiTT – military training team
MNF-I – Multinational Forces Iraq
OE – operational environment
OEF – Operation Enduring Freedom
OGA – other governmental agency
OIF – Operation Iraqi Freedom
OPCON – operational control
PSS – personnel-security support
PRT – provincial reconstruction team
RCT – route-clearance team
SFAT – security-force assistance team
TACON – tactical control
TPT – tactical psychological-operations team
USAID – U.S. Agency for International Development

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Tagging, Tracking and Locating:
Intelligence-Gathering in Support of Army 2020

by LTC Eric Lowry

As the Army continues to define the structure and doctrine of Army 2020, lessons-learned from 13 years of war in Iraq and Afghanistan — and applying these lessons to wide-area security, stability and combined-arms maneuver operations — have become a cornerstone of building that Army. The counterinsurgency (COIN) environment generated new processes and programs across the doctrine, organization, training, materiel, leader development, personnel and facilities (DOTMLPF) domains. Intelligence-gathering is no exception; the insurgent / counterinsurgent environment drove the need for audiovisual, tagging, tracking and locating (TTL) capabilities. These capabilities provided the combat commander with the ability to pinpoint and remove hostile forces embedded in civilian populations while reducing collateral damage and building a network of information addressing all aspects of the COIN fight.

One of the materiel solutions that has provided commanders with those exact capabilities is the Close-Access Target Reconnaissance (CATR) system. CATR is an assembled kit of technical audio and visual surveillance equipment as well as electronic TTL devices that has been used with great success within the Department of Defense communities to gather information in support of COIN operations. Although this capability was developed in support of the COIN environment, it has applicability to conventional warfare in the arena of reconnaissance formations.

CATR influences the fight in that it allows the commander and his staff to continuously monitor targets and named areas of interest in the operational environment, assess that environment and evaluate the threat. CATR is capable of employment and monitoring with minimal impact to the Soldier's workload. Once employed, there is no requirement for Soldiers to remain on the battlefield until recovery of the equipment is required. Some CATR equipment can be monitored from friendly unit locations, while other pieces of equipment must be recovered and evaluated. Previously CATR had been issued to battlefield surveillance brigades (BfSB) and brigade combat teams (BCT), but it now has the flexibility to provide various capabilities tailored to subordinate echelons and their collection requirements. Subcomponents can be used by commanders / leaders or can be emplaced, monitored or operated by specially designated and trained Soldiers.

What is CATR?

CATR is a unique technical reconnaissance capability that enables commanders and subordinate leaders to gather information on predominantly asymmetric threats operating across a wide range of military operations and act in a timely and decisive manner to defeat the enemy threat. It is an integrated set of devices, kits, software, support equipment and training that provides the warfighter a technical reconnaissance, surveillance and information-collection capability that has demonstrated its effectiveness during recent combat operations. The program addresses the evolutionary changes to technology while supporting force-protection requirements, and it augments existing all-source intelligence analysis and targeting programs. It enhances information collected from TTL operations to be integrated into a unit's intelligence collection, mission planning and targeting cycles.

The CATR program covers two primary capabilities. First is the use of TTL equipment to geolocate a position on the ground through global positioning with either real-time devices observed through the network or loggers that can be emplaced and then downloaded at a later time by retrieving or gaining proximity to their location. The second aspect of the program involves the use of technical, audio, visual and surveillance (TAVS) equipment to record

Figure 1. A Soldier from 525th BfSB works during the basic electronics portion of NET. *(Photo by Derek Larson)*

either audio or video using small, high-quality recorders. The TTL and TAVS equipment consists of devices that can be tailored to suit a variety of reconnaissance, surveillance and information-collection missions. The items in the set can be employed using standard batteries, fabricated battery packs or external alternating current / direct current power. Also, the CATR set includes an installation kit and basic electronics kit used for installation and fabrication to meet unit mission requirements.

During employment, the CATR set uses a government system called Keymaker, which is composed of a network administration server called "Unitrac" and a mapping visualization tool with analyst tools built in called "Raptor X." This system enhances the commander's common operational picture through a tactical unit's ability to use the robust data-sharing architecture and a common graphical user interface. This allows the operator to conduct long-term/fused analysis of TTL data. These devices give the commander an enhanced force-protection capability when conducting operations in a variety of environments.

History

An operational-needs statement was submitted and approved in 2005 to provide units with TTL capability. The Joint Improvised Explosive Device Defeat Organization took the lead in developing a kit made up of commercial-off-the-shelf equipment that fit the identified requirement. Since then, the capabilities of the CATR system have increased as technology has matured. CATR was used successfully within the conventional force communities, giving commanders TTL capabilities enhanced with audio- and video-recording options. As the conflicts in Iraq and Afghanistan matured, organizations used the CATR capabilities to build an intelligence database populated with viable targets, which in turn allowed combat commanders to develop target packages and direct resources to maximize success with decisive results.

Current kits

The current CATR kits consist of several types of audio- and video-recording devices and TTL equipment. This gives the user several types of employment options that are useful in different technological mediums, depending on the host environment's technology infrastructure. There is enough of each type of equipment to support information-gathering on multiple targets simultaneously.

Current training

The current CATR training program relies primarily on contracted field service representatives (FSRs) and contracted trainers provided by the Program Manager (PM)-Military Departments. New-equipment training (NET) mobile training teams (MTT) currently go to a deploying unit's

Figure 2. A Soldier from 525th BfSB lays out a CATR system. *(Photo by Derek Larson)*

desired training location to conduct an extensive 20-day CATR training course designed to bring members of the unit up to a level of expertise that will allow them to successfully employ the TTL and TAVS surveillance equipment. This course is not military-occupational-specialty specific.

Students learn basic electronics that includes identification of appropriate electronic formulas, calculations and how to build power supplies. Students also learn camouflage and fabrication techniques. Unit members learn target reconnaissance, which teaches them how to place devices to enhance information-collection efforts in support of the commander's priority intelligence requirements. Students learn how to retrieve the information and, most importantly, how to analyze the data gathered to inform the operational commander of enemy activity in a unit's area of operation.

Upon completion of NET, the unit signs for the CATR equipment (about three wooden pallets). All this follows final equipment operations testing, which is conducted throughout the duration of that 20-day training course as it is being used. Any equipment identified as unserviceable during this training is replaced right away.

Currently, FSRs are at the Maneuver Center of Excellence (MCoE); the Intelligence Center of Excellence; certain divisions; both the National Training Center (NTC) and the Joint Readiness Training Center (JRTC); and all current BfSB locations. These FSRs provide command and staff CATR education, CATR sustainment training, maintenance of equipment, evaluation of the unit's CATR readiness, software diagnostics and deconfliction, and assistance in developing realistic training scenarios to exercise the capability. Internal to the MCoE, CATR information briefings began in mid-2012 as part of the Maneuver Captain's Career Course, Army Reconnaissance Course and Maneuver Senior Leader's Course, with the potential for more detailed and hands-on training opportunities for CATR in the future.

Program of record

The success of the CATR system and the need for precise intelligence-gathering has prompted the Department of the Army (DA) to transition the system from a Capabilities Developed for Rapid Transition-14 acquisition program candidate to become an actual Army program of record. That decision was made by the Army's vice chief of staff in June 2012.

The Army G-8 decided to place the CATR project under the Program Executive Office (PEO) for Intelligence and Electronic Warfare Systems, to be managed by PM-Ground Sensors. PM-Ground Sensors — working in concert with the MCoE, U.S. Army Training and Doctrine Command (TRADOC), U.S. Army Forces Command (FORSCOM) and the other Army centers of excellence — has developed and submitted supporting production documentation to support CATR's competition for future Army funding. This plan will allow fielding of the CATR system to every BCT in the Army at a rate of eight to 10 brigades a year. An initial fielding timeline to the first units is still to be determined at this time.

Future kit design

The current CATR funding and fielding plan calls for a base kit designed to train units on use of the TTL and TAVS components. A more robust kit will be issued if a unit is designated for deployment. This more enhanced kit will be made up of the same equipment that makes up the base kit but will consist of more of each type of TTL and TAVS devices. If a unit is required to deploy in support of combat operations, it will receive its equipment prior to departure, or the unit will draw its equipment once in theater. The unit will receive more of each type of equipment, allowing a greater capability to gather information.

As initial and subsequent fielding takes place, only in certain instances will a unit receive enhanced kits made up of equipment not in its base kit. As technology matures, PM-Ground Sensors will purchase and field new components to the base kits. This process may lead to units deploying with enhanced kits containing equipment the unit has not seen before. In these instances, units will receive modified NET to ensure the unit is proficient in using its new devices.

Future training

The future training plan and cost constraints will necessitate the termination of the FSRs except at combat training centers. Brigades will be required to designate a unit CATR subject-matter expert (SME), who will receive training at designated locations. Funds for this training will come from the PM and not from unit training dollars. This training will be coordinated to end and coincide with the NET process that will take place when a brigade is fielded its CATR system. The new brigade SME will assist the CATR MTT with the equipment fielding and with supporting the NET training courses. Once NET is complete, the brigade SME will coordinate to conduct sustainment training in conjunction with the brigade's established training plans.

Institutional training for the CATR system will also be vital to the program's success. As the proponent for CATR, the MCoE is looking to the future of CATR training. The goal is to develop and fund CATR training at Fort Benning, GA, to enhance the capabilities of units that will deploy with and use the TTL and TAVS capabilities the system will provide. The MCoE has already taken the first steps in this process and will work to develop a skill identifier not only for future CATR training recipients but also for those Soldiers who have trained on the system previously and have supported combat operations in Iraq and Afghanistan.

Ten years of war in the Middle East fighting an enemy that can blend into the population have demonstrated the need for a more thorough ability to find and positively identify that enemy. The identification and destruction of enemy support networks, capabilities and removing the enemy threat while successfully building positive relationships with local populations are vital aspects that support the Army of 2020. Unmanned aerial systems, communications-network advances and advances in technology are examples of the continuing strides forward that will allow U.S. and coalition partners to identify and target that enemy more effectively. The CATR system and its proven effectiveness falls into this category, and the capabilities the platform brings

to current and future battlefields will enhance the Army's combat effectiveness in both current and future operations.

Organizations or personnel desiring more information about CATR are encouraged to contact the TRADOC Capability Manager (TCM)-Armored Brigade Combat Team (ABCT) / Reconnaissance at the MCoE. Contact information can be found on the MCoE Website at www.benning.army.mil/mcoe.

LTC Eric Lowry serves as team chief of TCM-Reconnaissance in the MCoE's Capabilities Development and Integration Directorate. His past duty assignments include transition team chief, Task Force 1/15 Infantry, 3rd BCT, 3rd Infantry Division, Diwaniyah, Iraq; staff synchronization officer, Abrams Main Battle Tank, Department of the Army G-8, Pentagon; operations officer, Area Support Group-Kuwait, Camp Arifjan, Kuwait; and commander, C Company, 2/70th Armor Regiment, Fort Riley, KS. His military schooling includes Armor Officer's Basic Course, Armor Officer's Advanced Course and Combined Arms and Services Staff School. LTC Lowry holds a bachelor's of science degree from North Georgia College in political science.

Acronym Quick-Scan

ABCT – armored brigade combat team
BCT – brigade combat team
BfSB – battlefield surveillance brigade
CATR – Close-Access Target Reconnaissance
COIN – counterinsurgency
DA – Department of the Army
DOTMLPF – doctrine, organization, training, materiel, leader development, personnel and facilities
FORSCOM – (U.S. Army) Forces Command
FSR – field service representative
JRTC – Joint Readiness Training Center
MCoE – Maneuver Center of Excellence
MTT – mobile training team
NET – new-equipment training
NTC – National Training Center
PEO – program executive office
PM – program manager
SME – subject-matter expert
TAVS – technical, audio, visual and surveillance
TCM – TRADOC capabilities manager
TRADOC – (U.S. Army) Training and Doctrine Command
TTL – tagging, tracking and locating

TCM-ABCT / Recon serves as TRADOC's centralized manager for all activities related to the ABCT, BfSB and all supporting reconnaissance formations. The office serves as the ABCT / Recon Soldier's user representative to PEO- Ground Systems, PM-ABCT, DA, TRADOC and MCoE. In the past year, TCM-ABCT / Recon has completed trend analysis from five decisive-action training environment rotations at NTC/JRTC, seven unit visit/umbrella week data-collection efforts and multiple leader-engagement sessions with ABCT / Recon officer and noncommissioned-offer leaders attending training at Fort Benning to develop an observations, insights and lessons (OIL)-based DOTMLPF integrated action plan. Since 2010, TCM-ABCT / Recon has conducted 31 unit visits to identify trends and assist the Army in improving ABCT capabilities.

Global Positioning System and the Maneuver Soldier

by CPT Jerry V. Drew II

Throughout the last decade of continuous conflict, our armed forces have become increasingly dependent on space-based systems. Services like space-based missile warning, satellite imagery and the worldwide relay of communications — much to the credit of operational service-support personnel — have remained largely transparent to Soldiers at the tactical level. We are confident that the "giant voice" will alert us to an incoming missile; that Force XXI Battle Command Brigade-and-Below (FBCB2) data will be with us on the move; and that relevant imagery will be available when requested.

We often lose sight of the source of these services, and in doing so, we cheat ourselves of an opportunity to leverage a deeper understanding of them. In the current fight, space services have remained largely uncontested, but because our adversaries are becoming increasingly capable of fielding their own space systems while attempting to deny us the use of ours, a functional understanding of space-based systems is more necessary than ever. Despite this reality, Soldiers, officers and staffs at all levels are often not aware of how to leverage space systems and Army space professionals to the maximum benefit of their units.

Although space-based systems and the individuals trained to exploit their capabilities provide diverse services such as those discussed in the preceding paragraphs, the one space-based system that is most vital to the maneuver Soldier is the Global Positioning System (GPS). It is the constellation of GPS satellites that provides a Defense Advanced GPS Receiver's (DAGR) positional data, enables navigation through the FBCB2 and provides a time source for radio encryption. These devices are so common and they work so well that we often take position, navigation and timing (PNT) services for granted. Soldiers rarely, if ever, consider the satellites that provide the data or the possibility that a technologically advanced enemy would be able to deny them the ability to precisely know their position. However, even a basic understanding of GPS capabilities, along with a discussion of some tactics, techniques and procedures (TTPs), will enable maneuver Soldiers, leaders and planners at all echelons to more effectively conduct operations.

From a space professional's perspective, there are several things about the GPS constellation and handheld receivers that Soldiers and leaders need to know. First, DAGRs receive two separate radio frequencies, L1 and L2, from any GPS satellite in view. These frequencies contain codes. To acquire precision PNT data, a DAGR must acquire two codes: the coarse acquisition (C/A) code and the precision (P) code. A GPS satellite will typically only transmit the C/A code on the L1 frequency. The DAGR will acquire the C/A code first, which will then allow it to acquire the P code. The P code is normally broadcast on both the L1 and L2 frequencies, and when it is encrypted with the appropriate communications security (COMSEC), the P code becomes a P(Y) code.

TTPs

TTP 1: Encrypt your DAGR to ensure protection against jamming. The dual signal itself accounts for part of the DAGR's security. While DAGRs will function with no encryption loaded in them, leaders must ensure that Soldiers are loading the proper encryption to allow the receiver the best chance of resisting jamming activity, specifically a type of jamming called spoofing (Figure 2).

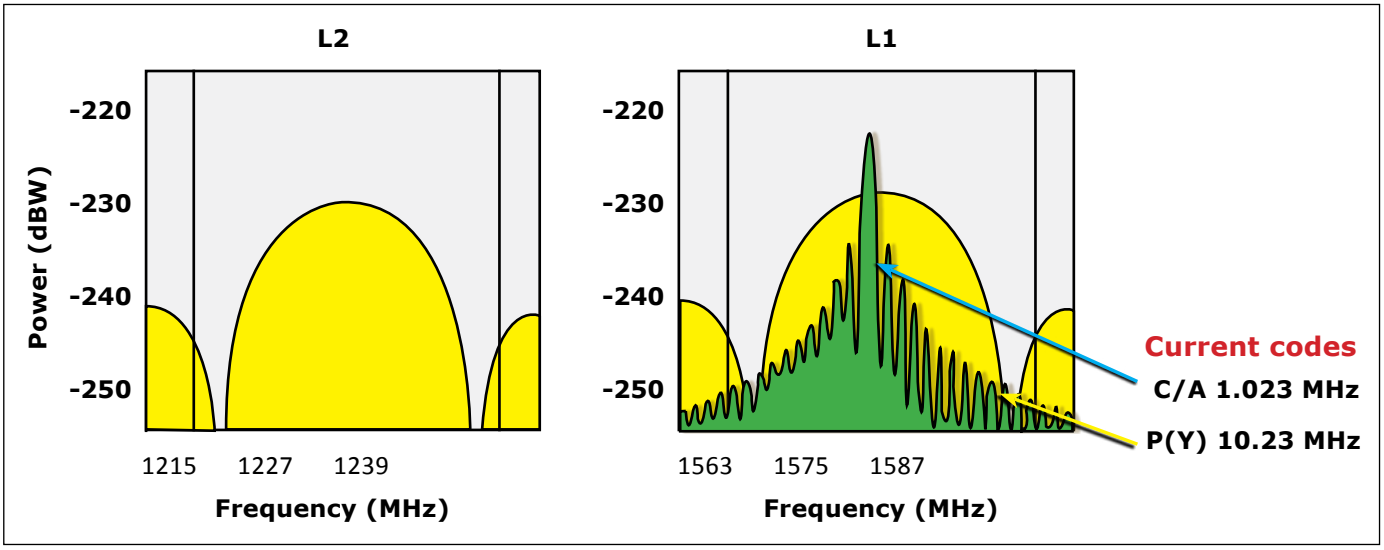

Figure 1. A DAGR will acquire frequencies in the L1 and L2 bands from any GPS satellite in its field of view. The DAGR will first acquire the C/A code (green), which will allow it to acquire the P code (yellow). *(Graphic courtesy of U.S. Army Space and Missile Defense Command)*

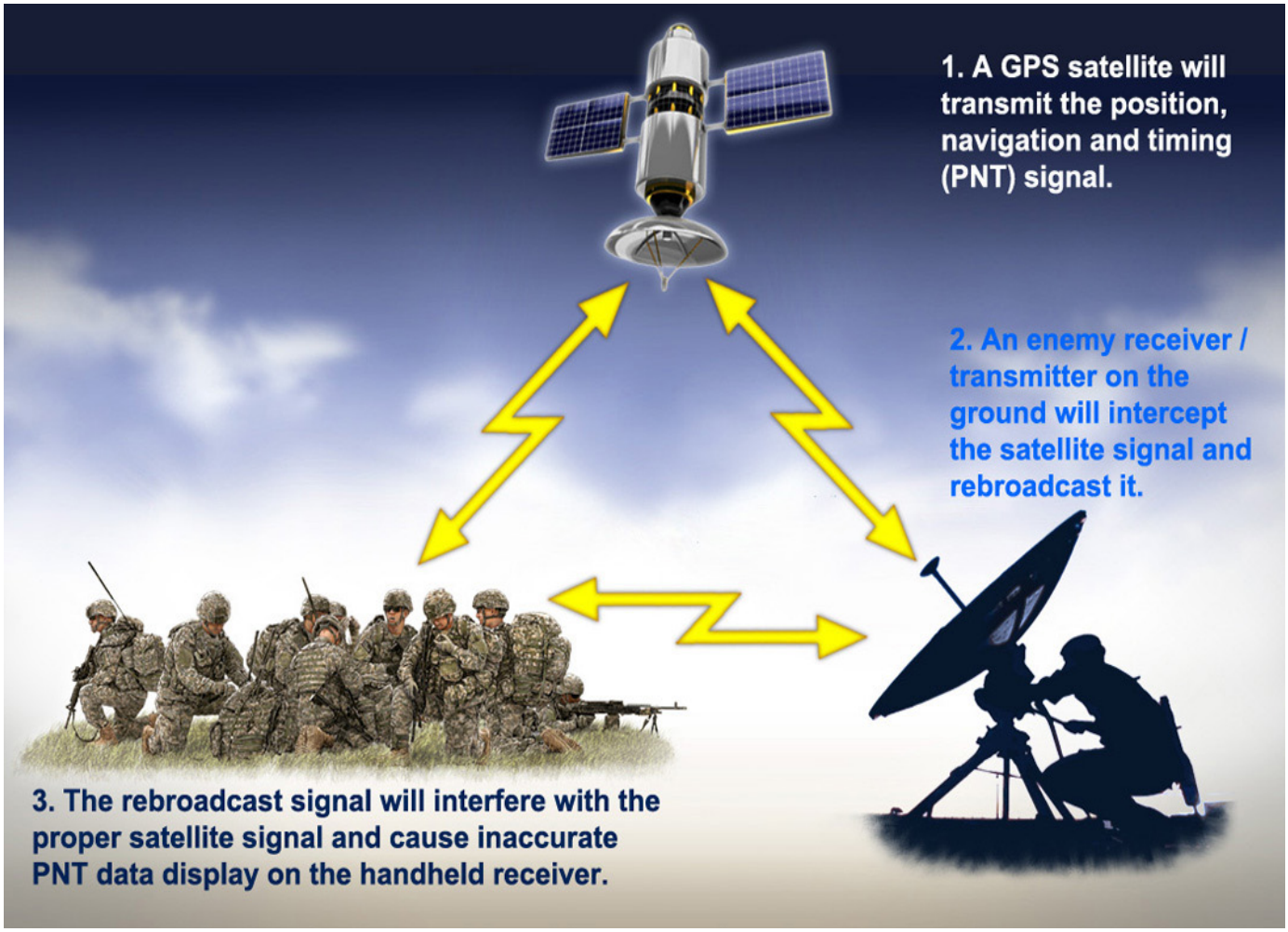

Figure 2. Spoofing.

TTP 2: To protect your Soldiers and your mission, use only military-grade receivers. Largely due to shortages in military-grade GPS receivers, the practice of using civilian GPS receivers in a combat environment has been fairly common for the past decade. Individuals should not use civilian GPS receivers in a combat zone (or in training, for that matter). Civilian GPS receivers only receive one frequency, do not support encryption and are not secure. Making matters worse, many civilian GPS receivers actually transmit a signal. An enemy can use the same model of receiver to monitor your channel and determine your location. The risk of endangering your Soldiers and your mission could very well outweigh any benefit gained from the additional situational awareness offered by using commercial receivers.

Even though military GPS receivers are capable of being encrypted, the signals they receive from satellites are relatively weak. In fact, anyone can purchase a GPS jammer from the Internet. (Please note that using a jammer of any kind can lead to extremely serious legal consequences.) Furthermore, adversarial nations understand our dependence on GPS and are equipped with military-grade jammers — equipment that could potentially show up in current areas of operations and will certainly play a large role in future conflicts. What does a Soldier do if he is being jammed or suspects he is being jammed?

TTP 3: If your DAGR loses its GPS signal, attempt to reacquire the satellites' signals. Your GPS signal is coming from the sky, and the jammer is likely ground-based, so any way of blocking the jammer's energy will help keep your DAGR locked on friendly GPS signals. If the jamming signal is extremely strong or extremely near, you must be prepared to conduct operations in a degraded environment (see TTPs 5 and 6). If the jamming signal is weak, place your body, a vehicle or a terrain feature between your DAGR and the jammer's suspected location. If you are not sure where the jamming is coming from, digging a shallow hole and placing your DAGR in the hole might protect your DAGR enough to allow it to reacquire the GPS signal.

TTP 4: If you suspect jamming, report it up the chain sooner rather than later. Soldiers tend to dismiss signal loss, nonsensical location or elevation readings, or a jammer warning on the DAGR screen as equipment errors. These are all indications of signal interference. Blue-on-blue (unintentional) interference is common; many U.S. and allied systems (for example, certain radars) emit frequencies that can interfere with the GPS receivers' ability to properly receive signals. In these instances, space personnel, in conjunction with other staff elements and government agencies, will be able to assist

in deconflicting the interference. If an enemy is responsible for the interference, their jammer may be locatable and targetable.

TTP 5: Prepare for a jamming threat; train with a map and compass. Knowledge of your position is a necessity, and because DAGR and FBCB2 systems depend on GPS input, the loss of a GPS signal may mean the loss of situational awareness. Spoofing is a kind of jamming that intercepts friendly GPS signals and retransmits them to your receiver, causing the receiver to lock on to the jammer and not the satellites. This causes the DAGR to report that you are somewhere other than where you actually are (see Figure 2). Fire support and medical-evacuation support depend on precision location; a false sense of location could lead to serious consequences. Without the availability of GPS, the map and compass are a Soldier's best bet.

TTP 6: Prepare for a jamming threat; train for degraded communications. The encryption on your radio is probably using the time reference provided by your DAGR (that is to say, the time reference transmitted by the GPS satellites to the DAGR) to stay synched with all the other radios in the unit. If the timing in your radios drifts and jamming prevents you from receiving the time as provided by an accurate GPS signal, you may eventually be unable to talk in an encrypted mode. If your COMSEC is compromised, you may need to resort to using a Terrain Index Reference System (TIRS) or Grid Index Reference System (GIRS), or you can assume the risk of operating over an unencrypted frequency. Leaders must incorporate training for degraded operations.

In the United States, we are accustomed to commercial GPS receivers that will tell us our location with great precision and great consistency, but when planning and executing missions in austere environments, it is essential to understand that GPS does not always produce a consistent level of precision. The position your DAGR reports may very well be your true position, but it could also be off by 100 meters or more. The reason we enjoy such accuracy in the United States has less to do with the space-based segment of GPS than with the ground-based benchmarks that augment it. These reference emitters know their location and never move. A dashboard GPS receiver, for example, takes the satellite input, compares it to the reference emitter's input, and calculates a precise location for the vehicle by accounting for the difference in the two signals. Countries like Afghanistan do not have this ground-based infrastructure, so GPS positioning there depends solely on space-based assets, which increases the probability of imprecision.

To complicate the matter, GPS satellites are continually passing overhead. Contrary to one common misconception, GPS satellites do not remain over

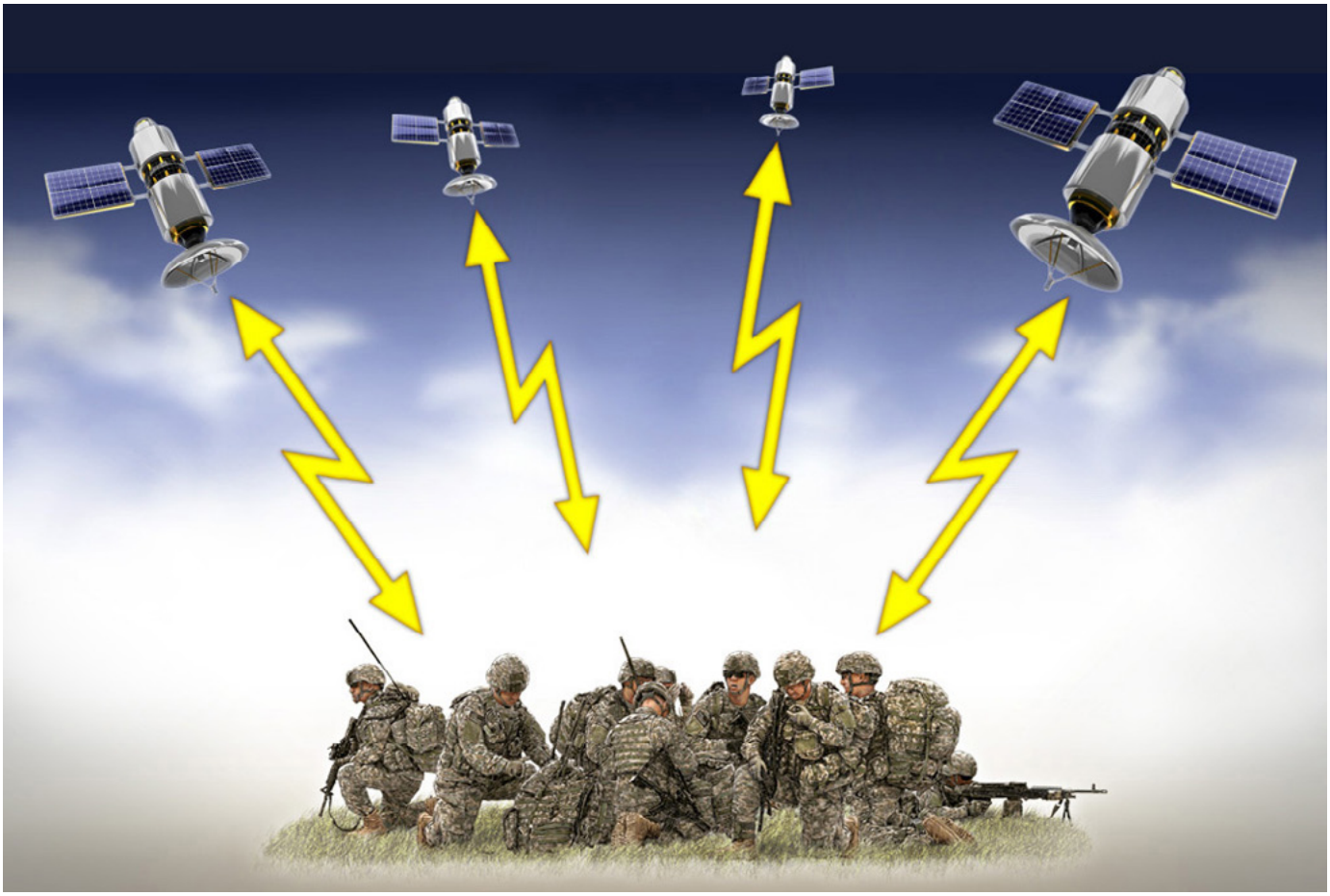

Figure 3. Favorable satellite geometry. This graphic depicts satellites at varying heights, depths and horizontal distances relative to the Soldiers. Satellites arrayed throughout a disbursed volume of sky will provide PNT data that is more accurate than a less disbursed configuration.

one fixed ground location the way an aerostat blimp might. As a result of multiple satellites passing overhead and dipping below the horizon, DAGRs are constantly losing the signal from one satellite and reacquiring the signal from another. To display a valid four-dimensional solution (latitude, longitude, elevation and time), a DAGR must receive a signal from at least four satellites. More satellites in view of a receiver means increased precision, but the way that the satellites are arrayed in space also affects the DAGR's precision. For example, if you are able to "see" four satellites, but two of them are near the horizon, your solution will be less accurate than if your DAGR is receiving signals from four satellites spaced evenly across the viewable sky (Figure 3).

Similarly, if your receiver is able to "see" four satellites, but they are all directly overhead or if they are all near the horizon, your solution will not be as precise as if you have four satellites spaced evenly across the viewable sky (Figure 4).

Add in the effects of terrain, and the solution worsens. If you are in a valley surrounded by mountains or in an urban area full of buildings, for example, the terrain is blocking the signals of all satellites except those that can "see" down into the valley (Figure 5); the satellite geometry is unfavorable. Thankfully, planners can mitigate the negative effects of the shortcomings in the GPS system through an understanding of terrain and space support capabilities.

TTP 7: If you suspect a jamming environment, request a navigational-accuracy (NAVAC) model. Division space-support personnel use a software program called the GPS Interference and Navigation Tool (GIANT) to analyze satellite availability, effects of terrain and potential effects of jammers. GIANT will model the accuracy of a GPS signal at a given location at a given time or over a given time period. Commanders and planners will be able to wargame the operational effects of GPS availability and jamming activity.

Although a degraded GPS signal will probably not stop a patrol, it may inform route selection, rehearsals and the plan for employing precision-guided munitions (PGMs). For example, if at 11 p.m. the GPS signal will provide accuracy only to within 100 meters of the desired impact point, a commander may choose not to employ a PGM at that time. If, however, the satellite geometry at 11:30 p.m. indicates accuracy down to within 10 meters of the target, it may be prudent to wait the extra 30 minutes for the more probable mission success. The employment of Joint Precision Airdrop Systems (JPADS), GPS-guided unmanned aerial systems (UAS), GPS-aided Joint Direct Attack Munitions (JDAMs) or any other GPS-dependent system requires similar consideration.

TTP 8: If you suspect that GPS degradation due to terrain will be a problem, request a Satellite Tool Kit (STK) model. STK, like GIANT, is also a software program space-support personnel can use to model GPS accuracy, but STK's capability for building models is

Figure 4. Unfavorable satellite geometry. This graphic depicts satellites with less variance in heights, depths and horizontal distances relative to the Soldiers. These satellites are more compactly arrayed than those in Figure 3, degrading the accuracy of the PNT signal.

Figure 5. Effects of terrain. Naturally occurring or manmade terrain features can block or reflect GPS signals, reducing the number of satellites in view and preventing your handheld device from receiving the data necessary to get a good geolocation. Leaders should address such potential effects during mission planning.

vastly more expansive. In STK, for example, one can build an animated model — a sort of miniature movie — of an MQ-1 Predator flying through a mountain valley in Afghanistan. The simulated Predator can be designed to include, among other attributes, a camera of specified quality, memory storage of specified size and a fuel tank of specified capacity. Also, because the software reads Digital Terrain Elevation Data (DTED) data and allows for imagery overlays, the animation is quite realistic and provides an excellent product for mission briefs and rehearsals. When the GPS constellation is included in the model, STK reports will predict at what point the UAS will lose the GPS signal, and mission planners can adjust its flight path and/or timeline accordingly.

A discussion of STK's full capability is beyond this article's scope. However, STK is a very powerful tool that can be used to model different sizes or types of forces, radio-frequency propagation and many other battlefield elements.

Conclusion

Although Soldiers use space-based capabilities like GPS every day at the tactical level, we often do so without the level of understanding necessary to maximize the potential of these capabilities. We take capabilities like GPS for granted, but our adversaries understand our dependence on space and will continue to direct training and assets against them. We must be prepared for their eventual success in denying or degrading our space capabilities.

Currently, the first echelon at which a unit has organic space professionals is the division (the space support element). During deployments, Army space support teams will often augment division and corps staffs, and depending on the organization and the issue at hand, space-support requests may go through operational (S-3), intelligence (S-2) or signal (S-6) channels. This construct, however, should not deceive us into thinking that space-based products and services are only for use by the upper echelons, nor should it discourage a company commander or a battalion planner to request that support. On the contrary, space-based capabilities like GPS were developed with tactical operations in mind, and a leader or planner at any level who understands the military applications of space systems will enjoy greater mission success as adversaries become increasingly capable of challenging U.S. supremacy in the space domain.

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Space Battalion, 1st Space Brigade, Peterson Air Force Base; and Headquarters and Headquarters Company executive officer and scout platoon leader, 1st Combined Arms Battalion, 5th Brigade, 1st Armored Division (Army Evaluation Task Force), Fort Bliss, TX. CPT Drew's military schooling includes Air Assault School, Basic Officer Leader's Course, Scout Leader Course and Army Space Operations Officer Qualification Course. He holds a bachelor's of science degree in art, philosophy and literature from the U.S. Military Academy and a master's of business administration from Webster University.

Acronym Quick-Scan

C/A – coarse acquisition
COMSEC – communications security
DAGR – Defense Advanced GPS Receiver
DTED – Digital Terrain Elevation Data
FBCB2 – Force XXI Battle Command Brigade-and-Below
GIANT – GPS Interference and Navigation Tool
GIRS – Grid Index Reference System
GPS – Global Positioning System
JDAM – Joint Direct Attack Munitions
JPADS – Joint Precision Airdrop Systems
Mhz – megahertz
NAVAC – navigational accuracy
P (code) – precision
PGM – precision guided munitions
PNT – position, navigation and timing services
STK – Satellite Tool Kit
TIRS – Terrain Index Reference System
TTP – tactics, techniques and procedures
UAS – unmanned aerial systems

64TH ARMOR REGIMENT

The distinctive unit insignia was originally approved for the 758th Tank Battalion Feb. 27, 1942. It was redesignated for the 64th Tank Battalion April 30, 1952. The insignia was redesignated for the 64th Armor Regiment April 3, 1963. The elephant symbolizes the heavy assault of a tank battalion. He was used in ancient times to lead the attack in a manner comparable to the present day armored organizations.

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