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SULLIVAN CUP

# ARMOR

*Mounted Maneuver Journal*  
*Spring 2022*



**SULLIVAN CUP 2022**

# ARMOR

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# CHIEF OF ARMOR'S HATCH

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**U.S. Army Armor School**



## Armor Standardization and Training Strategy 2030

*“True intuitive expertise is learned from prolonged experience with good feedback on mistakes.” -Daniel Kahneman*

Readiness and expertise remain foundational to our lethality as a branch. However, the real question that must be asked is, “In what way must we focus our expertise and readiness?”

It is true that over the past 20 years, the atrophy of large-scale combat skills led to a decline in lethality. After the *III Corps Lethality Study*, the consensus among leaders to rectify the problem was a focus on improving our approach to gunneries. While improving the Integrated Weapons Training Strategy (IWTS) was a significant step in the right direction, Armor units across the force still fail in platform proficiency as demonstrated through an inability to meet basic gunnery, training and maintenance standards.

After feedback and observation from across the force, the root of the problem comes from a lack of uniform adherence to existing standards, systems and processes. While we have quality, proven standards, they are not universally followed for a number of reasons. To name a few, fluctuating operational-tempo requirements, inadequate master-gunner (MG) manning and an increased latitude afforded to commanders to determine training

requirements created inconsistencies with our overall approach to lethality and expertise.

**The Armor Standardization and Training Strategy 2030** focuses on a systematic approach that codifies the necessary structures and enforcement mechanisms that are needed to standardize training and leader development within the branch. Our strategic framework links standardization across training requirements and leader development to build expertise in mounted warfare. As part of the initial concept development, we categorized the big ideas into near, mid- and far objectives (illustrated in Figure 1) as we move toward 2030. Future work across the Maneuver Center of Excellence over the spring, summer and fall of this year will incorporate working groups to build detailed plans that codify our objectives, with the end-state being the implementation of a pilot program.

To start with, the U.S. Army Armor School is working with the Directorate of Training and Doctrine and 316<sup>th</sup> Cavalry Brigade to develop overarching policies and manuals that will guide enforcement of standards. These products will range from adjustments to the IWTS to the development of a training circular (TC) similar to that of TC 3-04.11, **Commander's Aviation**

### **Training and Standardization Program.**

Other near-term efforts include building and implementing a tank- and Bradley-commander certification test for all tank and Bradley commanders. In early March 2022, 316<sup>th</sup> Cavalry Brigade provided a draft of the tank-commander certification test, and the brigade is currently working on a draft Bradley-commander certification test for review.

Both of these certifications will focus on written and physical demonstration of knowledge on each respective platform. We see the incorporation of these tests as a requirement for all tank and Bradley commanders at the completion of professional military education (PME) and before assuming duties at their units. We see the administrators of these tests as battalion- and company-level MGs, who will use them as part of an assessment to advise battalion commanders on the readiness of their leaders.

Other near-term objectives to increase expertise involve increasing one-station unit training (OSUT) tank/Bradley maintenance training and requiring all OSUT graduates to be licensed drivers.

Finally, we placed several recent Maneuver Captain's Career Course graduate captains in the MG course. Over

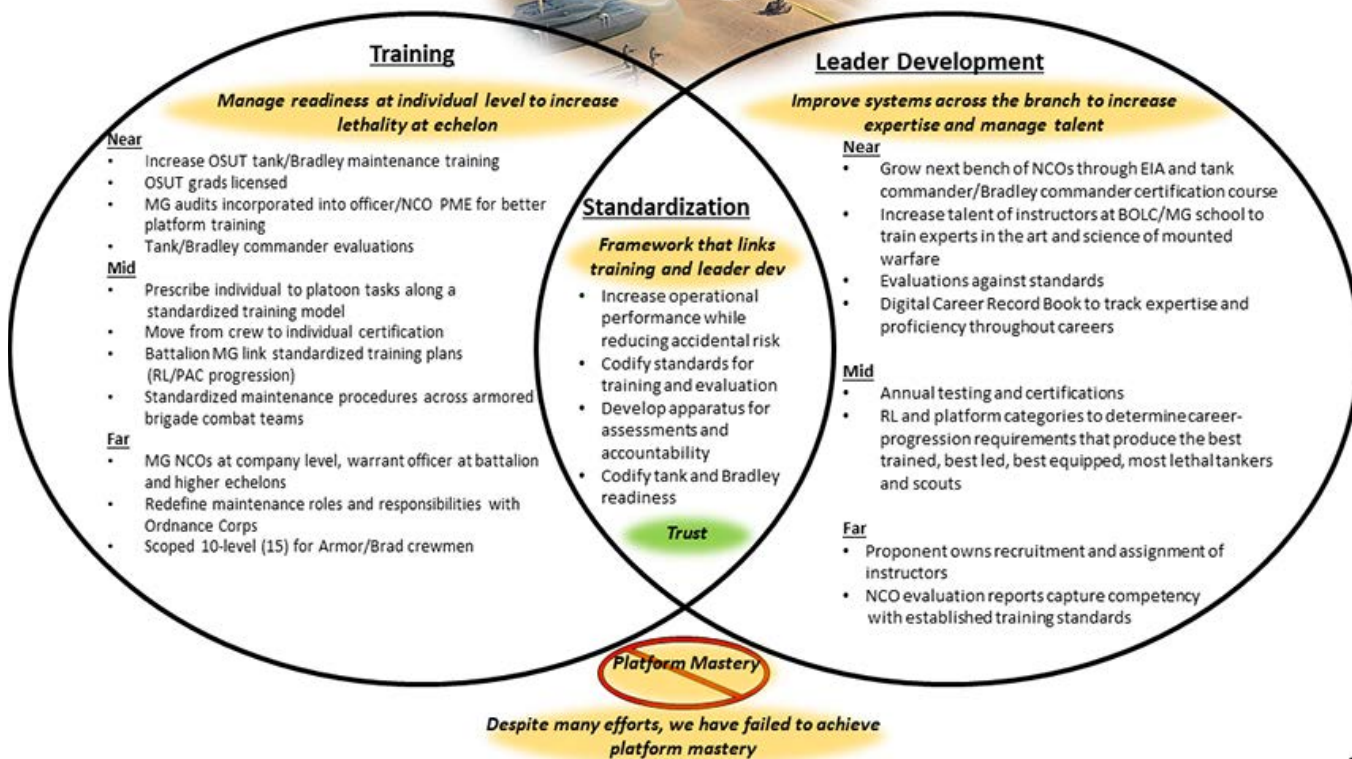


Figure 1. The “big ideas” – future goals categorized based on near/mid/far objectives for future planning efforts.

the next year, they will help us identify and integrate key course components to address knowledge gaps with our company-grade PME. Their mission is advisory only; they will receive no badges. However, these officers will provide feedback to help us increase the knowledge requirements of our students on their platforms.

Based on their recommendations, we will look to revise our PME to deliver graduates who possess 1) a greater understanding of MG roles and responsibilities at echelon; 2) an increased knowledge of key technical aspects of vehicle systems; and 3) an expanded understanding of weapon and turret maintenance. By distributing this knowledge across the force, we will build the foundations needed for expertise.

As part of the readiness-level (RL) progression model, we look to increase the role of the battalion MG to become the standardization instructor and officer that links RL programs to standardized unit training plans from individual to platoon tasks

(Figure 2). At its core, the RL progression model is the foundational structure for implementing the big ideas from Figure 1.

We are currently exploring ways to aggregate individual qualifications based on RLs to build crew qualification, allowing for greater battalion-commander flexibility in certifying crews and reducing the number of sustainment gunneries required to keep formations qualified. This does two things. The first is to better link PME requirements to expertise and knowledge needed upon arriving at a unit. Secondly, it will create a system across the branch whereby an individual who conducts permanent-change-of-station from one post to another can expect the same requirements, standards and standard operating procedures for qualification and certification. Doing so, we will better manage talent, provide training stability at echelon and create a unified system for knowledge and expertise.

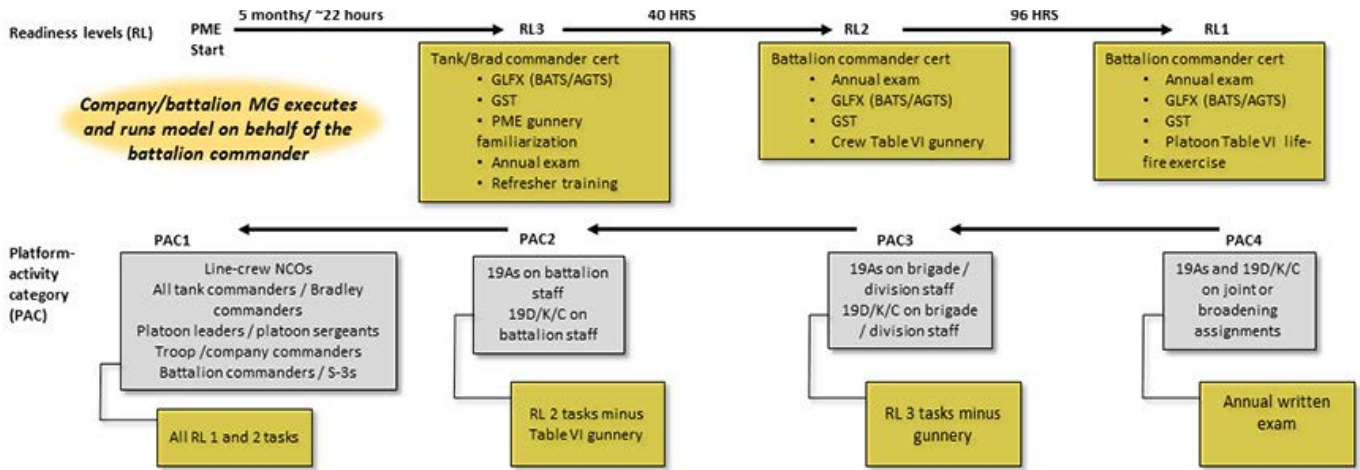
Looking long-term, as we implement initial changes, we will need a greater

collective effort across the Army to achieve. For example, expanding expertise for 10-level tasks, or possibly creating a 15-level for armored crewmen, would require cooperation with Ordnance Corps. The creation of a branch-wide command maintenance standard which will include the standardization of the following:

- Global Command Support System-Army (GCSS-Army) proficiencies by duty position;
- GCSS-Army data tracked and reported at unit level; and
- Metrics for maintenance efficiencies.

Currently GCSS-Army is a data-driven system where trends at echelon are not tracked universally. We want to look beyond operational-readiness rates driven by the Status of Resources and Training Systems to create a system that better understands issues our platforms have. For example, creating systems to track common non-mission-capable faults, lead times for replacement and issues with vendor provided parts allows us to keep the force informed as well as provide





**Figure 2. Leader-development model comparison, potential Armor model.** RLs are a way to track individual and collective crew readiness based on specific criteria, with progression levels based on rank and position. This approach is similar to how Aviation Branch standardizes and tracks readiness. The final product will be incorporated into a digital-records system for Soldiers that will span their entire career.

better feedback across the Army enterprise as to the functional needs of our platforms.

As we link training to leader development, we want to identify talent and grow expertise. This will begin with growing the next bench of noncommissioned officers (NCOs) through use of Excellence in Armor (EIA) in OSUT and a tank commander/Bradley commander certification exam for the most qualified graduates. We are currently working with the Combined Arms Center to implement a Digital Career Record Book that links to existing Army systems of record, where individuals can track their certifications; gunnery scores; written annual exam scores; platform-activity category (PAC) based on current duty position; and future requirements necessary for them to advance in RL categories.

Ultimately, this system will allow us to better assess and distribute talent across the branch while also allowing us to balance quality of Soldiers and

instructors across U.S. Army Forces Command and U.S. Army Training and Doctrine Command positions.

Looking ahead, our working groups will continue to refine requirements over the coming months. Our goal is to conduct an RL progression pilot (depicted in Figure 2) by the first quarter of Fiscal Year 2023. I welcome your feedback and ideas as we continue to develop our strategy, as well as receiving the results of the pilot with select brigades in the future.

The ideas presented here represent a large shift from how we have previously operated over the last 20 years. However, as large-scale combat operations continue in Ukraine with significant changes in great-power competition in the 21<sup>st</sup> Century, it is imperative more than ever that we as a branch seek ways to improve our knowledge and expertise of our platforms. I believe *The Armor Standardization and Training Strategy 2030*

can get us there, and I am counting on you to help make it a reality.

Forge the Thunderbolt!

### ACRONYM QUICK-SCAN

- AGTS** – Advanced Gunnery Training System
- BATS** – Bradley Advanced Training System
- BOLC** – Basic Officer Leader’s Course
- EIA** – Excellence in Armor
- GCSS-Army** – Global Command Support System-Army
- GLFX** – gate to live-fire
- GST** – gunnery-skills test
- IWTS** – Integrated Weapons Training Strategy
- MG** – master gunner
- NCO** – noncommissioned officer
- OSUT** – one-station unit training
- PAC** – platform activity category
- PME** – professional military education
- RL** – readiness level
- TC** – training circular

# GUNNER'S SEAT

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**CSM Levares J. Jackson Sr.**  
**Command Sergeant Major**  
**U.S. Army Armor School**



## Thunderbolt 7 Tools for the Kit Bag: Competence, Trust and Communication

*"Trust is equal parts character and competence. ... You can look at any leadership failure, and it's always a failure of one or the other." -Stephen M.R. Covey, **The Speed of Trust: The One Thing that Changes Everything***

As Armor and Cavalry team members, we use the three developmental domains of leadership – institutional, operational and self-development – to enhance education, training and experience. For the purpose of this article, I want to focus on institutional leadership and how it applies to the operational and self-development aspects.

In the institutional domain, we focus on the foundations of learning and experience through professional military education (PME) and functional courses. Through these courses, you grow your military-occupational-specialty knowledge, applying additional special skillsets provided in course material to better yourself and your formations. The knowledge imparted to you from doctrine while attending these courses exemplifies the refined lessons-learned from battle-tested leaders over the past 247-year history of our Army. However, it is up to you to apply them.

Institutional leaders use military doctrine to establish a baseline of knowledge across all Army leaders. The foundations of doctrine and our PME teaching gives commanders and

leaders reassurance that in the event there is an inability to communicate, you will understand how to apply experience and doctrine to continue and accomplish the mission. Vital to our mission as noncommissioned officers (NCOs), the NCO creed states, "I will exercise initiative by taking appropriate action in the absence of orders." The leader must know you will create a trusting environment among yourself, senior leaders and subordinates based on your competence and education.

Competence is our watchword. Competence is the ability to accomplish tasks in a timely manner with successful results. It is the embodiment of reliability to your Soldiers and senior leaders. We must always strive to uphold and increase our level of competence. Competence is the foundational requirement that enables trust. When combined with an upright character, your competence enables organizations to build mutual trust and communication to accomplish missions with superior results.

Effective organizational influence requires the application of competence and sound judgment of its leaders to build the trust needed for lethal organizations. Trust is the key to unit and leader success, but remember, blind trust is detrimental. True development of NCOs in the institutional domain must ensure they understand and ap-

ply the art and science of trust.

Part of this understanding must include teaching mechanisms that build prudence and sound judgment to encourage critical thinking and prevent the usage of the preverbal "easy button." NCOs who fully understand the "art and science" of inherent trust are valuable to our ability to continue to grow future leaders within the Armor force. Trust is developed and maintained by leaders who contribute to the well-being of Soldiers, their military expertise and to the Army.

Trust has a direct relationship on the time and resources required to accomplish the mission. We as leaders must develop and grow that trust within our Soldiers so that we maintain our positive relationship with the American people who rely on us to ethically, effectively and efficiently serve the nation.

Communication is another critical component of foundational leadership that enables trust. Communication contributes to trust by keeping others informed, establishing expectations, providing feedback and developing commitment. Lack of communication creates chaos throughout organizations and reduces productivity to compliance rather than commitment.

Poor communication fails to allow subordinates time to provide much needed bottom-up refinement. A

continued lack of refinement continues to foster an organizational distrust because it prevents the communication necessary to complete the mission. This chaos becomes evident in safety failures, discipline incidents and training shortcomings.

Units that fully understand and operate within mission command demonstrate mastery of competence, trust and communication. These types of organizational leaders understand how the tools we have in our “leadership kit bag” are paramount to accomplishment of our mission and the welfare of our Soldiers. Remember, no

one tool is greater than the other, but when used together, their combined effect is vital to mission success.

Competence, trust and communication are three of the most common after-action review comments either after an operation or in a command-climate survey. The foundations are built institutionally, but as lifelong learners, we must constantly strive to earn our subordinates’ and leaders’ trust while providing that inherent trust to our subordinates in our organizational actions and self-development.

Always communicate the Army

profession as the best there is through your actions as competent leaders who can be trusted.<sup>1</sup>

## Notes

<sup>1</sup> Army Doctrinal Publication 6-22, *Army Leadership and the Profession*, July 2019, referenced throughout for institutional, organizational and self-development discussion.

### ACRONYM QUICK-SCAN

**NCO** – noncommissioned officer  
**PME** – professional military education



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# LETTERS

Dear Editor,

After seeing what upgrades have been given to the Abrams M1A2 Systems Enhancement Package Version 2 that I have been on since 2016 and to the new Advanced Multipurpose (AMP) round that might potentially be issued in a time of war, I am under the impression that the overall design and capability of how good the M1 can be is being ruined by good-idea fairies.

When I first arrived at my battalion, we had the flex mount for the tank commander (TC)'s .50-caliber weapon. A few years ago, we had the flex mount replaced with Common Remote-Operated Weapon Station (CROWS) 3 ("lo pro CROWS"). The "lo pro CROWS" has become an absolute waste of money to have on the tank. Why? Because it's another electronic thing that breaks or stops working, and the .50-cal solenoid loses timing. To keep it working requires extra time to ensure that it will work properly – vs. the flex mount, which was simple and easy.

Also, the "lo pro CROWS" blocks the TC's forward vision when he is either in nametape defilade or when he has his hatch in "open protective" mode. And it turns the TC into a gunner when he is trying to use it vs. having his head out of the hatch to correctly survey the battlefield. The best thing for the tank is to get rid of the costly and problematic CROWS and replace it with the flex mount (Commander's Weapon Station).

The AMP round, in concept, is great. The biggest issue I foresee with it is that the Ammunition Data Link that interfaces with the round may break. When that happens, with my understanding of the round, it basically turns it into a glorified high-explosive (HE) anti-tank (AT) round, which defeats the purpose of developing this new round. The AMP round's capabilities are fantastic; the issue is that it relies on electronic components that will break at the worst time.

A better alternative is to take the multipurpose AT round and turn it into an HE round. How to accomplish this? By my understanding, removing all the

penetrating cones' components and cramming the projectile with explosives would do it. Then replace the fuse from air/ground to impact/delay, with the fuse set from the factory on impact.

Why an HE round? Because as I read many accounts from World War II, I saw that all sides expended, on average, significantly more HE rounds than armor-piercing (AP) rounds. And when in heavy tank-on-tank combat during World War II, HE was still expended more than AP. Having an analog system is generally more reliable and simple to understand/maintain. Especially for main-gun rounds.

Another improvement for the Gunner's Primary Sight/ Thermal Imaging System would be to have the turret/hull position shown in the optic rather than just on the Gunner's Control Display Panel. It would be something similar to how it is in the Commander's Independent Thermal Viewer (CITV). The only difference is that it wouldn't show where the CITV is looking.

**SGT BEN SCHNEIDER**

Company B, 1<sup>st</sup> Battalion, 35<sup>th</sup> Armored Regiment, 2<sup>nd</sup> Brigade Combat Team, 1<sup>st</sup> Armored Division

Dear Editor,

I read with great interest articles related to armored cavalry in both the Fall 2021 and Winter 2022 issues of **ARMOR**. The two-part article, "Armor Operations in the Battle of Hue: Readyng Armor for Future Urban Operations," by LTC (Retired) Lee Kichen is exceptional in detailing the need for armored reconnaissance and security in urban areas. LTC Cole Pinheiro's "Resurrecting the 3<sup>rd</sup> Armored Cavalry Regiment" and MAJ Greg Marsh's "Task Force-Management Approach for the Division Cavalry Squadron," both in the Fall 2021 issue, were well-written and convincing. I commend all three of these authors for their professionalism, dedicated research and insightful articles.

**COLONEL (RETIRED) DAVID TEEPLES**

43<sup>rd</sup> Chief of Armor  
Honorary Colonel, 3<sup>rd</sup> Cavalry Regiment

Dear Editor,

At Tillet, Belgium, the Germans staged a brilliant defense against the U.S. 761<sup>st</sup> Tank Battalion, aided by angry, low-hanging clouds and subzero temperatures. Mobility was limited to the roads only. On the hilltops above Tillet, the enemy positioned forward observers. On reverse slopes sprawled well-concealed artillery units that had the roads zeroed in. It was a bloodbath for the combatants, especially for the exposed infantry, as German and American tanks battled it out.

Finally, on the evening of Jan. 9, the Germans could no longer continue their resistance and withdrew, with elements of 761<sup>st</sup> Tank Battalion and 87<sup>th</sup> Infantry Division in pursuit. Together they set up barricades along the Marche-Bastogne Road and choked off the vital supply artery to German operations in the Bulge.

More than three-quarters of a century have passed since the blood-stained ground in and around Tillet shuddered with the shock of battle. But how different today is! Belgium has been liberated. The pounding of hostile guns no longer echoes through the valleys.

We dedicated this plaque (Figure 1) in honor of 761<sup>st</sup> Tank Battalion Oct. 31, 2021.

**JOE WILSON JR.**

Son of Tech5 Joe Wilson Sr., Company B, 761<sup>st</sup> Tank Battalion



Figure 1.

# Train to Outthink, Outmaneuver and Outfight Enemy

by 1LT Hyun J. Chang

The enemy the United States is likely to face in future conflicts will be quite different from those we've engaged in recent decades. Future enemies will likely:

- Be a near-peer who possesses capabilities similar to or better than ours;
- Want to win as bad as we do, with an untethered opposing, hostile and independent will;
- Learn and adapt to how we fight;
- Need to be "hunted" through reconnaissance; and
- Will not be easy to predict.

But do we currently train to fight and win against such an enemy? No. Instead, in most of our training, we fight an opposing force (OPFOR), a roleplayer who is often scripted and told to act a certain way to enable the training unit (TU) to achieve a training objective. Our missions are usually terrain focused – to seize key terrain – with an enemy that is either on the objective or inbound.

But terrain doesn't move or think. Is there a better way to train? Yes. By conducting a free-play force-on-force (FoF) exercise where each side is precisely the enemy described above. It is the superior way to train and how we should train every time. It trains a unit to "outthink, outmaneuver and outfight the enemy" instead of "pursuing perfection in method rather than obtaining decisive results."<sup>1, 2</sup>

## Free-play training not new

Using a free-play exercise isn't a novel concept. William Lind describes in his book, *4<sup>th</sup> Generation Warfare Handbook*, that free-play is the "best training" and that it "must constitute the bulk of the curriculum" for officers in preparation for war.<sup>3</sup> He also wrote that "most training should be [FoF] free-play because only free-play ap-

proximates the disorder of combat."<sup>4</sup>

Free-play training isn't just a concept that resides in books, and it isn't new. In 1941, in preparation for World War II, the U.S. Army conducted the Louisiana Maneuvers, FoF exercises that involved about 400,000 Soldiers over 3,400 square miles. And some of the officers present later became very influential generals such as Omar Bradley, Mark Clark, Dwight Eisenhower, Walter Krueger, Samuel Anderson, Lesley McNair, Joseph Stilwell and George Patton.<sup>5</sup>

This article aims to demonstrate how effective free-play training is, based on an actual free-play FoF exercise called Rifle Focus, conducted Oct. 4-18, 2021, by a Stryker infantry-battalion task force (TF). From the planning phase of the exercise, it was blatantly obvious how the concept of a free-play exercise was now foreign to the U.S. Army. When planners sought support for the exercise, it was met with higher-institutional reluctance and skepticism.

Despite the lack of external support, the TF commander, LTC Craig A. Broyles, enabled the TF staff to plan, prepare and facilitate a true free-play FoF exercise, one in which the company teams entered an arena to fight one another in a competitive environment. What was the result? CPT Trey A. Botten, a company commander who participated in the exercise, said it "was the most effective training I've ever experienced."

## What was Rifle Focus?

Rifle Focus was a FoF multinational maneuver exercise conducted in Poland at the Bemowo Piskie Training Area (BPTA). As the capstone training event for Battle Group Poland (BG-P), it exercised support capabilities as well as command and control. Boyles, commander of both BG-P and the U.S. TF Dark Rifles from the Washington Army National Guard (WAARNG), oversaw the entire training exercise.

Rifle Focus brought together military units of the United States, Romania and Croatia to train with the Polish Territorial Defense Force, testing them all as a combined force. The U.S. contingent was comprised of units from 3<sup>rd</sup> Battalion, 161<sup>st</sup> Infantry, 81<sup>st</sup> Stryker Brigade Combat Team (SBCT) – called the Dark Rifles – Battery B, 2<sup>nd</sup> Battalion, 146<sup>th</sup> Field Artillery Regiment; and Troop A, 1<sup>st</sup> Squadron, 82<sup>nd</sup> Cavalry Regiment. (Table 1.)

Why the name "Focus?" Broyles and his staff focused on training BG-P's mission-essential tasks (METs): expeditionary-deployment operations such as alert/marshal/deploy (A/M/D), area security and defense, and attack. Special focus was placed on interoperability, or the units' ability to integrate and operate in a North Atlantic Treaty Organization (NATO) environment alongside allies.<sup>6</sup>

Each of the three rifle companies formed a company team, and they fought one another in a competitive environment. Company teams included all elements of BG-P, including mobile-gun-system (MGS) and anti-tank guided missile (ATGM) Strykers, a field-artillery platoon, Romanian Gepard short-range air-defense platoon, Croatian multiple-rocket launchers, U.S. combat engineers and Polish combat engineers. Our allies were eager to be a part of this competitive FoF exercise.

The 15 days of exercise consisted of three five-day rotations, where the first two days of each rotation was reception, staging, onward-movement and integration (RSOI), and later three days "in the box." Each company team was in the box for all three rotations, two as a TU and one as an observer/coach/trainer (O/C/T) team. (Figure 1.)

Each three-day rotation "in the box" consisted of three battle periods (BPs):

- A/M/D and receipt of the mission;
- Meeting engagement; and
- Defend/attack to destroy.

Table 1. Commander's intent for rifle focus.	
<p><b>MISSION STATEMENT:</b> Battle Group Poland (BG-P) conducts FoF maneuvers Oct. 4-18, 2021, on BPTA, Poland, to train company teams on all battle-group METs.</p>	
<p><b>PURPOSE OF THE TRAINING EVENT:</b> To practice fighting as company teams in a realistic/competitive environment that will allow the battle group to practice, refine and validate all warfighting, interoperability and exercise-control skills.</p>	
<p><b>VISUALIZATION OF TRAINING OF TRAINING EVENT</b></p>	
<p><b>Mission statement two levels up</b> Multinational Division Northeast BG-P has the mission to conduct a defense-in-depth in northeast Poland vicinity of the Suwalki corridor to gain time for NATO reinforcements.</p>	<p><b>Battalion training objectives (cont)</b> 4) Conduct deep and close reconnaissance and security operations to enable battle group combined-arms operations. 5) Exercise distributed mission command. 6) Execute expeditious logistics over extended distances. 7) Manage real-time risk to mission and risk to force effectively. 8) Learn and get better each day.</p>
<p><b>Desired outcome: "winning"</b> Leaders at echelon learned through experience and have a lasting mental model of how to train to outthink, outmaneuver and outfight the enemy.</p>	<p><b>Key tasks (conditions that MUST exist)</b> -Plan the exercise using the JELC cycle.</p>
<p><b>Training focus</b> Improving BG-P METs through repetitions by "being in the box" and by being the coach.</p>	<p><b>CONCEPT SKETCH:</b></p>
<p><b>Battalion training objectives (T,C,S)</b> 1) Increase BG-P decisive-action proficiency through realistic force-on-force maneuver training. 2) Increase interoperability between NATO allies. 3) Synchronize intelligence, reconnaissance and fires.</p>	<p><b>FOLLOW-ON TRAININGS</b></p>
<p><b>Risk to force:</b> Soldiers taking unnecessary risks because of the competitive environment. Mitigated through O/C/T coverage and EXSOP adherence. <b>Risk to mission (desired outcome):</b> Exercise control and HICON inexperience creates too much friction so exercise suffers. Mitigated through deliberate series of rehearsals prior to "game day."</p>	<p><b>Key concern:</b> Enough exercise control that ensures safety while achieving BG-P training objectives.</p>

Rotation 1					Rotation 2					Rotation 3				
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
RSOI		In the Box			AAR / RSOI		In the Box			AAR / RSOI		In the Box		
		C Co vs. B Co					A Co vs. C Co					B Co vs. A Co		
		O/C/T: HHC and A Co					O/C/T: HHC and B Co					O/C/T: HHC and C Co		

Figure 1. 15-day exercise schedule.

In the first BP, each company team received an alert from the BG-P headquarters to deploy into the tactical-assembly area, upload its ammunition and establish a defensive posture. Then it received its order to destroy the enemy. Once each team received

the mission, the second BP began. Each team began the troop-leading procedures (TLP) process and executed its mission to destroy the other team. Once the meeting engagement was over, the last BP began when both teams received a fragmentary order

(FRAGO) to either defend in sector to destroy the enemy or to attack to destroy the enemy.

Since there was no Blue Force or opposing force (OPFOR) in the exercise, each team was assigned as either Gold



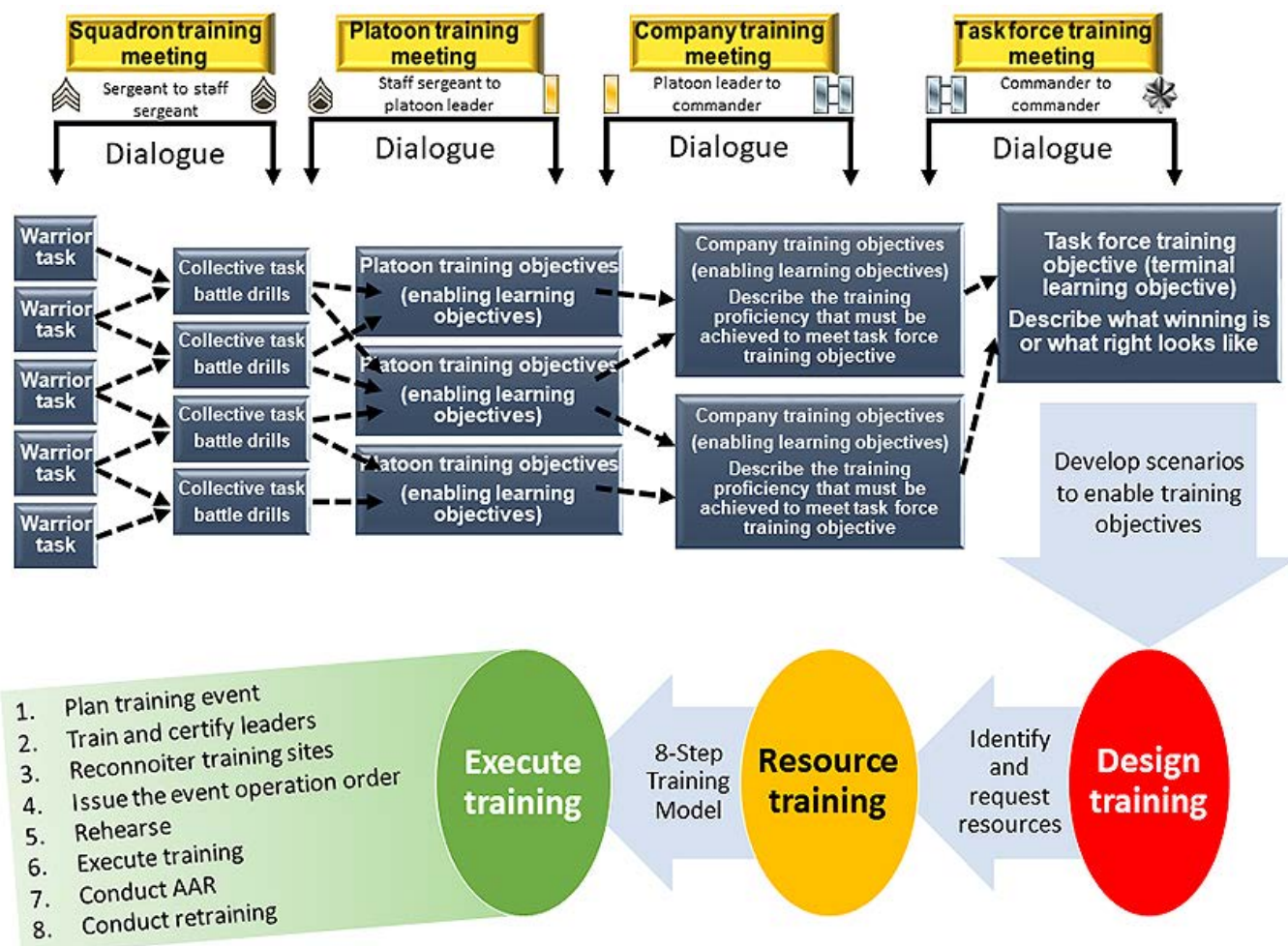


Figure 2. TF Dark Rifles training planning guidance.

or Black Team. All the vehicles were marked with gold or black flags on their antennas, and Soldiers wore a gold or black armband to distinguish the different teams.

Each team's leadership from squad leader and above had an O/C/T assigned. Only six humvees were used for each O/C/T team, and all O/C/Ts for squad leaders rode inside the Strykers of the squad they coached to minimize artificiality and limit the number of O/C/T vehicles trailing the TUs. (Figures 2 and 3.)

### Training without MILES

Rifle Focus was conducted without the use of multiple integrated laser-engagement systems (MILES). However, given the heavy vegetation on the terrain where BG-P was training to fight, MILES lasers simply wouldn't be effective. Instead, BG-P developed extensive exercise standing operating procedures (EXSOPs) that outlined how

O/C/Ts were to adjudicate casualties and effects during the exercise.

In the end, exercising the adjudication process was valuable training on its own. To adjudicate accurately, each O/C/T needed to understand the effect of each weapons system, including all indirect-fire (IDF) assets, and how cover, distance, and an element's posture affects the damage done to it.

### Rifle Focus based on 4 ideas

Rifle Focus was based on four ideas from the following books and article: (1) competition drives excellence (*Top Dog* by Po Bronson and Ashley Merryman); (2) champions are built by consistently training at the threshold of failure (*The Talent Code* by Daniel Coyle); (3) only free-play training brings in the central element of war: free creative will of the opponent (*Maneuver Warfare: An Anthology*, edited by Richard D. Hooker); and (4)

you learn the most when you teach others, and to teach, you must know what you're talking about (*TIME* magazine, "The Protégé Effect" by Annie Murphy Paul).<sup>7, 8, 9, 10</sup>

**Competition drives excellence.**<sup>11</sup> Rifle Focus was designed to bring out the competitiveness in every company commander and Soldier. Months prior, we announced that at the end of the 15-day capstone exercise, there could be only one winner. They were to conduct training to accomplish the mission of Rifle Focus: to find and destroy the opponent. This allowed subordinate units to prioritize training to discover their own ways to outthink, outmaneuver and outfight the enemy.<sup>12</sup> Each commander assessed and trained the real needs of their element instead of checking the boxes on a checklist of things to do.

Table 2 is one company's training plan to prepare for Rifle Focus.

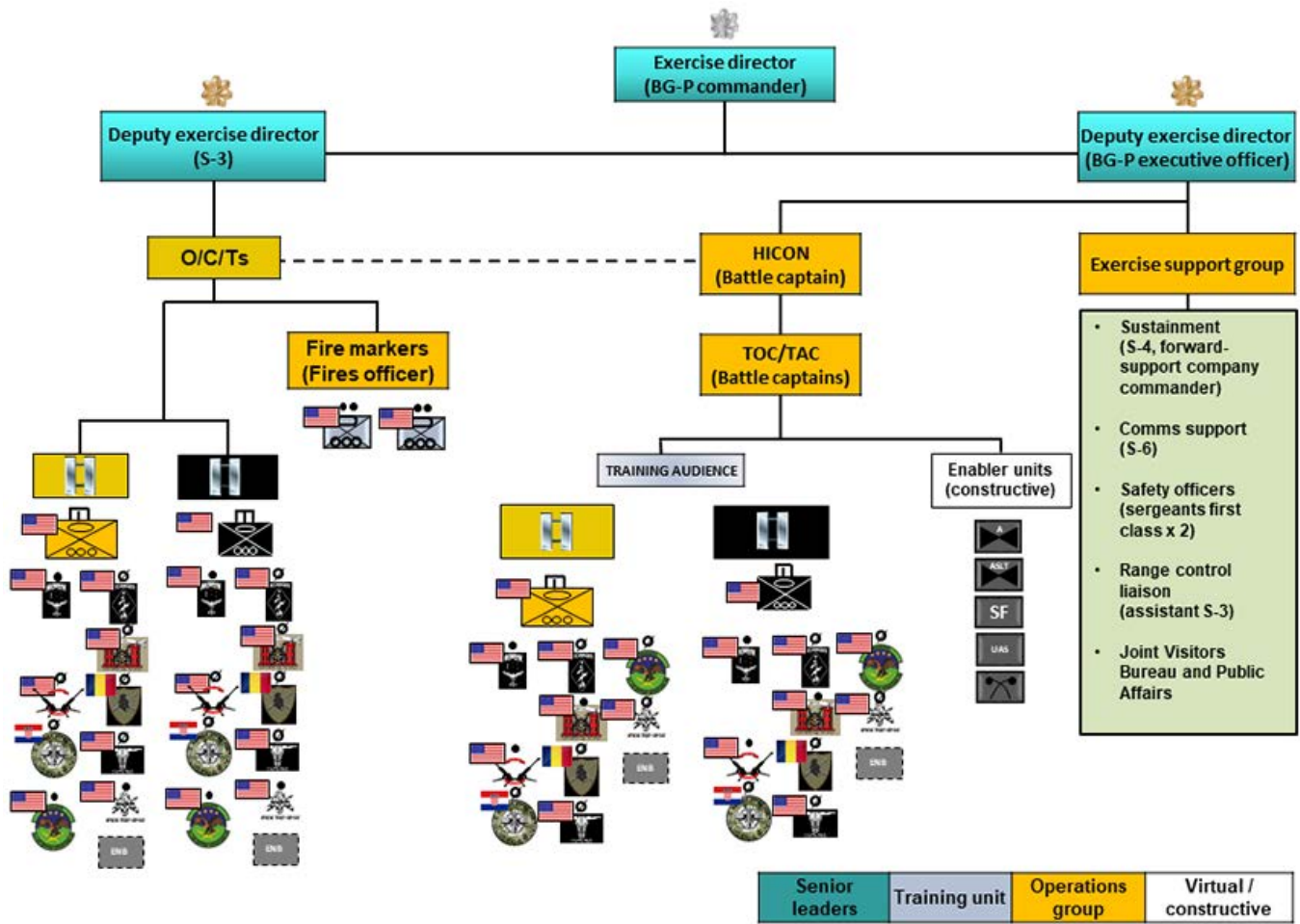


Figure 3. Rifle Focus task-organization.

Table 2. Bear Company's training plan leading to Rifle Focus. (Editor's note: a *bronegruppa*, meaning an armored group, refers to a group of fighting vehicles, such as Strykers, when the Soldiers have dismounted and the vehicles are occupied only by the driver and the gunner. The *bronegruppa* is usually commanded by the company executive officer and can be used to provide direct-fire support to dismounted troops.)

<p><b>DATES:</b> Aug. 2-5  <b>LOCATION:</b> Tank range  <b>TRAINING:</b> Platoon gunnery and short-range marksmanship  <b>PURPOSE:</b> Certify crews in platoon live-fire gunnery employing <i>bronegruppa</i> and incorporate dismounted weapon squads to clear enemy observation posts.  <b>FOCUS:</b> Crew qualifications, Stryker/squad integration on non-static range, anti-tank weapon employment.  <b>RISK TO TRAINING:</b> Weather, ammunition supply, range-coordination conflicts.</p>	<p><b>DATES:</b> Aug. 17-20  <b>LOCATION:</b> Klusy  <b>TRAINING:</b> Squadron FoF situation-training exercise (STX)  <b>PURPOSE:</b> Squadron capable of employing overlapping sectors of fire in islands of resistance.  <b>FOCUS:</b> Ambush, knock-out bunker, engagement-area (EA) development, range cards, direct-fire control measures (DFCMs), obstacle employment, battle drill development, peer O/C/T.  <b>RISK TO TRAINING:</b> Ammunition restrictions.</p>	<p><b>DATES:</b> Aug. 24-27  <b>LOCATION:</b> Klusy  <b>TRAINING:</b> Platoon FoF STX  <b>PURPOSE:</b> Employ islands of resistance at platoon-level planning for indirect fires and integrating Strykers into our defense.  <b>FOCUS:</b> EA development, DFCMs, obstacle emplacement, <i>bronegruppa</i>, moving from inaction to action, peer O/C/T.  <b>RISK TO TRAINING:</b> Ammunition restrictions.</p>
<p><b>DATES:</b> Sept. 7-9  <b>LOCATION:</b> Wyreby  <b>TRAINING:</b> Machinegun stress shoot  <b>PURPOSE:</b> Fighting to a position of advantage to employ automatic fire based on terrain/threat DFCMs.  <b>FOCUS:</b> Ambush mentality, terrain/threat-based DFCMs.  <b>RISK TO TRAINING:</b> Co-use with Company A.</p>	<p><b>DATES:</b> Sept. 18-23  <b>LOCATION:</b> South Hills  <b>TRAINING:</b> Platoon live-fire exercise  <b>PURPOSE:</b> Provide realistic, scenario-based live-fire training in wooded / restricted terrain enabling fighting to positions of advantage/DFCM according to terrain and threat.  <b>FOCUS:</b> Live-fire <i>bronegruppa</i>, safe / fast / aggressive battle-drill employment, simulated casualty treatment and evacuation.  <b>RISK TO TRAINING:</b> Existing targetry supporting scheme of maneuver.</p>	<p>Rifle Focus</p>

During training meetings, commanders briefed their training plan to prepare their units to be more efficient at fighting the opponent. The entire TF, including sustainers and staff, were intent on meeting the objectives of the capstone training event, either to fight to destroy the enemy or to enable company teams to do so. The focus was on “obtaining decisive results,” not “perfection in method.”<sup>13</sup>

The competitive environment not only created effective training plans but created excitement and motivation among the formations. CPT Brandon G. Legg, commander of the field-artillery battery, said that at the end of each rotation, his Soldiers were “discussing how the battle went, often leading to discussions about how one platoon or gun was faster than the others and how many times one platoon was able to take out the other platoon.”



**Table 3. Scoring criteria for Rifle Focus.** The winner was the Bear Company, 3-161 Infantry. Each company team competed in two three-day battle periods during the exercise, and the winner was awarded to the team with the highest cumulative points. The exercise was designed to reward results, so points were awarded when personnel/vehicles were destroyed, with personnel/vehicles of higher importance gaining higher points.

Per vehicle destroyed		Per person killed		Bonus points	
Infantry combat vehicle	+5	Rifleman/scout	+1	Recon elements detect other team first	+5
Mobile command vehicle / remote vehicle	+20	Team leader	+2	Excellence observed by Top 5 (commander, command sergeant major, executive officer, S-3, ops sergeant major)	+10
Gepard (air-defense artillery)	+20	Squad leader	+5	Intel exploitation	+10
Command vehicle / load-handling system / wrecker	+25	Platoon leader or platoon sergeant	+10	Trauma intervention	+10
MGS / ATGM	+25	Commander or first sergeant	+25	Faster start point out of motorpool	+10
Volcano / M777	+50				
Fueler	+55				

## Results, not process

Rifle Focus incentivized results, not the process. The winner of the 15-day exercise was determined based on who was most efficient at destroying the enemy. The scoring system was developed to incentivize destroying the high-payoff targets that will cripple the enemy, rather than just killing more troops/vehicles.

Table 3 is the scoring matrix. Once personnel/vehicle were killed, the regeneration process began, where personnel killed or vehicles destroyed had to conduct movement to the personnel holding areas and wait four hours until released back to the exercise.

During Rifle Focus, it didn't matter if company teams completed all the correct steps and processes. The only thing that mattered was if they could accomplish the mission to find and destroy the enemy. The company commanders and platoon leaders weren't restrained to and graded on a checklist such as all the correct elements of the TLP process. Instead, as soon as the commanders received the battalion order, they were free to immediately begin reconnaissance (or not; the choice was theirs) and develop and issue an order as extensive or bare as they felt would optimize their chance of winning combat.

**Training at threshold of failure.**<sup>14</sup> Rifle Focus was designed to train the companies at the threshold of failure by creating a training environment they'd never experienced before.<sup>15</sup> First, all missions during the exercise were based on destroying the enemy. For

the first time in their careers, company commanders were fighting a real peer-threat with the same capabilities as theirs, free-thinking and with an untethered opposing will. No one knew where the enemy would be or where the battle would occur. Each team had to "hunt" (outthink) the other team using reconnaissance.

Secondly, more stress was added by giving company commanders troops and equipment in an amount they'd never commanded before, increasing "the number of decisions [they] must make."<sup>16</sup> Each company team included its own MGS and ATGM Strykers, a field-artillery platoon, Romanian Gepard short-range air defense, Croatian multiple-rocket launchers, a U.S. long-range surveillance team, U.S. combat engineers and Polish combat engineers, totaling about 40 vehicles and 200 Soldiers. Each commander had to fully exercise mission command and decide how to do it on his own – what extra responsibilities to entrust to the executive officer, first sergeant, fire-support officer and other subordinate leaders, and how autonomous to make their attachments.

That meant attachment leaders had to recommend to company commanders how best to use their capabilities and areas of expertise. An example of this was how to properly employ the remote anti-armor mine/area-denial artillery munition family of scatterable minefields (FASCAM). The U.S. combat-engineer squad leader attached to each company was required to use the 17-line scatterable-minefield request for proper FASCAM authorization. This

typically would be completed by the engineer platoon leader/platoon sergeant to support the maneuver commander or coordinated by the TF engineer.

Placing these tasks on the engineer squad leader challenged this leader to perform at a higher level of responsibility, and the maneuver commander in turn gained experience in how combat support can shape his scheme of maneuver. Through multiple repetitions of employing FASCAM over the course of the exercise, each echelon of leaders gained a better understanding of the planning and coordination necessary for enabler authorizations from higher headquarters.

Lastly, more mental stress was imposed on the commanders by constant pressure to provide reports to paint an accurate picture of the battlefield to the TF commander. By design, each team wasn't the main effort in their battalion's mission. That meant if they wanted to request battalion assets, such as unmanned aerial systems (UASs) from the Polish unit that volunteered to join the exercise, or constructive close air support from the Joint terminal attack controllers, each commander had to articulate to the TF commander through accurate reports why he should grant them more assets to support the battalion mission.

## Operating 2 battalions with 1 staff

The idea of training at the threshold of failure was equally true for the staff. To make the exercise work, every staff section had to solve for "yes" with a great attitude, usually resorting to a new and creative idea that hadn't been tried before. The exercise was planned using the Joint exercise life-cycle (JELC), and staff officers were taught and coached by the TF commander about the process.

During the planning and preparation processes, staff created two battalion orders and two Road to War / warning order (WARNO) / operations order (OPORD) / FRAGO briefs. Staff also task-organized to be able to battle-track and support two teams. Sometimes a single person had to wear two hats, such as to be the S-2, S-4 or S-6 for both Gold and Black teams.



After rigorous assessment by appointed safety officers, an exercise map was created with battalion checkpoints and phase lines, then the S-2 created a world for company teams to fight in. To eliminate as much artificiality as possible, all boundaries and restricted areas had to make sense – labeled as the area of operations (AO) for adjacent units, enemy minefields, etc.

Due to the safety measures and coordination in place, the 15-day exercise was conducted without any serious injuries or accidents. There were real-life vehicle-recovery situations, but they all added to the training value by providing opportunities to use recovery assets/personnel and by placing stress on the command teams in coordinating recovery during combat.

Facilitating the exercise required creativity, especially from the S-6 section.

They engineered the Joint Battle Command-Platform (JBC-P) system so each team could not see the other teams' locations on their JBC-P. The tactical-operations center (TOC) and tactical command post (TAC) had to monitor and receive reports from both teams with one set of battalion equipment. To make this happen, the S-6 shop instrumentally used parts from the command-post (CP) platform vehicles to establish two CP systems. They supported both TUs with one retransmission (retrans) team, and they created two communication plans.

Despite all planning and preparation, once the exercise commenced, S-6 had to adapt to unanticipated changes such as thick vegetation in the AO, forcing retrans to collapse inward to support the vastly limited range of very-high-frequency communications.

When one TU's communication plan was acquired by the other team, S-6 had to quickly create another one (although the exercise director rewarded a TU's capture of intel by awarding points and allowing the capturing unit to exploit the other side's communication card for several hours). Overall, the unpredictable nature of the free-play FoF exercise created abundant opportunities for the staff to solve problems under pressure.

**Fighting a free-thinking enemy.**<sup>17</sup> Every effort was made to make this a true free-play exercise. Other than safety measures in place to ensure the exercise could be executed safely, everything was in play. Companies were given their constraints and restraints during the orders brief, and then they were allowed to use their creativity to find and destroy the enemy.

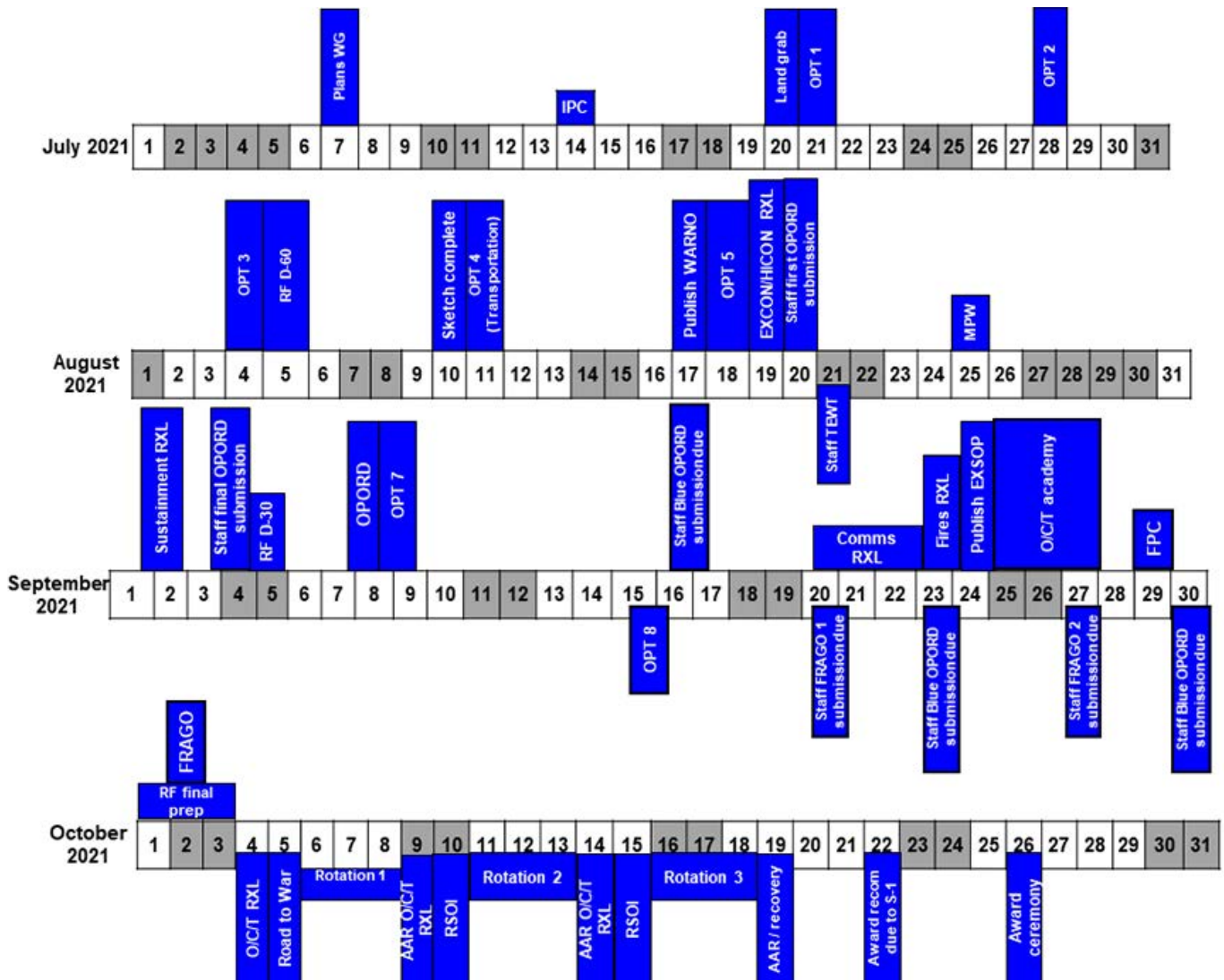


Figure 4. Rifle Focus JELC timeline.

Executing a true free-play exercise had many unique characteristics, one being TUs' experiencing the difficulty of finding an intelligent, moving enemy that was trying to avoid detection in a massive, heavily forested training area. Since there was no OPFOR who was alerted of the approaching TU, sometimes TUs circled each other or fought a ghost enemy they assessed to be at a certain area – which would be realistic when fighting a real enemy. In such cases, the exercise director played a role in keeping the momentum going.

As an example, once TUs spent enough time being pressed by the TAC to determine the enemy's location and intent, the TF commander would occasionally inject enablers. The enablers provided intelligence to the TU with better reports of an assessed enemy's commander's intent. Or, sometimes, the TF commander shifted the main effort to a TU and set a no-later-than time to attack across a phase line, forcing a decision in combat.

**Teachers learn the most.**<sup>18</sup> Lastly, Rifle Focus was based on the idea that you learn the most when you teach others.<sup>19</sup> Rotations were intentionally built to give every company an opportunity to become the O/C/T. All leaders knew they had to train and coach by the rules, so leaders at all levels intently studied the EXSOP. And to everyone's surprise, the idea that O/C/Ts are hated proved untrue, as all O/C/Ts did their best to coach and facilitate the exercise, and the TUs cooperated, each knowing their turn to trade places was coming. Since everyone knew they had to be O/C/Ts at some point, leaders showed respect and professionalism toward their peer O/C/Ts.

The effectiveness of O/C/T teams was made possible by the three-day O/C/T academy, conducted with full participation of all team leaders and above. All leaders were of the same understanding that "there may be a lot of friction points, but we're going to figure it out." It was required of all peer O/C/Ts to be fair and impartial professionals.

## Results

Rifle Focus accomplished precisely the training objectives of the exercise: to

become better at outthinking, outmaneuvering and outfighting the enemy. As the exercise unfolded, each company team learned to be better at incorporating fire and maneuver, using reconnaissance to find the enemy, then using IDF assets to attack the enemy's critical vulnerabilities. Company teams drastically increased their emphasis on finding the enemy. They fully used infantry to conduct reconnaissance missions, and they called for fire. During the exercise, more than 150 fire missions processed, and this also fully exercised the logistics assets by creating the need for logistics packages and caches.

Company teams learned the importance of operating dismounted and of conducting anti-armor ambushes. Dismounted ambushes abounded in later rotations and were the primary way direct-fire kills were achieved. In one of the rotations, a platoon sergeant from Cobra Company, SFC Schuyler D. Sampsonjackson, led his platoon dismounted through thick vegetation, found the enemy commander's Stryker, destroyed it using AT-4 and Javelin fire, and then called for fire to mask his exfiltration out of the area – outthinking, outmaneuvering and outfighting the enemy.

Rifle Focus demonstrated how a free-play FoF exercise is a superior way to train. Every company team experienced growth from its first rotation to the next. They weren't afraid to learn from each other, taking what worked and immediately implementing it to improve how they operated. One example was how one company team reduced its time to A/M/D from almost four hours to 52 minutes in just two days. That required meticulously fine-tuning how its Soldiers drew weapons from the arms room, completed communications check and moved 40-plus vehicles and 200-plus Soldiers out of the motorpool. That illustrated how our formation was capable of figuring things out to win the race and outmaneuver the enemy.

The true value of Rifle Focus was the opportunity to genuinely assess our units. Each rotation reflected the effective nature of our past training. After each rotation, each unit had internal after-action reviews (AARs) at

squad and platoon levels and facilitated AARs at the company-team level. During each AAR, the focus was on identifying what we're good at, what we need to train at each echelon, what it meant for our way forward and how we should drive our future training based on our self-evaluation. Leaders were focused on how to change the outcome – how to be better at outthinking, outmaneuvering and outfighting the enemy. The focus was on making ourselves better as an organization, not the exercise.

"Rifle Focus was different from other exercises simply because we had the opportunity to be creative," said Botten, commander of Bear Company, the winning team of Rifle Focus 2021. "It was the first time in my military career when I was not limited to a lane, a scenario, or left and right limits. I had the opportunity to employ different forms of maneuver at different periods of the battle, exploit when able, retrograde when required and was only limited by my imagination and combat power. It was a tremendous opportunity to test my strengths and limitation in task-organization of enablers, and I had the opportunity to think critically how my opponent would fight, then find a way to beat him.

"This was the most effective training I have ever experienced, and I am grateful my company had the opportunity to be a part of it," continued Botten. "We gained a better understanding of terrain sense; how to separate the mundane from the important; how to build a common operating picture through reporting and mission-command systems; and how to fight an opponent that wanted to win just as much as we did. We also had the opportunity to employ decentralized methods to achieve my intent due to limitations of operational timelines and changes of the battle period. This forced me to move away from the traditional TLP process and get back to [Field Manual] 3-0 tactics in finding the enemy, identifying the opponent's intent, developing and executing a course of action – as opposed to going into the fight with a well-refined, well-rehearsed plan.

"As a commanding officer, I was the training audience and was tested in





**Figure 5. SPC Michael Schwader, a Soldier assigned to 3<sup>rd</sup> Battalion, 161<sup>st</sup> Infantry Regiment, pulls security during Rifle Focus with a M240B machinegun Oct. 16, 2021, at BPTA, Poland. Different companies competed against each other as part of Rifle Focus, Battle Group Poland’s two-week-long capstone maneuver exercise. (U.S. Army photo by SPC Jameson Harris)**

every capability – training at the threshold of failure,” Botten said. “The competitive atmosphere encouraged us to take the training seriously and give every ounce of effort at every echelon to win. I did everything I could to determine the opponent’s course of action, develop a plan to beat him and then impose a creative will against him. It was awesome.”

Free-play FoF training to this scale wasn’t something soldiers from other nations were used to, especially since they were training with other nations. Even when some soldiers had multinational training, it was usually limited to experience of other nations’ weapon systems.

“Rifle Focus was all about how competition drives excellence,” summarized Broyles. “Soldiers knowing they are competing against their peers rather than an assigned OPFOR intensified their preparation and execution. They really experienced what fighting a near-peer adversary would look like. The intent was combining competition with external peer observers in a free-play exercise that created as close to a real combat environment as possible. The outcome was deep experiential learning of lessons our Soldiers would never forget.

“You really do win by reconnaissance,”

I heard a senior leader say to his company, for example. What I learned from Rifle Focus is we have developed comfort and a natural tendency to attack and seize terrain objectives, but the skills and techniques to find and destroy an enemy formation are different,” Broyles said. “I and my formation had lost the art of a movement-to-contact, then maneuvering to destroy an enemy rather than seizing terrain. Post-Rifle Focus, we revamped our entire training plans to consolidate and build on our lessons-learned. The outcome was better than I had ever imagined. Competition drives excellence.

“Rifle Focus was also all about integrating/cooperating with our NATO allies,” said Broyles. “We are never going to fight alone, and enemies exploit seams, gaps and joints. Therefore it is imperative we seal up those gaps created when two different armies operate side by side. We practiced this over and over by fully integrating our forces with allies and practicing taking advantage of their capabilities we did not have. In the end, our leaders understood the value of our NATO allies we and have consider multinational solutions in all we do.”

“Rifle Focus was a great opportunity to work with our allies in [the] field to

test our tactics and find the best possible way to work together and achieve victory on the battlefield,” said Croatian Army 2LT Luka Pavičić.

“It was the last exercise for us here in Poland and I enjoyed it a lot,” commented Romanian Army 1LT Bogdan Toma. “In the exercise I learned about U.S. capabilities, Croatian capabilities. It was great. I hope that we will have this kind of exercise more.”

## Conclusion

Contrary to all doubts, once the exercise commenced, the entire BG-P began operating like a single unit, engaging and using every part of the machine. It required flexibility at all echelons, from the rifleman to staff, and all the way to the TF commander. Leaders at all levels learned to adapt and figured it out to keep going and accomplish the mission.

Rifle Focus created precisely what Lind described as the ideal training to produce adaptive leaders, placing leaders in “difficult, unexpected situations, then [requiring] them to make decisions and take action under pressure.”<sup>20</sup> Above all, it created and engraved in future leaders a mental model of what effective training should look like: a free-play FoF exercise. Once you experience it, you won’t want to go back to situational-training exercise (STX) lanes. Everyone should train like this.

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## Notes

<sup>1</sup> Army Techniques Publication (ATP) 3-21.8, *Infantry Platoon and Squad*, Headquarters Department of the Army;



## ACRONYM QUICK-SCAN

**AAR** – after-action report  
**A/M/D** – alert/marshal/deploy  
**AO** – area of operations  
**ASLT** – assault  
**ATGM** – anti-tank guided missile  
**ATP** – Army techniques publication  
**BPTA** – Bemowo Piskie Training Area  
**BG-P** – Battle Group Poland  
**BP** – battle period  
**CP** – command post  
**CPX** – command-post exercise  
**DFCM** – direct-fire control measure  
**EA** – engagement area  
**EXCON** – exercise control  
**EXSOP** – exercise standard operating procedures  
**FASCAM** – family of scatterable mines  
**FoF** – force-on-force  
**FPC** – final planning conference

**FPW** – final planning work group  
**FRAGO** – fragmentary order  
**HICON** – higher control  
**IDF** – indirect fire  
**IPC** – initial planning conference  
**IPW** – initial planning workgroup  
**JBC-P** – joint battle-command platform  
**JELC** – Joint exercise lifecycle  
**LoE** – line of effort  
**MET** – mission-essential task  
**MGS** – Mobile Gun System  
**MILES** – multiple integrated laser-engagement systems  
**MPW** – mid-planning workgroup  
**NATO** – North Atlantic Treaty Organization  
**O/C/T** – observer/coach/trainer  
**OPFOR** – opposing force  
**OPORD** – operations order  
**OPT** – operational planning team

**RF** – Rifle Focus  
**RSOI** – reception, staging, onward movement and integration  
**RXL** – rehearsal  
**SBCT** – Stryker brigade combat team  
**SF** – Special Forces  
**STX** – situational-training exercise  
**TAC** – tactical command post  
**TEWT** – tactical exercise without troops or training exercise without troops  
**TF** – task force  
**TLP** – troop-leading procedures  
**TOC** – tactical-operations center  
**TU** – training unit  
**UAS** – unmanned aerial system  
**WAARNG** – Washington Army National Guard  
**WARNO** – warning order  
**WG** – working group

Washington, DC, Aug. 23, 2016.

<sup>2</sup> Robert Leonhard, *The Art of Maneuver: Maneuver-Warfare Theory and Airland Battle*, New York, New York: Presidio Press, 1994.

<sup>3</sup> W.S. Lind and U.S. Marine Corps LTC G.A. Thiele, *4<sup>th</sup> Generation Warfare Handbook*, Castalia House, 2015.

<sup>4</sup> Ibid.

<sup>5</sup> “Louisiana Maneuvers,” Wikipedia; retrieved Oct. 30, 2021, [https://en.wikipedia.org/w/index.php?title=Louisiana\\_Maneuvers&oldid=1042011463](https://en.wikipedia.org/w/index.php?title=Louisiana_Maneuvers&oldid=1042011463).

<sup>6</sup> LTC Craig A. Broyles, “Dark Rifle 6 Training Guidance,” 2021.

<sup>7</sup> Po Bronson and Ashley Merryman, *Top Dog: The Science of Winning and Losing*, New York, New York: Grand Central Publishing, 2014.

<sup>8</sup> Daniel Coyle, *The Talent Code: Greatness Isn't Born. It's Grown*, New York, New York: Random House Business, 2020.

<sup>9</sup> Richard D. Hooker, editor, *Maneuver Warfare: An Anthology*, New York, New York: Presidio Press, 1993.

<sup>10</sup> Annie Murphy Paul, “The Protégé Effect,” *TIME*, Nov. 30, 2011, <https://ideas.time.com/2011/11/30/the-protege-effect/>.

<sup>11</sup> Bronson and Merryman.

<sup>12</sup> ATP 3-21.8.

<sup>13</sup> Leonhard.

<sup>14</sup> Coyle.

<sup>15</sup> Ibid.

<sup>16</sup> Army Doctrine Publication 5-0, *The Operations Process*, Headquarters Department of the Army: Washington, DC: July 31, 2019.

<sup>17</sup> Hooker.

<sup>18</sup> Paul.

<sup>19</sup> Ibid.

<sup>20</sup> Lind and Thiele.

**Figure 6. SGT Sig Johnson, a Soldier assigned to 3<sup>rd</sup> Battalion, 161<sup>st</sup> Infantry Regiment, aims an inert M3 Carl Gustav anti-tank rocket Oct. 16, 2021, at a designated target during Rifle Focus at BPTA, Poland. (U.S. Army photo by SPC Jameson Harris)**







**Figure 7.** U.S. Army National Guard SSG Vireak Sok, with 3<sup>rd</sup> Battalion, 161<sup>st</sup> Infantry Regiment, leads a Soldier through a forest during Rifle Focus at Poland's Bemowo Piskie Training Area Oct. 8, 2021. Rifle Focus is a force-on-force U.S.-led training exercise that involves allies from Battle Group Poland, supporting two U.S. infantry companies. This exercise measures command-and-control and maneuver tactics to support the NATO alliance. (U.S. Army photo by SPC Osvaldo Fuentes)



**Figure 9.** U.S. Army military vehicles with 3<sup>rd</sup> Battalion, 161<sup>st</sup> Infantry Regiment, take defensive positions during Rifle Focus at Bemowo Piskie Training Area, Poland, Oct. 6, 2021. (U.S. Army photo by SPC Osvaldo Fuentes)



**Figure 10.** Croatia Land Forces Privat Ivan Kudric from Storm Battery takes fire elements on a Multiple Rocket Launcher System sighting device during Rifle Focus.



**Figure 8, left.** U.S. Army Soldiers from 3<sup>rd</sup> Battalion, 161<sup>st</sup> Infantry Regiment, prepare a .50-caliber M2 machinegun on a Stryker during Rifle Focus at Bemowo Piskie Training Area, Poland, Oct. 6, 2021. (U.S. Army photo by SPC Osvaldo Fuentes)





**Figure 11.** Croatia Land Forces soldiers from Storm Battery respond to a simulated alert to deploy during Rifle Focus at Bemowo Piskie Training Area, Poland, Oct. 6, 2021. (U.S. Army photo by SPC Osvaldo Fuentes)



**Figure 13.** SGT James Wright, a combat engineer assigned to 3<sup>rd</sup> Battalion, 161<sup>st</sup> Infantry Regiment, teaches Polish Territorial Defense Force soldiers how to use soft demo explosively formed projectiles during Rifle Focus Oct. 16, 2021 in Bemowo Piskie Training Area. This demonstration was one of many opportunities NATO allies had to work together and learn from each other during Rifle Focus, enhancing interoperability. (U.S. Army photo by SPC Jameson Harris)

**Figure 12, below.** Romanian Land Forces soldiers from the Sky Guardians receive a call for fire during Rifle Focus at Bemowo Piskie Training Area, Poland, Oct. 8, 2021. (U.S. Army photo by SPC Osvaldo Fuentes)







# Competitive Visualization: The Reconnaissance and Security Formation and What It Brings to Multi-Domain Operations

by MAJ Chris D. Thornton

Our enemies will be harder to find than they generally have been for the Joint force conducting multi-domain operations (MDO). Wide-area aerial intelligence, surveillance and reconnaissance (ISR) will be affected by anti-access and area denial systems at least part of the time, and unmanned aerial systems (UAS) may be shot down or impacted by cyber and electromagnetic activities (CEMA).

The space domain will also be contested. It is critical to friendly communications, the use of precision munitions and space-based sensors.

Given this inevitable reality, cavalry will continue to be a key tool for competitive visualization for commanders.

Formations dedicated to reconnaissance and security (R&S) – and cavalry at the division and corps echelons in particular – remain relevant despite increasingly sophisticated air- and space-based sensors. Their importance will only increase as the U.S. Army is increasingly challenged in the

air- and electromagnetic-spectrum (EMS) domains. An R&S formation can protect a flank; conduct detailed reconnaissance of critical terrain such as wet-gap-crossing sites; or deliver targets concurrently with satisfying the commander's priority information requirements (PIRs).

The Army need not look too far into the past to see what a formation with a dedicated R&S mission can deliver in large-scale combat operations (LSCO). During Operation Desert Storm, 2<sup>nd</sup> Armored Cavalry Regiment, screening forward of VII Corps, destroyed a division of Iraqi army combat power while answering information requirements and shaping the corps fight<sup>1</sup> at the Battle of 73 Easting.<sup>2</sup> The 3<sup>rd</sup> Squadron, 7<sup>th</sup> Cavalry Regiment, played an equally critical role in 2003, fighting for information for 3<sup>rd</sup> Infantry Division and eliminating lead-echelon threats during the division's advance toward Baghdad.<sup>3</sup>

The preceding two examples illustrate the continued ability of cavalry formations to develop the situation for

ground commanders at echelon in support of offensive operations in LSCO and their relevance to forces equipped with air- and space-based ISR. Whether penetrating the disruption zone of an enemy's deliberate defense or conducting detailed reconnaissance for a gap crossing, there is a continued need for an all-weather sensor and the Army to fight for the information needed to identify targets and visualize enemy activity.

## Describing R&S toolkit

The current version of Field Manual (FM) 3-98, *Reconnaissance and Security Operations* (in revision), describes considerations for the required capabilities of a task-organized R&S formation. The guidance remains largely valid<sup>4</sup> but deliberately lacks specificity because the formations are tailored to the supported echelon and mission. Task-organizations should be tailored to fit specific mission variables.<sup>5</sup> Considerations of command and support relationships are also critical when posturing R&S formations for success in LSCO.

Potential task-organizations for division-cavalry squadrons have been devised with due attention to the considerations discussed in FM 3-98 and have had differing levels of success. Different divisions have described how they equipped and employed division-cavalry squadrons during warfighter exercises. Field artillery and attack aviation have been critical capabilities for these formations.<sup>6</sup>

While these enablers have often supported division-cavalry squadrons, considerations of support relationships and incorporation of these into the phasing construct are also critically important. This is particularly true when the staff of the R&S formation is a squadron supporting a division, which is less robust and lacks some of the specialists that a brigade tasked to provide R&S to a corps would have organically.

A challenge that division-cavalry squadrons have consistently faced is employing all their capabilities effectively. During Fiscal Year (FY) 2021 warfighter exercises, many division-cavalry squadrons provided with indirect-fire and air-defense assets as attachments or under operational control (OPCON) often struggled to employ them effectively, as they lacked adequate specialists required on staff.<sup>7</sup> This may be partially alleviated with the assignment of one or more air defenders and a liaison from the counterfire headquarters.<sup>8</sup> However, as with any liaison exchange, the losing unit pays a price.

Key capabilities to consider for a division or corps R&S formation are ground-based radar systems such as the AN/TPQ-53 weapon-locating radar and the AN/TPQ-64 Sentinel.<sup>9</sup> These systems not only enable effective counterfire against enemy long-range artillery, but they facilitate the protection of cavalry formations by cueing friendly short-range air defenses (SHORAD) and friendly firing batteries that are conducting indirect cannon and rocket fires against targets identified by R&S formations' sensors.

By having these sensors in a support rather than in an OPCON or tactical-control (TACON) role, the division cavalry benefits from the capability

without being bogged down by the requirement to plan for, maintain and employ these sensors. Understanding where artillery and sensor enablers are on the battlefield will become increasingly important in the future as batteries become able to deliver not just munitions but also sensors into the enemy disruption and battle zone.

Attack aviation is another key consideration for a cavalry formation requiring specialized expertise to use effectively. Currently a troop from a heavy attack reconnaissance squadron (H-ARS) in direct support<sup>10</sup> provides capabilities to the division cavalry that increases its agility in reconnaissance missions and its ability to rapidly identify high-payoff targets (HPTs). It comes with a planning burden that is likely best alleviated through specialists assigned to the division cavalry's staff to serve as planners, liaisons, or both.

The H-ARS troop facilitates aggressive squadron reconnaissance by allowing continuous coverage of one platoon of AH-64 Apaches and RQ-7B Shadow UAS to detect enemy systems out to the fire-support coordination line. Unlike larger UAS such as Gray Eagle, the Shadow is agile enough to displace frequently and keep up with the squadron. It also allows for a manned/unmanned teaming capability that increases the survivability of aviation assets against an enemy equipped with man-portable and SHORAD air-defense systems. The H-ARS' capabilities also facilitate intelligence and target handover, not only within the squadron but also in support of division dynamic targeting and PIR collection.

During warfighter exercises, cavalry squadrons are frequently tasked to conduct detailed area reconnaissance of potential gap crossing sites. Task-organizations with up to three engineer reconnaissance teams (ERTs) from the brigade engineer battalion to the squadron in a TACON or direct-support relationship could complete many tasks supporting the crossing, especially if ERTs have trained with the squadron before combat.<sup>11</sup> ERTs can validate assessments of roads and bridges, the status of banks and soil composition.

Unfortunately, initial assessments are sometimes based on months- or years-old information, or the initial collection has a limited level of detail. This capability is valuable to a division preparing for a gap crossing.<sup>12</sup> However, including them is sometimes omitted in exercise environments.

A final capability to consider is communications for the R&S formation, which must operate far forward to be effective in LSCO and MDO. Corps and divisions must be able to communicate using frequency modulation; longer-range radios such as high frequency and ultra-high frequency (UHF); or UHF satellite-communications-based systems, including Joint Battle Command-Platform.<sup>13</sup> Also, supporting UAS must be prepared to act as a voice-communications relay, including Gray Eagle – whether or not it operates in support of the cavalry squadron, depending on terrain impacts to communications and platform location.

Planners must also consider how to push intelligence information they receive via the Tactical Intelligence Ground Station (TGS) or the Tactical Intelligence Targeting Access Node (TITAN) to its R&S formation. However, the right place for TGS (and TITAN) is not with the division cavalry or corps R&S formation because of the signature they present. Cavalry formations are not manned to conduct processing exploitation and dissemination of that data.

Ultimately, R&S formations must be equipped and supported to provide the capabilities required of the mission. They also need specialists to augment lean staff to employ them. An appropriate task-organization can facilitate requirements without inflicting on commanders a burdensome span of control beyond what their staff can support.

## Visualizing collection, replicating experience

Enemy sensors, whether or not they are backed by artificial intelligence, are likely to detect signatures from high-flying UAS visible to long-range radar, voice communications between command nodes<sup>14</sup> and active emitters such as jammers. Understanding our detection capabilities and our

enemies' capabilities is key to successful R&S tasks in MDO. Visualizing signatures across domains is the foundation of effective surveillance and reconnaissance, which requires experience.

It's significantly harder to model an enemy armor regiment conducting a movement-to-contact if you've never seen at least a battalion conducting a combined-arms live-fire exercise. However, we've seen junior analysts who are staffing our intelligence sections model armor regiments despite considerable doctrine-based<sup>15</sup> preaching about leveraging the breadth of the staff's knowledge during mission analysis by conducting "reverse intelligence preparation of the battlefield (IPB)."<sup>16</sup>

It doesn't end there. Finding armor regiments generally requires integrating often poorly understood intelligence capabilities such as electronic-intelligence measures and signatures intelligence, delivering these to the analyst via a complex intelligence architecture and interpreting the observed indicators correctly. In addition to stepping into the boots of that enemy commander, that same analyst in the S-2 or G-2 may have to understand the terrain, enemy systems, electromagnetic spectrum, airspace, network routers and virtual machines to build the doctrinal product used to depict current and anticipated enemy activity in time and space.

Thankfully there are tools to leverage the staff's experience and communicate that experience down to the lowest level, provided they are used and disseminated. The staff must leverage these tools during mission analysis to improve collection plans and targeting and deception plans. Army Techniques Publication (ATP) 2-01, **Collection Management** (recently revised), recommends "collection management tools" for effective information-collection planning, including the information-collection synch matrix (ICSM), the information-collection matrix (ICM) and the information-collection overlay. These tools are often omitted, incomplete, used incorrectly or not disseminated beyond the intelligence section.<sup>17</sup>

While these tools can contribute to an effective information-collection plan, they neither represent the totality of the plan nor convey the relationship between the sensors available and the PIR and targets. Planning requirements tools created during the IPB process exist in a symbiotic relationship with the event template. If the collection plan is developed in a vacuum, or not updated as assessments are updated, it will consistently fall far short of expectations.

Ensuring whole-of-staff input into collection-plan components such as the collection-management tools, part of "reverse warfighting-function IPB" during the mission-analysis process, makes it more likely the list of indicators to confirm or deny PIR is complete. For example, an engineer staff can help the intelligence staff understand enemy-obstacles compositions in their emplacement process so the intelligence staff can incorporate this into the ICM, making the section more likely to recognize the construction of that obstacle when it happens.

Ideally this also includes leveraging functional and multifunctional brigades' expertise. A division collection manager may or may not understand survivability moves within a position area for artillery or where the enemy is likely to place radar systems. However, division-artillery staff planners will probably have a good idea and will have considered it during their mission analysis process.

Considering observables for key systems on high-payoff target lists (HPTL) and inclusion of these in the ICM was a recommended best practice<sup>18</sup> that is now in doctrine. The change makes sense. Although PIRs will change during an operation, a division will still tend to have a HPTL that prioritizes enemy long-range artillery, air defense and radars because of its responsibilities in shaping enemy forces in support of its subordinate brigades and the criticality of these enablers. Warfighter-exercise observations had shown that even when well-developed ICSMs and PIRs were disseminated to the division-cavalry squadron, the staff sometimes did not understand the association between PIRs, indicators and specific information

requirements, which seemed to happen when ICM was not developed or disseminated.<sup>19</sup>

An understanding of observable signatures based on a whole-of-staff effort and an understanding of the enemy's capabilities and limitations is the foundation of the collection plan and an effective deception plan. Intelligence representatives with this understanding of the enemy must be present at working groups that consider deception and CEMA employment for these plans to be effective. Successfully fighting for information requires understanding what to look for and how to look.

Intelligence sections should produce an ICM that considers how, when and where to identify PIRs and HPTs and disseminate it to subordinates and collectors (such as division-cavalry squadrons) as part of the orders process. They should also brief key changes and expected target and intelligence handovers at the collection-management working group to ensure shared understanding. A good plan is of little use if not disseminated.

## Benefits of 'chief of reconnaissance'

Transitions between plans, future operations and current operations are not a challenge confined to the intelligence warfighting function or warfighter exercises. Divisions have taken many approaches to ease these transitions, including appointing an officer<sup>20</sup> as the chief of reconnaissance for the division or corps, a practice proven to be successful with brigade combat teams.<sup>21</sup> The position can free collection management and dissemination or fusion sections of the need to manage the current fight while planning the next one.<sup>22</sup>

Similarly, at the corps echelon, the appointment of an experienced officer<sup>23</sup> can increase the agility of collection on the current operations and integration cell (COIC) floor with an experienced person making sound recommendations on dynamic retasking of organic assets. Force-design updates to provide dedicated division-cavalry squadrons to divisions, if implemented, may result in wider adoption of the chief-of-reconnaissance role.



A chief of reconnaissance at echelon can also help integrate the collection plan and the decision-support matrix by assisting the chief of operations with interpretation of the reporting coming into the COIC. However, the individual needs a clear understanding of the division's priorities and targeting plan, and comprehension of how to interpret intelligence information and reports. With the right experience, the G-2 operations section, armed with collection-management tools, could fulfill this role.

The potential advantages of a dedicated chief of reconnaissance to help assist in dynamic adjustments to the collection plan and rapidly interpret the intelligence picture are evident. Still, that individual must have the right mix of skill and experience to be able to visualize and interpret the reporting. Cavalry-squadron commanders typically have the right mix of talents but might find it challenging to divide his or her time between the chief-of-reconnaissance role and command of the squadron.

However, no matter who fills the role, the individual should be selected and integrated into the role early to ensure the new arrangement is well rehearsed before being executed because it affects the targeting process and how the battle is fought on the COIC floor.

Ultimately the intelligence and operations staffs retain their responsibilities whether or not there is a chief of recon. Producing sufficiently detailed PIR enables commanders' decisions and targeting priorities. Even when backed by effective collection-management tools, it is not easy. The challenges are compounded by the need for clearly understood roles and responsibilities at echelon. Nevertheless, they are the most critical elements when successfully integrating cavalry into the deliberate and dynamic targeting process at the division and corps echelons. Without them, formations will continue to struggle to fight for information.

In execution, results at the division and corps have been mixed. Given the loss of dedicated R&S formations at key echelons and lack of practice

using them, this is understandable. The reasons are not made entirely clear through exercise performance<sup>24</sup> but seem to be tied to insufficient training of non-cavalry formations in planning and executing R&S tasks. Reasons also include lack of intelligence sections' ability to visualize the enemy in time and space<sup>25</sup> and therefore the ability to tie observables to PIRs. The solution is linked to an understanding of friendly capabilities and a shared understanding of what the staff believes a particular intelligence requirement means.

Ultimately, whether or not task-organized R&S formations' key leaders and collection managers understand the cavalry "mindset" – for success in MDO, where ISR assets in the air and space cannot be assured – Army divisions and corps must have several options so they are able to fight for information.<sup>26</sup>

## Considerations for MDO R&S operations

The Army is already considering what the next generation of reconnaissance vehicles and ground-based sensors will look like. The Next-Generation Combat Vehicle family of programs currently in development provide for "optionally manned" vehicles with long-range thermal and other sensors equipped with artificial intelligence,<sup>27</sup> increasing the flexibility and standoff covered by the cavalry squadron.

Optionally manned fighting vehicles with longer-range sensors potentially increase the physical distance between platforms, known as dispersion, and therefore frontage covered by the cavalry squadron equipped with the capability. Future cavalry forces require the ability to tip and cue networked sensors by voice and digital means and to generate targets for cannon and rocket batteries and Joint fires and effects. However, that tipping and cueing of sensors must keep in mind the necessity of all forces, particularly cavalry forces, to conduct signature management across multiple domains. Camouflage might evade optical detection, but more sophisticated sensors are generally not fooled. A concealed vehicle may be visible to thermal sensors.

Signature management with sensor programs must be a key consideration in how systems are employed across the board. Command-and-control systems that rely heavily upon the Upper Tactical Internet and sensors that require continuous connection to a satellite will be vulnerable and must be mitigated with an effective signature-management and command-post displacement plan.

The Army's 11<sup>th</sup> Armored Cavalry Regiment, the opposing force at the National Training Center, is experimenting with multi-domain signature management and is integrating multiple sensor types and non-lethal effects into operations. While cover and concealment increase survivability, tactics, techniques and procedures must also consider a force's EMS footprint. It's important to remember that the enemy is actively searching for them, a lesson better learned in training than in combat!

Increasingly, training audiences at our combat-training centers (CTCs) are working not only to integrate lethal and nonlethal effects but to manage their EMS footprint, too.<sup>28</sup> Division G-6 sections can produce products on organic systems such as the systems-planning engineering and evaluation device<sup>29</sup> that allow a division to "see itself" in terms of its command post's EMS footprint. Ultimately, divisions can and should experiment with different options for mission command against peer threats.

In addition to courses about using exquisite theater and national ISR to answer the commander's PIRs and identify targets, collection managers who don't understand organic sensors must learn to use them to be effective. Spending a CTC rotation shadowing organic assets such as radar platoons, low-level voice-intercept teams and cavalry troops may be a greater benefit to a would-be collection manager than merely shadowing a division collection manager at the warfighter exercise.<sup>30</sup> Collection managers, particularly for armor and cavalry divisions, may also benefit from the Cavalry Leader's Course<sup>31</sup> to understand reconnaissance and counter-reconnaissance tasks.

Cavalry's importance at the division echelon to enable MDO is increasingly being refined, driving doctrine, organization, training, materiel, leadership and education, personnel, facilities and policy changes to the force as concepts and capabilities are reassessed and adjusted for Waypoint 2028-9.<sup>32, 33</sup> Ultimately the Army must recognize cavalry for what it is: a necessary component of competitive visualization.

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## Notes

<sup>1</sup> MAJ Amos C. Fox, "The State of the Cavalry: An Analysis of the U.S. Army's Reconnaissance and Security Capability," Association of the U.S. Army (AUSA) Institute of Land Warfare, Landpower Essay No. 16-1, June 2016; retrieved from <https://www.ausa.org/publications/state-cavalry-analysis-us-armys-reconnaissance-and-security-capability>.

<sup>2</sup> Stephen Borque, *Jayhawk! The VII Corps in the Persian Gulf War*, U.S. Army Center for Military History; retrieved from <https://history.army.mil/html/books/070/70-73-1/index.html>.

<sup>3</sup> Fox.

<sup>4</sup> The capabilities are ground maneuver;

manned and unmanned aircraft; mobility and countermobility assets; indirect-fires systems; ground-based intelligence collection teams; protection; sustainment; and mission command. FM 3-98, *Reconnaissance and Security Operations*, July 2015, describes these in detail.

<sup>5</sup> FM 3-98.

<sup>6</sup> Center for Army Lessons Learned (CALL), *Mission Command Training in Large-Scale Combat Operations, FY19 Key Observations*; retrieved from <https://call2.army.mil/docs/doc18018/20-15.pdf>.

<sup>7</sup> CALL, *Mission Command Training in Large-Scale Combat Operations, FY21 Key Observations*; retrieved from <https://call2.army.mil/toc.aspx?document=18124>.

<sup>8</sup> For the division, frequently the division artillery; for the corps, frequently the field-artillery brigade, but exceptions exist.

<sup>9</sup> CALL, *Mission Command Training in Large-Scale Combat Operations, FY20 Key Observations*; retrieved from <https://call2.army.mil/toc.aspx?document=18085>.

<sup>10</sup> OPCON or TACON may be more appropriate, and like the task-organization, the command relationship is mission- and situation-dependent.

<sup>11</sup> ATP 3-34.81, *Engineer Reconnaissance*, March 1, 2016.

<sup>12</sup> Note that ERTs can also provide an initial assessment of a site for suitability as an airfield. If used for this purpose, augmentation from the combat-aviation brigade or even the Joint force may be advisable depending on the site's intended purpose in the division's plan.

<sup>13</sup> CALL, *Preparing for Large-Scale Combat Operations*, Publication 21-06, January 2021.

<sup>14</sup> Including unrealistic use of "always-on" transmitters such as those used to deliver the Upper Tactical Internet.

<sup>15</sup> ATP 2-01.3, *Intelligence Preparation of the Battlefield*, Jan. 6, 2021.

<sup>16</sup> COL Thomas Feltey and CPT Lance Rae, "Military Deception and Reverse Intelligence Preparation of the Battlefield: How Staff Integration Creates Advantages for the Brigade Combat Team Commander," *ARMOR*, Fall 2018.

<sup>17</sup> CALL, *Mission Command Training in Large-Scale Combat Operations, FY21 Key Observations*; retrieved from <https://call2.army.mil/docs/doc18124/18124.pdf>.

<sup>18</sup> CALL, *Mission Command Training in Large-Scale Combat Operations, FY20*

*Key Observations*; retrieved from <https://call2.army.mil/docs/doc18085/18085.pdf>.

<sup>19</sup> *Mission Command Training in Large-Scale Combat Operations, FY21 Key Observations*.

<sup>20</sup> The division-artillery squadron commander or expeditionary military-intelligence battalion (e-MIBn) commander have been used in this role by divisions in an exercise environment.

<sup>21</sup> CPT John F. Palmer, "The Squadron Commander as Chief of Reconnaissance," *ARMOR*, July–September 2016.

<sup>22</sup> MAJ Paul E. Roberts, "Reconnaissance beyond the Coordinated Fire Line," *Military Review*, July-August 2018; retrieved from <https://www.armyupress.army.mil/Portals/7/military-review/Archives/English/JA-18/Roberts-Division-Warfighter.pdf>.

<sup>23</sup> While the leader chosen varies, at the warfighter exercise, the expeditionary military-intelligence brigade commander and a corps R&S formation commander have been demonstrated in the role at the corps echelon.

<sup>24</sup> Key leaders in the G-2 Operations section or E-MIBn augmentees could also fulfill this role.

<sup>25</sup> The warfighter exercise is a simplified simulation that does not realistically model most domains, and certain things are adjudicated by exercise controllers and adjusted via "white card." This, coupled with communications that are largely not disrupted or denied during the exercise, potentially makes a chief of recon on the COIC floor appear to be of greater value than it is.

<sup>26</sup> Fox.

<sup>27</sup> COL Rich Creed and MAJ Nathan Jennings, "Winning the Deep Fight: Why We Should Return to Echeloned Reconnaissance and Security," *Modern War Institute*, March 3, 2019; retrieved from <https://mwi.usma.edu/winning-deep-fight-return-echeloned-reconnaissance-security/>.

<sup>28</sup> Kris Osborn, "Army brings AI-Combat Speed to Tank Warfare," Security Television Network, Sept. 13, 2021; retrieved from <https://warrormaven.com/cyber/army-brings-ai-combat-speed-to-tank-warfare>.

<sup>29</sup> Joseph Trevithick, "This Is What Ground Forces Look Like to an Electronic-Warfare System and Why It's a Big Deal," *The Drive*, May 11, 2020; retrieved from <https://www.thedrive.com/the-war-zone/33401/this-is-what-ground-forces-look-like-to-an-electronic-warfare-system-and-why-its-a-big-deal>.



<sup>30</sup> Refer to ATP 6-02.70, *Techniques for Spectrum-Management Operations*, for the role of the Systems Planning, Engineering and Evaluation Device and similar tools in spectrum management.

<sup>31</sup> This is the current culminating event for the Army Intelligence Development Program-Intelligence Surveillance Reconnaissance program, designed to prepare future division and corps collection managers to conduct LSCO. There is significantly more flexibility in the program than years ago, but seeing the sensors in a field environment may be of more training value than a virtual/constructive environment.

<sup>32</sup> Fox's "State of the Cavalry" discusses this course on Pages 3-4 of his paper, and it expresses concern that there are not enough slots for officers in cavalry squadrons; widespread attendance by division collection managers, however, would potentially exacerbate this issue.

<sup>33</sup> Danae Johnson, "TRADOC LPD to Discuss Readiness through Waypoint 2028," October 2021; retrieved from [https://www.army.mil/article/251507/tradoc\\_lpd\\_to\\_discuss\\_readiness\\_through\\_waypoint\\_2028](https://www.army.mil/article/251507/tradoc_lpd_to_discuss_readiness_through_waypoint_2028).

## ACRONYM QUICK-SCAN

**ATP** – Army techniques publication  
**CALL** – Center for Army Lessons Learned  
**CEMA** – cyber and electromagnetic activities  
**COIC** – current operations and integration cell  
**CTC** – combat-training center  
**E-MIBn** – expeditionary military-intelligence battalion  
**EMS** – electromagnetic spectrum  
**ERT** – engineer reconnaissance team  
**FM** – field manual  
**FY** – fiscal year  
**H-ARS** – heavy attack reconnaissance squadron  
**HPT** – high-payoff target  
**HPTL** – high-payoff target list  
**ICM** – information-collection matrix  
**ICSM** – information-collection synch matrix  
**IPB** – intelligence preparation of the battlefield

**ISR** – intelligence, surveillance and reconnaissance  
**JSTARS** – Joint Surveillance Target Attack Radar System  
**LPD** – leader professional development  
**LSCO** – large-scale combat operations  
**MDO** – multi-domain operations  
**OPCON** – operational control  
**PIR** – priority information requirements  
**R&S** – reconnaissance and security  
**SHORAD** – short-range air defense  
**TACON** – tactical control  
**TGS** – Tactical Intelligence Ground System  
**TITAN** – Tactical Intelligence Targeting Access Node  
**TRADOC** – (U.S. Army) Training and Doctrine Command  
**UAS** – unmanned aerial system  
**UHF** – ultra-high frequency

## Armored Fighting Vehicles of the World

**T-72B3 / T-72B3M**

The B3 version of the T72 main battle tank was introduced in 2011, and the B3M in 2016. Three-man crew, weight 45 tons. Main armament is an improved 125mm autoloading gun, 7.62mm coax MG secondary armament. Reactive armor modules, improved fire control and very-high-frequency radio. The B3M variant has a more powerful engine, armored side skirts and slat armor. In service with: Russia.



# Forgotten Fundamentals in Reconnaissance and Security

by CPT Christopher E. Kiriscioglu  
and CPT Jordan L. Woodburn

Executing mission tasks that are built from mere running estimates, fighting for information to inform higher headquarters and shaping an enemy with few “knowns,” cavalry squadrons routinely lean on the reconnaissance and security (R&S) fundamentals while operating in austere environments. Through the ability to fight for information and answer intelligence requirements, cavalry organizations enable freedom of maneuver and decision-making for commanders at echelon.

However, trends indicate many cavalry formations are falling short in their ability to shape the fight, retain combat power and set conditions for the

brigade’s main effort. When the fundamentals of R&S are neglected, the squadron becomes an inhibiting liability rather than a dominating enabler.

From multiple rotations at the Joint Multinational Readiness Center (JMRC), the message is clear: cavalry organizations are forgetting the fundamentals.

## Adjacent unit coordination

**Orient on the protected force, fundamental of security, Field Manual (FM) 3-98.** (Illustrated on back cover.) Communication issues will always be at the heart of every unit after-action review, but most will be focused on communication up to the higher headquarters, or communication down to

subordinate units. Few, however, will focus on lateral communication issues inherent in coordination with adjacent units.

This is paramount for a cavalry organization due to the nature of reconnaissance handovers (RHO) during forward-passage-of-lines and rearward-passage-of-lines. The RHO consists of a battle handover (BHO), or transition of area-of-operations responsibility, as well as an intelligence handover, transition of targets and collected information requirements. Squadrons must be able to facilitate the transition of intelligence, targets and terrain knowledge to the protected force during RHO to set conditions for the follow-on force to accomplish its mission.

The largest obstacle inhibiting



Figure 1. Abrams tank crews from 1<sup>st</sup> Battalion, 8<sup>th</sup> Cavalry Regiment, pull security Feb. 2, 2020, during Combined Resolve XIII at JMRC, Hohenfels, Germany. (Photo by Army National Guard SGT Fiona Berndt)

effective RHO is failure to plan and rehearse with adjacent units. During planning, units fail to exchange mutually supporting operations graphics or mission intent prior to execution. This inevitably leads to miscommunication, lost engagement opportunities and preventable combat loss. To mitigate degraded adjacent unit coordination, squadrons must include representatives of all units involved in RHO at the combined-arms rehearsal (CAR).

In the defense, the RHO must be rehearsed at respective squadron/battalion CARs, even to troop level if possible. All observers and leaders in the cavalry (down to the platoon-leader level) should know what platoon or element is behind them, along with their future task and purpose. Cavalry troops must have mutually supporting graphic-control measures, at minimum, and target-reference points along key avenues of approach (AoA) to rapidly pass a target and facilitate its subsequent destruction.

Simply reporting to brigade is not enough to enable a timely target acquisition or transition. Special considerations must also be established to account for the surface-danger zones of defending and screening units. The probability of fratricide directly correlates to the level of dissemination and coordination of direct-fire-control measures among adjacent units. Squadrons must take ownership of coordinating shared understanding along unit boundaries, especially during displacement operations.

In the offense, successful cavalry squadrons not only seek to answer priority intelligence requirements (PIRs) for the brigade, but they also identify how their scheme of maneuver ties into the overall concept of operations. For example, if the cavalry squadron is conducting a zone reconnaissance leading to an objective, discussions between the squadron and the follow-on assaulting battalion should occur, focused on what the battalion commander will need to know to enable the attack.

Battalion PIRs, route trafficability, obstacles, enemy composition and disposition, suitable AoA and any other specified information are all likely

information requirements the cavalry squadron needs to provide. These reports should not only flow to the brigade but also to the customer battalion immediately to the cavalry squadron's rear. This is the true definition of enabling timely decision-making.

## Displacing the squadron

**Retain freedom of maneuver, fundamental of reconnaissance, FM 3-98, and provide reaction time and maneuver space, fundamental of security, FM 3-98.** With special consideration to the defense, cavalry squadrons rarely define what it means to reach their displacement criteria. When the trigger is met to displace, troops and squadrons have rarely prepared to displace in contact or under pressure.

Ideally, displacement must consist of pre-planned (and rehearsed) subsequent battle positions that are supported by indirect fires to enable the cavalry squadron to transition while maintaining combat power. Units must also be deliberate, not hesitant, in initiating their displacement. It exists for a reason and ultimately allows the cavalry to properly transition while maintaining the ability to continue to fight for the brigade.

Triggers to initiate displacement must be clear and easily understood to the lowest level. Hesitation at the transition will lead to unnecessary combat losses.

Part of maintaining freedom of maneuver also relies on the squadron's ability to deny freedom of maneuver to the enemy. Since aggressive direct-fire engagements are likely to compromise observation posts (OPs) and increase unwanted decisive engagement, obstacles become the squadron's primary means of disrupting enemy force maneuver.

Effective obstacle emplacement continues to be the most neglected component for cavalry organizations conducting a security-mission task, almost to the point of non-existence. Although the squadron's obstacles will not be as robust as obstacles that are along the support brigade's main defensive belt, they still need to be just

as deliberate. Emplacing obstacles directly correlates to providing increased reaction time and maneuver space for the protected force, especially during a guard.

## Enduring operations in R&S

**Retain freedom of maneuver, fundamental of reconnaissance, FM 3-98, and provide early and accurate warning, fundamental of security, FM 3-98.** While not the perfect solution for enabling security operations, the use of engagement-area development in the screen undeniably enables success for the cavalry squadron.

By using all the steps in the process (including the commonly neglected rehearsal, which should include adjacent units, a verification of the RHO plan and the displacement plan), the cavalry can ensure it is prepared to answer intelligence requirements, fight for reconnaissance if necessary and retain combat power. Any deadspace should be mitigated by the use of dismounted OPs in depth, which should be employed by platoon leaders and troop commanders after careful analysis of the sector sketch.

Furthermore, establishing a narrative of how to interact with the enemy, codified as engagement criteria within commander's reconnaissance/security guidance, will allow the squadron to impose deliberate lethality as well as preserve combat power. Too often, squadron staffs relegate engagement criteria into the rudimentary box checks, "engage enemy infantry fighting vehicles but not tanks," rather than guiding the echeloned engagement of weapon systems to balance lethality with economy-of-force (for Phase II, use 155mm to destroy enemy OPs undetected; use 120mm mortar fire to disrupt or displace enemy mounted recon; use vehicle-mounted anti-tank systems to initiate direct-fire contact with section-sized or below *Boyevaya Razvedyvatelnaya Dozornaya Mashina*; employ .50-caliber weapons for squad-sized dismounts, etc.).

To retain combat power, the cavalry squadron must tailor its engagement criteria appropriately to avoid becoming decisively engaged. Engagement criteria must be definitive and



eliminate the guesswork for the scout on the ground. Otherwise, reconnaissance units will become unnecessarily compromised and unable to continue intelligence-collection efforts due to OPs meeting disengagement or troop-displacement criteria.

## Feeding brigade info-collection plan

**Ensure continuous reconnaissance, fundamental of reconnaissance, FM3-98; orient on reconnaissance objectives, fundamental of reconnaissance, FM 3-98; report all information rapidly and accurately, fundamental of reconnaissance, FM 3-98; and perform continuous reconnaissance, fundamental of security, FM 3-98.**

Cavalry formations continue to struggle with leveraging R&S operations to enhance the brigade's information-collection plan. Whether it's from collecting on irrelevant PIR that do not enable the brigade commander to make an advantageous decision, or

failing to answer PIRs within the latest-time-information-is-of-value (LTIOV), reconnaissance organizations routinely neglect their critical role in information collection.

To influence the collection plan, squadron staff must integrate with their higher headquarters during intelligence preparation of the battlefield or risk degrading the full development of a focused reconnaissance objective and supporting PIRs. Nesting with brigade during the earliest steps of the military decision-making process will enable the squadron staff to synchronize across all warfighting functions with its higher headquarters and ensure that the ground-reconnaissance elements understands their role in answering PIRs.

Inversely, failure to synchronize with higher headquarters will contribute to a domino effect of ambiguous reconnaissance objects, confusing information requirements and wasted effort

from troop-collection assets that feed into an unfocused brigade collection plan. It's not just information that the squadron must collect, it's the development of that information through analysis and feedback to the brigade that will lead to answering PIR.

Cavalry organizations transition information into intelligence to drive brigade operations. Information itself is worthless unless it contributes to intelligence, and intelligence is useless unless it contributes to an assessment. With supporting intelligence, assessments are what allow the brigade S-2, and ultimately the brigade commander, to visualize the operational environment and make advantageous decisions within it. The lower in echelon that assessments can be made, the timelier and more accurate they will portray the true events of enemy forces on the battlefield.

Furthermore, troop commanders who are empowered to make decisions will



**Figure 2. Scouts assigned to 1<sup>st</sup> Squadron, 91<sup>st</sup> Cavalry Regiment, conduct intelligence collection during troop dismount reconnaissance training for a platoon external evaluation at Hohenfels, Germany, Jan. 26, 2021. (U.S. Army photo by SGT Julian Padua)**



decrease the amount of time it takes to answer a PIR within LTIOV and, in turn, allow the brigade commander to exert control over the enemy's decision-making cycle. To provide assessments, commanders at echelon must be able to comprehend and differentiate between the multitudes of possible enemy courses of action, which only occurs when the squadron staff is fully nested and integrated with brigade planning cycles.

### All-weather, day or night

Cavalry squadrons provide the most reliable set of eyes and ears for their higher headquarters to employ. Charged to dominate the operational environment, they must ensure shared understanding of both enemy and terrain, and do so by adhering to a set of universal fundamentals – fundamentals that, if ignored, prevent ground-reconnaissance elements from achieving the reconnaissance objective and subsequently keep the brigade from realizing its decisive operation.

Cavalry formations must be prepared to provide early warning and detection, generate assessments from collected information requirements and destroy select enemy targets to enable reaction time and maneuver space for the protected force. Cavalry squadrons can't accomplish this task if they are compromised, destroyed or fixed by enemy reconnaissance. To live up to the status of being all-weather, day or

night, squadrons must embrace *all* the R&S fundamentals.

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**ACRONYM QUICK-SCAN**

<b>ABCT</b> – armored brigade combat team
<b>AoA</b> – avenue of approach
<b>CAB</b> – combined-arms battalion
<b>CAR</b> – combined-arms rehearsal
<b>CLC</b> – Cavalry Leader's Course
<b>FM</b> – field manual
<b>JMRC</b> – Joint Multinational Readiness Center
<b>LTIOV</b> – latest-time-information-is-of-value
<b>O/C/T</b> – observer/coach/trainer
<b>OP</b> – observation post
<b>PIR</b> – priority intelligence requirement
<b>R&amp;S</b> – reconnaissance and security
<b>RHO</b> – reconnaissance handover

*Division, Fort Stewart, GA; commander, Company D, 1<sup>st</sup> CAB, 64<sup>th</sup> Armor Regiment, 1<sup>st</sup> ABCT, 3<sup>rd</sup> Infantry Division, Fort Stewart; Long-Range Surveillance Detachment leader, Company C, 3<sup>rd</sup> Battalion, 38<sup>th</sup> Cavalry Regiment, 201<sup>st</sup> Military Intelligence Brigade, Fort Lewis, WA; and cavalry-platoon leader, Company B, 3<sup>rd</sup> Battalion, 38<sup>th</sup> Cavalry Regiment, 201<sup>st</sup> Military Intelligence Brigade, Fort Lewis. His military schooling includes Maneuver Captain's Career Course, CLC, Army Reconnaissance Course, Ranger School, Airborne School, Air-Assault School and Pathfinder course. He holds a bachelor's of science degree in political science from The Citadel, Charleston, SC.*

# Be a Better Mentor

by LTC Allen Trujillo

To succeed on today's modern battlefield, the Army must continue to recruit, employ and retain the very best Soldiers. In addition, the Army must continue to improve its diversity, equity and inclusion efforts to make sure that the right person, with the right knowledge, skills and behaviors takes the right job at the right time.<sup>1</sup>

Army senior leaders play a critical role in these initiatives and processes through their mentorship of Soldiers.<sup>2</sup> As the Army modernizes a wide range of talent-management processes, there is an excellent opportunity for senior leaders to improve the way they mentor officers, noncommissioned officers (NCOs) and Department of the Army civilians.<sup>3</sup> To modernize our mentorship processes, senior leaders must deliberately make themselves available to become mentors for high-performing subordinates across the Army.

## What is mentorship?

*The Army Profession and Leadership Policy* (Army Regulation (AR) 600-100) defines mentoring as "the voluntary developmental relationship that exists between a person of greater experience and a person of lesser experience characterized by mutual trust and respect. Mentoring extends beyond the scope of chain-of-command relationship and occurs when a mentor provides the mentee advice and counsel. Assessment, feedback and guidance are critical within the mentoring relationship and must be valued by the mentee for growth and development to occur."<sup>4</sup>

As a result, AR 600-100 implies that mentees are ultimately responsible for establishing and maintaining a relationship with their mentor.

This implied responsibility is further explored in the article, *Mentorship: Understanding a Leader's Investment*, where the author argues a commonly

accepted belief that "while true mentorship entails a commitment by both the mentor and the mentored, the selection of a mentor is determined by the Soldier; it cannot be based on position, rank or military occupational specialty."<sup>5</sup>

Joseph Kopser also supports this position in *Mentoring in the Army: Not Everybody Gets It*, where he states that mentees must "work to maintain the relationship as it progresses. Mentors will distinguish themselves from acquaintances as time passes. It is your responsibility [as the mentee] to maintain the relationship."<sup>6</sup>

Therefore if successful mentorship occurs when mentees maintain a relationship with mentors they choose, senior leaders can improve their role in this process by deliberately making themselves available to a wider audience than just those assigned to their immediate organization. It is the **duty of the mentor** to make themselves





available, and it is the **responsibility of the mentee** to establish and maintain the relationship.

## How are mentors chosen?

Generally speaking, mentees choose mentors they “know, trust and feel genuine loyalty toward.”<sup>7</sup> More specifically, mentees choose mentors they have worked for or seen in a professional setting. Unless there is a deliberate process in place, mentees rarely select mentors outside of this limited scope because they don’t even **know** anyone else is even a possibility. Therefore improving the pool of mentors a mentee has to select from will improve the likelihood a high-performing subordinate can find the right mentor.

If we are serious as a profession about identifying, promoting and retaining the most talented people, senior leaders must make a conscious, deliberate effort to engage with and make themselves available to high-performing subordinates across the Army. To build the “mutual trust and respect”<sup>8</sup> required for the mentoring outlined in AR 600-100, it is essential for senior leaders to leverage formal and informal interactions to build the relationships required to truly get to know the high-performing Soldiers, NCOs and officers in their respective fields.

## How can senior leaders improve the way they mentor?

**Identify and advocate for high performers in your organization.** The first step senior leaders must do in the talent-management process is clearly identify the top 5 percent to 10 percent of performers within their organizations. During formal and informal interactions, it is incumbent on senior leaders to understand the personal and professional goals of each high-performing subordinate as well as the knowledge, skills and behaviors that will potentially make them successful in future jobs.

Senior leaders must understand their top performers will not always choose to be their mentees; however, it is the professional duty of senior leaders to create opportunities for

high-performing subordinates to select the best possible mentor for their personal and professional goals. Senior leaders must advocate for these individuals to their higher headquarters as well as to other senior leaders in similar organizations.

Although the Assignment Interactive Module 2.0 move cycles are the most logical place for senior leaders to advocate for high performers, they should not be the only time high-performing subordinates are being discussed. Senior leaders should always be looking for opportunities to give their high-performing subordinates access to other potential mentors across the Army.

**Identify high performers across the Army.** Once senior leaders clearly understand the high performers in their organization, they must deliberately seek out high performers across the Army. Although this seems like an impossible task, branch managers at Human Resources Command (HRC) regularly compile this type of information to give senior leaders an accurate assessment of the Soldiers, NCOs and officers across various organizations.

Another method for senior leaders to identify top performers is to engage peers and superiors across the Army. Once a senior leader determines a list of high-performing subordinates, it is essential to develop a plan on how to formally or informally engage these top performers.

**Direct engagement.** The easiest way to engage a high-performing subordinate is to make direct contact. Direct engagement can be described as a point-to-point email, a phone call or an in-person meeting at a predetermined location. In a direct engagement, it is important for the senior leader to clearly articulate to the high-performing subordinate that this meeting, phone call or email is the first in a series of potential engagements aimed at building a professional relationship.

The high performer should also understand that the senior leader is making himself or herself available as a potential mentor. The initial goal of a direct engagement is to get to know each other; the long-term goal of a direct

engagement is a potential mentor-mentee relationship.

**Virtual leader engagements or newsletters.** Another option for senior leaders to engage high-performing subordinates is through virtual leader engagements or newsletters. Similar to direct engagements, senior leaders send high performers emails or phone calls and invite them to participate in a virtual leader engagement or periodic newsletter. These virtual leader engagements and newsletters can cover any relevant topic in the profession.

However, the main goal of the interaction between senior leaders and high-performing subordinates should be that the senior leader is making themselves available as a potential mentor. The initial goal of virtual leader engagements or newsletters is to provide an avenue for high performers to make direct contact with senior leaders; the long-term goal is for senior leaders and high performers to get to know each other and develop a potential mentor-mentee relationship.

**Official visits and/or in-person leader-professional-development (LPD) seminars.** Senior leaders should also consider using official visits or professional conferences as a venue to engage high-performing subordinates across the Army. As senior leaders plan temporary-duty travel to conduct official business, they should allocate a portion of their allocated time to visit with high performers at the temporary-duty location.

Similar to direct engagement, virtual leader engagement or newsletters, official visits and LPD seminars should begin by notifying a high-performing subordinate that a senior leader plans to visit them during their travels. If this option is not feasible, senior leaders could also directly invite high performers to an in-person LPD seminar or social event during their visit.

The initial goal of meeting during official visits or hosting an event is to provide the opportunity for high performers to make direct contact with senior leaders. As previously mentioned, the long-term goal is a potential mentor-mentee relationship.

**Other options.** There are many ways

for senior leaders to reach high-performing subordinates. These options include, but are not limited to, all forms of social media and social-networking sites. If senior leaders choose to use alternate methods to reach high performers, the most important thing to remember is to make an initial connection as direct as possible.

## What's the next step?

**Role of the senior leader.** Once a senior leader signals to a high performer that he or she is available as a potential mentor, senior leaders should make periodic contact to remind the potential mentee that they still have a vested interest in their future development. In addition to maintaining periodic contact, senior leaders should also continue to advocate for their high performers to other senior leaders across the Army as well as to the branch managers at HRC.

**Role of the high-performing subordinate.** If a Soldier is ever contacted by a battalion-level leader or above outside their chain of command, the Soldier should do everything he or she can to get to know the senior leader. Treat these formal or informal engagements as an opportunity to grow personally and professionally, and keep an eye out for the cues that encourage direct communication. In the end, the Soldier is ultimately responsible for maintaining the mentor-mentee relationship.

## Conclusion

Since 1775, the U.S. Army has been successful due to the people who comprise its formations. The Army's success can also be attributed to the professional military education for its officers and NCOs. As the Army modernizes our talent-management processes, it is essential for senior leaders to update the way they mentor high-performing subordinates. As GEN James C. McConville has previously said, "We are in a war for talent, and

we're going after the best and brightest ... and we are going to do what it takes to keep them in the Army."<sup>8</sup>

Senior leaders have the potential to take action and improve the way they mentor high-performing subordinates. With the advent of new technologies and the ease of communication across the globe, senior leaders must make a deliberate effort to identify high performers, make direct contact with them and clearly make themselves available as a potential mentor.

Senior leaders must also advocate for high performers inside and outside of their direct organizations. High-performing subordinates exist everywhere in the Army; it is up to senior leaders to get to know as many of them as possible and then advocate for the best Soldiers for the right job, at the right time ... even if they're not a subordinate who has previously worked for them.

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## ACRONYM QUICK-SCAN

**ABCT** – armor brigade combat team  
**AR** – Army regulation  
**CSA** – Chief of Staff of the Army  
**HRC** – Human Resources Command  
**LPD** – leader professional development  
**NCO** – noncommissioned officer  
**USMA** – U.S. Military Academy

*USMA in systems engineering and a master's of science degree from the University of Texas at Austin in operations research/industrial engineering.*

## Notes

<sup>1</sup> Devon Suits; "Talent management will lead Army's push to diverse leadership, says CSA"; Army News Service; March 15, 2021; [https://www.army.mil/article/244233/talent\\_management\\_will\\_lead\\_armys\\_push\\_to\\_diverse\\_leadership\\_says\\_csa](https://www.army.mil/article/244233/talent_management_will_lead_armys_push_to_diverse_leadership_says_csa).

<sup>2</sup> Everett Spain, Gautam Mukunda and Archie Bates, "The Battalion Commander Effect," *Parameters*, Vol. 51, No. 3, 2021.

<sup>3</sup> Thomas Brading; "Chief of staff: Most signature systems to be fielded by 2023, people still No. 1 priority"; Army News Service; Oct. 13, 2021; [https://www.army.mil/article/251126/chief\\_of\\_staff\\_most\\_signature\\_systems\\_to\\_be\\_fielded\\_by\\_2023\\_people\\_still\\_no\\_1\\_priority](https://www.army.mil/article/251126/chief_of_staff_most_signature_systems_to_be_fielded_by_2023_people_still_no_1_priority).

<sup>4</sup> AR 600-100, *Army Profession and Leadership Policy*; Washington, DC: Department of the Army; April 2017.

<sup>5</sup> MSG Leslie Renken; "Mentorship: Understanding a Leader's Investment"; *One Leader to Another Volume II*; U.S. Army Command and General Staff College; 2015, <https://www.armyupress.army.mil/Journals/NCO-Journal/Archives/2017/December/Mentorship/>.

<sup>6</sup> Joseph Kopser; "Mentoring in the Military: Not Everybody Gets It"; *Military Review*, November-December 2002.

<sup>7</sup> Ibid.

<sup>8</sup> AR 600-100.

<sup>9</sup> Suits.



# The Cube Division: A New Template for Armored Warfare?

by Michael McCabe

In a war against a peer adversary such as Russia or China, armored divisions will play a central role. The purpose of this article is to propose a new template for armored divisions in high-intensity mechanized warfare in the plains or desert.<sup>1</sup>

This design, hereafter referred to as the “cube division,” is built from a binary template with two armored battalions forming a “binary regiment,” two regiments forming a “square brigade,” and two brigades forming a cube division: 2x2x2, or two-cubed.

The use of the binary template offers advantages compared to a three-battalion “triangle” template that are more advantageous to armored divisions than to infantry divisions, and this article will articulate how and why.

## Why the binary template?

The first question to be answered is: why is the binary template better for armored divisions than triangle templates? The answer is threefold: First, it is inherently more agile. Second, it puts more combat power at the brigade level compared to a triangle template, with four battalions per brigade rather than three. Third, it allows a higher ratio of support units without making the division oversized and bloated.

## Agility

In an infantry brigade or division, the need for mobility must be balanced with static staying power. This is a difference in kind from armored divisions, which are more lopsided in favor of mobility.

On the open steppes of Eastern Europe or comparable desert terrain, mounted infantry has similar

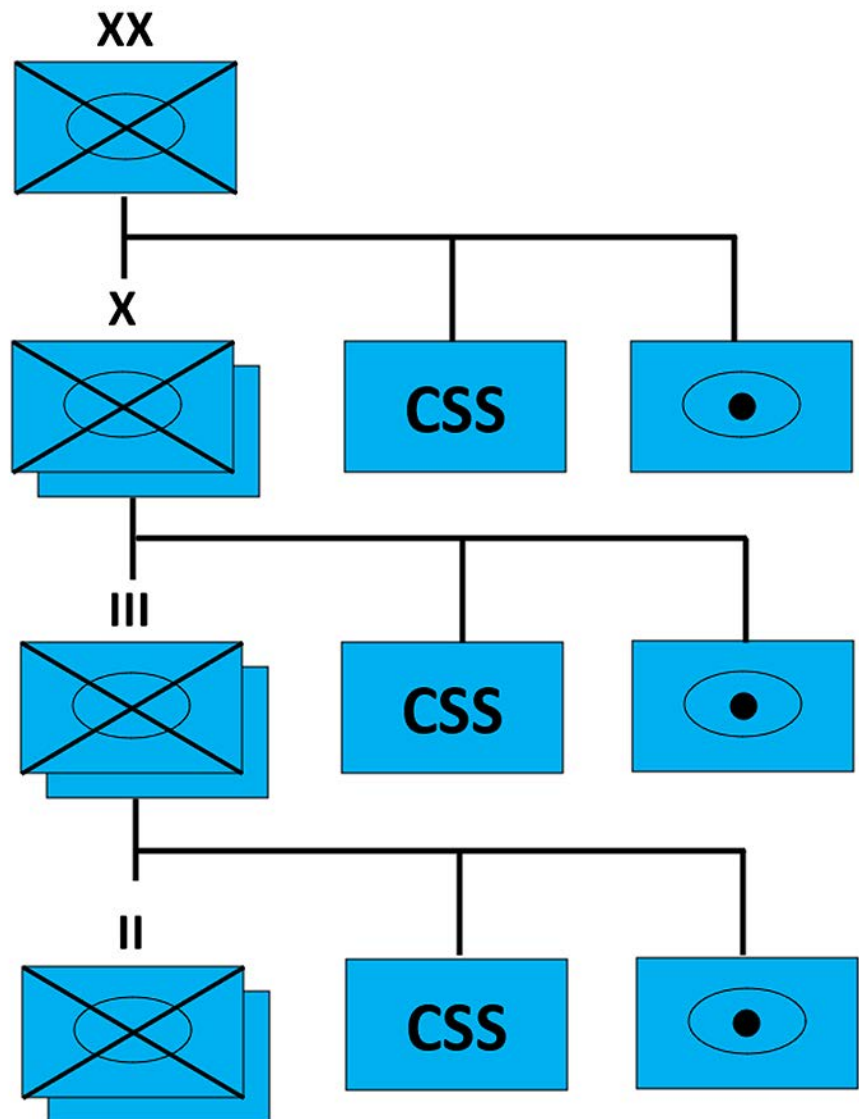


Figure 1. Organization chart of “cube” division.

operational mobility to armor but must dismount to fight. On foot, an infantryman is capable of seizing a building or manning a trench but is nowhere near as tactically speedy or powerful as a main battle tank. In a featureless battlefield bereft of infantry’s usual choices for cover, tanks’

speed and protection will become more critical, and battles will become more fluid.

This is not to discount the importance of infantry in an armored battle but merely to point out that they play a supporting role to tanks, a reversal of

the Army's recent experiences in counterinsurgency. Battalions designed for conventional warfare against a peer opponent will resemble reinforced battalions, and this means the infantry "reinforcing" the armored battalion will be organic and permanent, as opposed to mixing pure infantry/pure armor battalions in a brigade and then blending them temporarily on a case-by-case basis.

With a binary template, a regimental commander has two reinforced maneuver battalions. While two battalions may seem weaker than three on the surface, they are inherently more responsive to changes and can reliably beat the enemy to the punch. Getting inside the enemy's observe-orient-decide-act loop will be crucial for armored divisions, as they cannot adopt Maginot tactics like infantry can.

Coordination and synchronization of a multi-battalion formation is necessary to prevent piecemeal actions, and the fewer subunits one has to manage, the better. Thus, a command level with more than one battalion, but still smaller than a brigade, will enable junior officers to seize fleeting opportunities with minimal staff work, while brigade commanders can focus on larger actions requiring greater amounts of staff work – all without either commander or operation becoming overwhelmed.

The brigade and division also benefit from this binary template, and the cube division uses it on all three levels. This consistency throughout all levels of command will smooth the path for officers rising through the ranks, something which will be indispensable should the officer corps suffer heavy casualties in a slugfest. Using an agile template at higher levels of command will also foster a culture of bold, aggressive action from all officers, and this will preserve the spirit of armored warfare and the armored division's *esprit de corps* in an age when the Army is largely dominated by infantry culture.

## Greater brigade power

While a binary regiment has the tactical-agility advantage over a three-battalion regiment or brigade, the square brigade is larger and has more

capacity to inflict and sustain damage than its three-battalion counterpart. In a future war involving armored divisions, most tank battles will be fought at the brigade level; the cube division emphasizes this command level over the others. The square brigade has more combat battalions than a triangular template and can therefore deliver heavier knockout blows, but it is divided into pairs for ease of management and command so as to not become unwieldy.

Should any peer conflict go nuclear, square brigades and binary regiments will furthermore be necessary for power projection without offering juicy targets for tactical nukes.

The four-battalion model is useful in both concentrated and dispersed actions. The American way of war is predicated on the assumption that our forces must fight outnumbered and win, especially when the enemy attempts to encircle us. To counter this, our military has traditionally relied on slashing attacks throughout the enemy's strategic depths rather than encirclements, and mechanized/tank warfare is no exception. An armored brigade would be capable of attacking and counterattacking in four locations at once with reinforced battalion-sized forces, or be able to use one regiment to screen a wide area and/or both flanks while the second concentrates for an attack.

Even when an armored brigade cannot blunt an enemy's thrust or destroy it, such dispersed counterattacks can still throw off the timing of the enemy's attacks and buy time for any units in danger of encirclement to escape the noose. Without the binary regiments, a four-battalion brigade would be slow and lumbering compared to a three-battalion opponent, but with the regimental commands, this brigade becomes both larger and quicker than a three-battalion brigade designed for semi-mobile, semi-static infantry warfare.

## Higher ratio of support

Concurrent to smaller, more nimble and responsive multi-battalion formations, the cube division emphasizes combat support more than a triangle division does. Armored divisions have

much larger support requirements than mechanized infantry in sustained combat, and thus copying infantry-support ratios is less than ideal. The cube division offers an improvement – first by reducing the total number of combat battalions from nine to eight, and second, by increasing the number of organic support units.

The first improvement, reducing the number of battalions, makes the division smaller and therefore easier to transport and resupply. Since armored divisions consume more supplies per capita than infantry divisions, smaller, more nimble formations will consume less overall. Smaller two-battalion formations can recover more quickly than three-battalion formations and sustain the tempo of operations above what the enemy can sustain, granting a tactical advantage. Smaller armored divisions would also be easier to deploy strategically, and the ability to rapidly introduce armor to hotspots is desirable for readiness and deterrence.

The second advantage is tied directly into the binary regiments; their existence in the chain of command allows a third tier of command and support. Three tiers of command creates new slots for support but also allows modularity, mixing and matching.

For instance, medical support might be better suited for a regiment; transport for the brigade; and chemical, radiological, biological and nuclear units for division level. Engineering could be useful at more than one level, and so on. Instead of a binary "brigade/division" choice, it becomes an all-you-can-eat buffet. All three levels, however, would possess fuel-resupply trucks and armed escorts, plus self-propelled artillery. These are crucial because fuel consumption is a major concern for armored warfare, resupply will always be targeted, and towed artillery is as obsolete on a mechanized battlefield as black-powder muzzleloaders.

Dispersed, mobile, armored artillery will offset any quantitative artillery advantages enjoyed by the Russians and Chinese, and also provide a place for anti-weaponry (particularly against drones). By giving smaller units more organic support, the division can



readily keep its widely dispersed regiments and brigades resupplied and supported at all times. These are not only beneficial for sustained high-tempo combined-arms warfare but also provide redundancy when the division sustains heavy losses.

## Conclusion

While this essay has been fairly broad and brief in describing the cube division, the principles are consistent: armored warfare is not the same as infantry warfare, and armored divisions will benefit from stronger brigades, greater support and smaller overall size. Dispersal is critical in modern warfare, and the cube division is pur-

pose-built for dispersed action.

Yet the cube division still avoids the pitfalls of the pentomic division, which emphasized dispersed strength too excessively and thus could not function without tactical nukes. The cube division's design is better suited to tanks than infantry's jack-of-all-trades approach and is an original, modern design for the 21<sup>st</sup> Century.

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## ACRONYM QUICK-SCAN

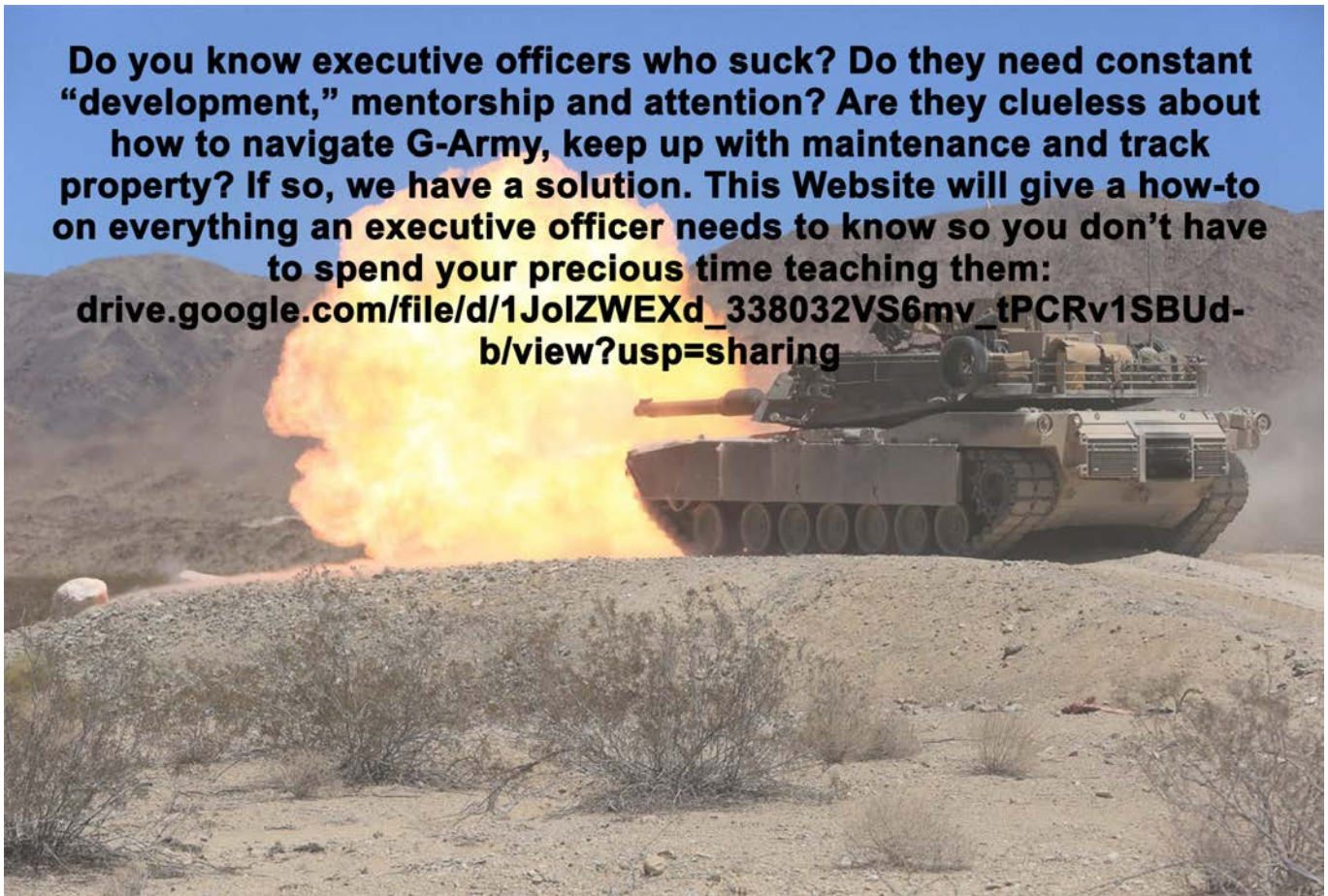
CSS – combat service support

*have been reposted on **RealClearDefense**. He holds a bachelor's of arts degree in biochemistry-molecular biology from Carroll College.*

## Notes

<sup>1</sup> Infantry divisions would be best served by separating into light-heavy versions rather than a one-size-fits-all approach, with heavy infantry working alongside tanks and in urban combat; however, this is a whole essay unto itself and therefore omitted.

**Do you know executive officers who suck? Do they need constant “development,” mentorship and attention? Are they clueless about how to navigate G-Army, keep up with maintenance and track property? If so, we have a solution. This Website will give a how-to on everything an executive officer needs to know so you don't have to spend your precious time teaching them:  
[drive.google.com/file/d/1JolZWEXd\\_338032VS6mv\\_tPCRv1SBUd-b/view?usp=sharing](https://drive.google.com/file/d/1JolZWEXd_338032VS6mv_tPCRv1SBUd-b/view?usp=sharing)**



# The U.S. Army Should Establish a Robotics Branch

by John Dudas

As part of the effort to modernize and to build the Army of 2030, air and ground robotics systems will soon be fielded to Army brigade combat teams (BCTs).

According to *The U.S. Army Small Unmanned Aircraft Strategy* published in September 2020, there are five robotics systems designated for fielding in the next two to three years.<sup>1</sup> Included in these systems are four small unmanned aircraft systems (SUAS) with the capability to perform small-unit intelligence, surveillance and reconnaissance (ISR) missions, and one ground robotic vehicle designed for equipment transport. These capabilities are managed by the Robotics Requirements Division within the Maneuver Capabilities Development Integration Directorate at Fort Benning, GA.

Another robotic system is also on board for fielding, albeit some years down the road. The Robotic Combat Vehicle-Light (RCV-L) is under development as part of the portfolio of the Next-Generation Combat Vehicles Cross-Functional Team (NGCV-CFT). The NGCV-CFT is one of the six priorities for Army modernization.<sup>2</sup>

See Table 1 for a brief description of each system.

## Challenges

A quick study of Table 1 will tell the reader that all these systems are destined for fielding at the tactical level (brigade and below). Looking even closer, one system stands out: the RCV-L. The glaring difference in this system as compared to the others is that the RCV-L is a lethal ground robotic. The vehicle is forecasted to be equipped with a Common Remotely Operated Weapons Station-Javelin (CROWS-J) system, similar to the infantry carrier variant that is present in the Stryker BCT.<sup>3,4</sup>

The CROWS-J is a remote weapon station armed with a .50-caliber machinegun or MK 19 grenade

machinegun and one Javelin missile. The RCV-L is perhaps the strongest case for a robotics military-occupation specialty (MOS) within a dedicated Robotics Branch.

Common sense sharply indicates that only a highly trained Soldier should be permitted to operate this combat system and not someone with an additional duty whose focus may be elsewhere. True, there are many examples where Soldiers can perform their primary MOS and an additional duty – the anti-armor infantryman is one such case. This Soldier is expected to fight as a dismounted infantryman and then transition into an anti-armor gunner when required.

However, to ask a Soldier to operate an air or ground robotics system – especially one with the complexity and lethality of the RCV-L, and expect the same Soldier to give the required concentration, skill and vigilance while performing their primary combat duty – is simply asking too much. Specialization is needed.

## Options

After the previously mentioned robotic systems are fielded, a practical question is: Who is going to operate and maintain them? Right now, the answer is that Soldiers from each echelon where they are assigned will have this task. For example, an infantry platoon fielded with three Soldier-borne sensors (SBSs), one short-range reconnaissance (SRR) system and one small multi-purpose equipment transport (SMET) would require five Soldiers to operate these robotic systems in addition to their primary MOS duties. A different approach must be considered.

One option is to create an additional skill identifier (ASI). The ASI denotes a coded position within an organizational chart that ensures the proper manning of a special duty within the unit. It can be considered a so-called forcing function for organizational leaders (and the Army) to ensure these

positions are filled with qualified Soldiers. The ASI qualification is earned after the Soldier completes more training for the specific duty assigned.

Applying an ASI system to fill robotics-operator positions is a band-aid at best, especially in light of future quantities that are destined to maneuver formations. The Army is still left with the dilemma of asking a Soldier to perform two complex functions on the battlefield: their primary MOS and the additional duty.

Another option is to create new MOSs in a branch career-management field. Since most air and ground robotic systems will be fielded at the tactical level, this highlights more MOSs within the two primary maneuver branches: infantry and armor/cavalry.

Creating more MOSs in these two branches would result in only a better band-aid. Though you have seemingly solved the problem of overloading the Soldier with two jobs, a new problem is created with career development. How do armor Soldiers with RCV-L operator MOSs compete with their 19D/19K cousins? Does he or she have the experience to lead a dismounted reconnaissance team after operating a lethal robot for three years inside a control vehicle?






Probably yes. Motivated Soldiers are very adaptable, and quality leaders will always find a way. But the Army should manage talent in a manner that avoids putting a Soldier in that position in the first place. Especially when it must be accepted that military application of robotics technology is only going to advance in the future. And these advancements will find their way in greater numbers to the maneuver formations. There will be a time when potentially half the combat vehicles in a mounted-maneuver formation will be robotic.

Perhaps there will even be entire robotic formations at different echelons

**Continued on Page 35**



**Table 1.**

Robotic system	Type	Description	
Soldier-borne sensor (SBS)	Air	The SBS is a nano unmanned aerial system that provides a squad with an organic “quick look” capability. The system allows squads to conduct reconnaissance and observe targeted areas of interest while remaining out of enemy contact.	 <p><i>From Program Executive Office Soldier Website</i></p>
Short-range reconnaissance (SRR)	Air	The SRR is a platoon-level SUAS that provides advanced situational awareness and a standoff capability enabling reconnaissance, target detection and acquisition. The SRR has vertical take-off and landing, hover, perch and stare capabilities.	 <p><i>From Army News Service</i></p>
Medium-range reconnaissance (MRR)	Air	The current fielded MRR platform is the RQ-11B Raven and serves as a company-level SUAS. The Raven has been in service for several years and is undergoing an upgrade. The new RQ-11C will be modernized with a new hand controller, sensor gimbal and longer battery life.	 <p><i>A Raven launched in Iraq. From Wikipedia</i></p>
Long-range reconnaissance (LRR)	Air	The currently fielded LRR is the Puma SUAS. This hand-launched SUAS is used as a battalion-level surveillance and intelligence gathering tool that uses an electro-optical camera and infrared camera. A new LRR SUAS is in development.	 <p><i>PUMA</i></p>
Small multi-purpose equipment transport (SMET)	Ground (equipment transport)	The eight-wheel SMET will provide small dismantled units at battalion level and below with an unmanned cargo transport. The SMET also features a universal battery charger with the capability to recharge unit equipment batteries.	 <p><i>From U.S. Army Acquisition Support Center Website</i></p>
Robotic Combat Vehicle-light (RCV-L)	Ground (combat)	The RCV-L could potentially be employed as a scout or escort for manned combat vehicles. It will weigh no more than 10 tons, with the ability to be transported by a rotary-wing aircraft. The system will be fitted with a remote weapon station and armed with a heavy machinegun and an anti-tank missile.	

## Continued from Page 33

– robotic sections and platoons, robotic companies, perhaps even robotic battalions – complete with air and ground systems. These formations may even have different roles within the same organization, some being lethal and others providing combat-support functions such as ISR, logistics transport or resupply. The point is to not split the maneuver branches into human combat systems, if you will, and robotic systems. Again, specialization of skill in talent management is key.

The best option for the Army is to create a Robotics Branch that can fill combat organizations with specially trained Soldiers. These Soldiers should be backed and supported by a purposeful branch, filled with robotic experts with the mission to solely focus on their training, employment, professional development, promotion and assignment. Only a dedicated Robotics Branch can perform all those functions.

### Robotics Branch and center of excellence

Building a new branch is not without precedent. The creation of a Robotics Branch would be similar to the advent of the Motor Transport Corps after integration of mechanized vehicles into the force, or even the Tank Corps, which both began in 1918.<sup>5,6</sup> As recently as 2014, the Army started the Cyber Branch to engage threats in the cyber domain.<sup>7</sup>

The new Robotics Branch should be classified as another member of the combat arms since most of its systems will find their home in maneuver formations (at BCT level and below). A seemingly logical home for a Robotics Center of Excellence (RCoE) is at Fort Benning, which is also home to the Maneuver Center of Excellence (MCoE).

However, a strong argument could be made for Fort Bliss, TX. Fort Bliss and the adjoining White Sands Missile Range has an enormous training area with excellent live-fire ranges, along with adequate air and ground maneuver space, that would fit the needs of an air and ground robotics training

center. Until 2009, Fort Bliss served as the Air Defense Artillery School and would have little difficulty ramping up for a dedicated training-support mission. Officers, warrants officers, non-commissioned officers and Soldiers could all receive specialized robotic training at Fort Bliss, providing a professional environment of robotics experts for the Army.<sup>8</sup>

Besides entry-level MOS training for operators, maintainers and leaders, the RCoE would also provide advanced education for all ranks and become the repository of lessons-learned. In addition, the RCoE would have the responsibility of developing future roles and concepts for robotic formations and ensuring these concepts were nested across the doctrine, organization, training, materiel, leadership development, personnel, facilities and policies categories.

### Conclusion

As stated, the U.S. Army should establish a Robotics Branch. As robotic technology advances and finds its way into maneuver formations, dedicated and skilled Soldiers must be properly trained and led to employ these systems. A Robotics Branch will directly support this effort.

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*Western Governors University.*

### Notes

<sup>1</sup> Robotics Requirements Division, Maneuver Capabilities Development Directorate; **U.S. Army Small Unmanned Aircraft System Strategy**; Fort Benning, GA: Army Futures Command; 2020.

<sup>2</sup> Andrew Feickert; "The Army's Robotic Combat Vehicle (RCV) Program"; Congressional Research Service; Dec. 14, 2021; <https://crsreports.congress.gov/product/pdf/IF/IF11876>.

<sup>3</sup> Shephard News Team; "Javelin firings showcase CROWS flexibility"; Jun. 25, 2021; <https://www.shephardmedia.com/news/landwarfareintl/javelin-firings-showcase-crows-flexibility/>.

<sup>4</sup> Director, Operational Test and Evaluation; "Stryker Common Remotely Operated Weapon Station-Javelin (CROWS-J)"; Feb. 26, 2022; Fiscal Year 2018 Army Programs; <https://www.dote.osd.mil/Portals/97/pub/reports/FY2018/army/2018strykercrowjs.pdf?ver=2019-08-21-155808-197>.

<sup>5</sup> Richard Killblane; **70 Years of the Transportation Corps**; U.S. Army Transportation Corps; Feb. 26, 2022; <https://transportation.army.mil/history/index.html>.

<sup>6</sup> Office of the Chief of Armor; **This is Armor**, U.S. Army Armor School Pamphlet 360-2; Dec. 8, 2021; [www.benning.army.mil/armor/ocoa/content/References%20and%20Guides/USAARMS%20Pam%20360-2%20This%20is%20Armor.pdf?8DEC2021](http://www.benning.army.mil/armor/ocoa/content/References%20and%20Guides/USAARMS%20Pam%20360-2%20This%20is%20Armor.pdf?8DEC2021).

<sup>7</sup> Bill Roche; "Army's Cyber Branch Marks its Fifth Anniversary"; Army Cyber Command; Aug. 28, 2019; [https://www.army.mil/article/226345/armys\\_cyber\\_branch\\_marks\\_its\\_fifth\\_anniversary](https://www.army.mil/article/226345/armys_cyber_branch_marks_its_fifth_anniversary).

<sup>8</sup> LaSonya Morales and Jason Stadel; "Air Defense Artillery School Graduates Final Classes at Fort Bliss"; U.S. Army 16<sup>th</sup> Mobile Public Affairs Detachment; Dec. 15, 2009; [https://www.army.mil/article/31876/air\\_defense\\_artillery\\_school\\_graduates\\_final\\_classes\\_at\\_fort\\_bless](https://www.army.mil/article/31876/air_defense_artillery_school_graduates_final_classes_at_fort_bless).

### ACRONYM QUICK-SCAN

**ASI** – additional skill identifier  
**BCT** – brigade combat team  
**CROWS-J** – Common Remotely Operated Weapons Station-Javelin  
**DoTD** – Directorate of Training and Development  
**ISR** – intelligence, surveillance and reconnaissance  
**MCoE** – Maneuver Center of Excellence



## ACRONYM QUICK-SCAN

**MOS** – military-occupation specialty  
**NGCV-CFT** – Next-Generation  
Combat Vehicles Cross-Functional  
Team

**RCoE** – Robotics Center of  
Excellence  
**RCv-L** – Robotic Combat Vehicle-  
Light  
**SBS** – Soldier-borne sensor

**SMET** – small multi-purpose  
equipment transport  
**SRR** – short-range reconnaissance  
**SUAS** – small unmanned aircraft  
system

## Honoring our Armor and Cavalry Medal of Honor Heroes

Derived from Center of Military History information provided at <https://history.army.mil/html/moh/civwaral.html>. Listed alphabetically. Note: Asterisk in the citation indicates the award was given posthumously.

**MEACH, GEORGE E.**

Rank and unit: Farrier, Company I, 6th New York Cavalry. Place and date of action: Winchester, VA., Sept. 19, 1864. Born: New York. Date of issue: Sept. 27, 1864. Citation: Capture of flag.

**MEYER, HENRY C. CPT**

Unit: Company D, 24th New York Cavalry. Place and date of action: Petersburg, VA, June 17, 1864. Entered service: Dobbs Ferry, NY. Born: Hamburg, NY. Date of issue: March 29, 1899. Citation: During an assault and in the face of a heavy fire rendered heroic assistance to a wounded and helpless officer, thereby saving his life and in the performance of this gallant act sustained a severe wound.

**MILLER, FRANK PVT**

Unit: Company M, 2nd New York Cavalry. Place and date of action: Sailors Creek, VA, April 6, 1865. Entered service: Jamaica, NY. Born: New York. Date of issue: April 24, 1865. Citation: Capture of flag of 25th Battalion Virginia Infantry (CSA); was taken prisoner, but successfully retained his trophy until recaptured.

**MILLER, JAMES P. PVT**

Unit: Company D, 4th Iowa Cavalry. Place and date of action: At Selma, AL, April 2, 1865. Entered service: Henry County, IA. Born: Franklin, OH. Date of issue: June 17, 1865. Citation: Capture of standard of 12th Mississippi Cavalry (CSA)

**MILLER, JOHN PVT**

Unit: Company H, 8th New York Cavalry. Place and date of action: Waynesboro, VA, March 2, 1865. Entered service: Rochester, NY. Born: Germany. Date of issue: March 26, 1865. Citation: Capture of flag.

## The Screen In-Depth

by 1LT Caleb B. Welch

One of the first things I had to do as a new platoon leader was participate in a tactical-decision exercise that my squadron commander was facilitating to prepare platoon leaders for an upcoming Joint Readiness Training Center rotation. I was fresh out of the Armor Basic Officer Leader's Course (ABOLC) and the Scout Leader's Course (SLC) at Fort Benning, GA, and I was looking forward to applying what I had learned.

My troop commander brought in all the platoon leaders and briefed an operations order, all of which made sense until he briefed the locations of each platoon arrayed in a troop screen. My troop commander explained that he wanted my platoon to "screen in-depth" along a certain route, but his graphics indicated he wanted us arrayed in what I would have described as a good ol' fashioned stationary screen.

At SLC I was taught that a screen in-depth was a very specific way to conduct a screen. Therefore I was under the impression that setting up a screen in-depth meant emplacing observation points (OPs) to conduct a platoon or troop internal reconnaissance handover (RHO) and pass targets into an engagement area to be destroyed.

I was honestly a little confused after the brief, so I approached my commander and asked him to clarify how he wanted me to orient my platoon in the screen. He clearly thought his new platoon leader was very dumb as he tried in vain to explain the orientation of a screen to the stupidest person he had ever met.

Despite being confident that my instructors at SLC had taught me the doctrinally correct way to establish a screen in-depth, I quickly realized the definition I learned was not shared by all cavalry officers. Cavalry leaders can generally agree that a screen in-depth

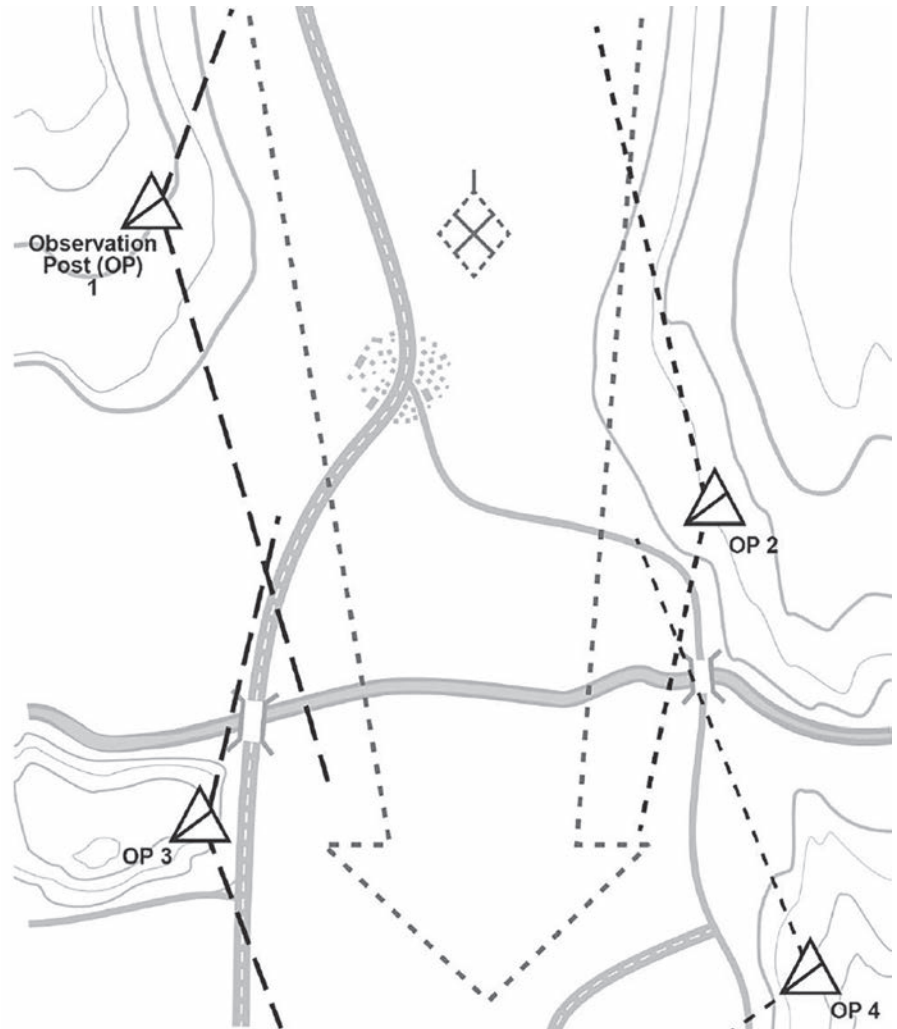


Figure 1. In-depth positioning of OPs. (Adapted from Figure 4-3, ATP 3-20.98, *Scout Platoon*)

has something to do with positioning OPs at varying distances between the frontline trace and rear boundary of the platoon, but they rarely articulate their definition in similar language.

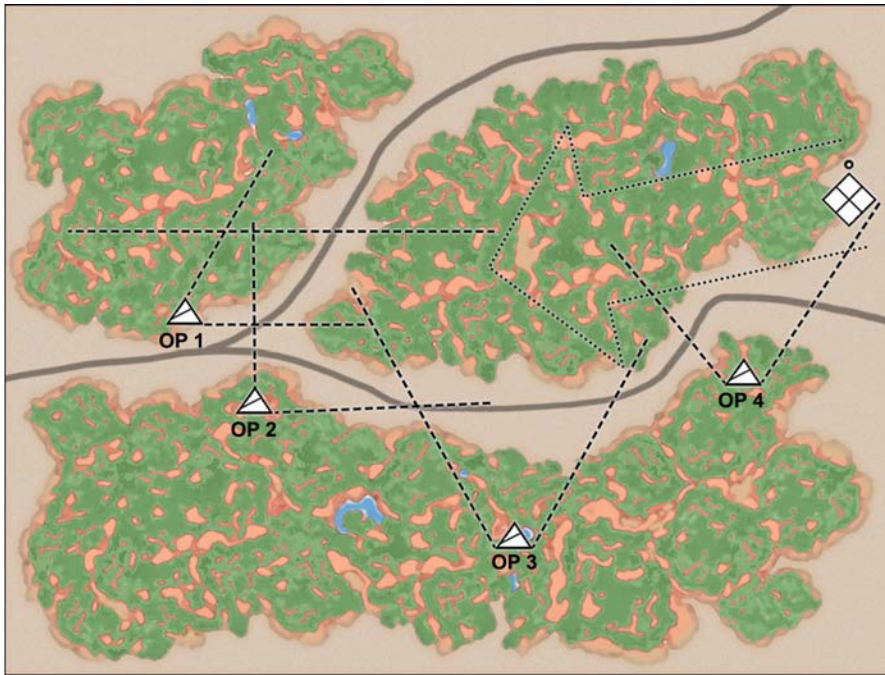
To make matters worse, Army Techniques Publication (ATP) 3-20.98, *Scout Platoon*, does not have a clear definition for a screen in-depth. The result is that cavalry leaders often use the term "screen in-depth" so liberally that the term no longer has any meaning. For example, if every screen is a screen in-depth, then isn't a

screen in-depth just a regular screen?

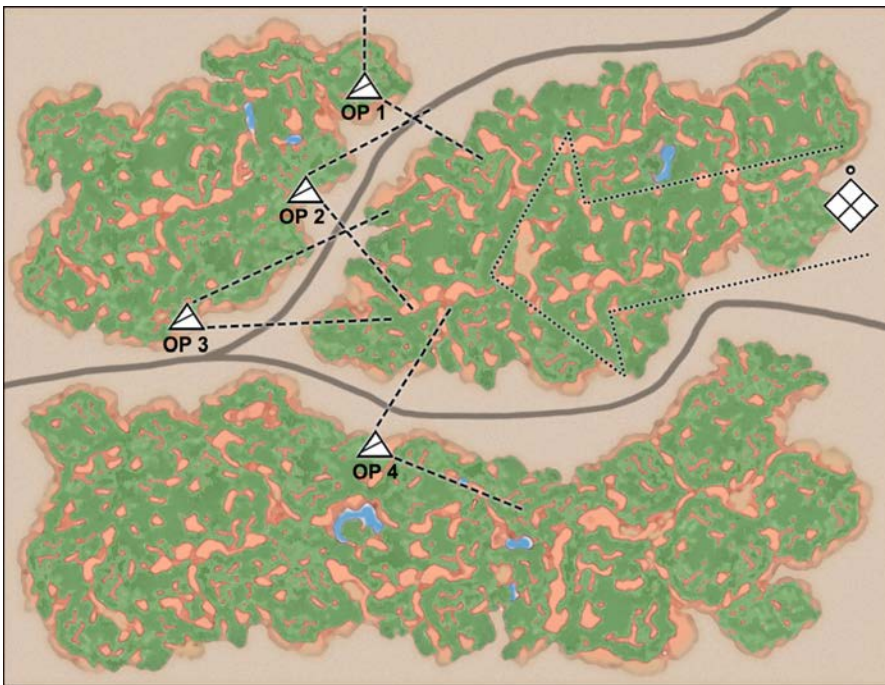
Thankfully my troop commander was a good sport about the whole misunderstanding and didn't lose his patience with me. Eventually I opened up *Scout Platoon* in his office, and I discovered that doctrine provided no clear guidance one way or another. Both of us were able to see each other's understanding of what constituted a screen in-depth reflected in the language of ATP 3-20.98.

The previous vignette illustrates the lack of unity among cavalry leaders on





**Figure 2. Alternate graphics to depict in-depth positioning of OPs.** (Based on map created by the author)



**Figure 3. Alternate graphics to depict a stationary screen with depth.** (Based on map created by the author)

the definition of a screen in-depth and shows that a lack of specificity ultimately leads to confusion. My goal is to provide a summary of platoon- and troop-level doctrine for the term “screen in-depth,” highlight discrepancies and inadequacies in its definition, and discuss possible alternatives that would clarify its meaning.

### What doctrine says

To its credit, ATP 3-20.98 dedicates an entire paragraph to discussing depth, and its importance when planning and conducting security operations. Unfortunately, it also fails to clarify the difference between incorporating depth into a screen and planning a screen in-depth. Ultimately depth is meant to be

a characteristic incorporated into all screens.

According to *Scout Platoon*, “Scout platoons plan screens in-depth. Depth prevents the threat from easily identifying and penetrating the screen, prevents gaps from occurring when [OPs] displace, allows platoons to gain and maintain enemy contact, and facilitates the destruction of enemy reconnaissance elements without compromising tasks” (Paragraph 4-23). Incorporating depth into a screen prevents the enemy from easily pinpointing the location of friendly screens, protects screens from enemy indirect fires and allows OPs to displace without compromising the integrity of the screen. As a result, depth should be incorporated as a planning consideration into all screens.

*Scout Platoon* Paragraphs 4-30 and 4-31 under subhead “Depth” provide an excellent discussion of the importance of depth and potential techniques for platoon leaders to achieve depth in their screens. “Scout platoon leaders assign section boundaries that allow multiple [OPs] to establish a screen and create depth within a screen [Figure 1]. Whenever possible, [OPs] should be within supporting distance of each other to enhance security through mutual support and to enable RHO between observation posts.”

While this information is helpful, it ultimately fails to describe in concrete terms how to establish a screen in-depth. The definition is supported by graphics, which generally seem to cause more confusion than clarity.

The most obvious issue with Figure 4-3 in ATP 3-20.98 is that leaders have a hard time imagining implementing this technique into their screen because of the lack of graphic-control measures. If Figure 4-3 shows the enemy moving into an engagement area, the OPs passing the target are in danger of committing fratricide. The risks associated with setting up a screen in this way are too high to be considered a useful technique and a more concrete, less theoretical example would be helpful.

The biggest shortcoming with *Scout Platoon’s* definition of a screen in-depth is that it fails to differentiate the

difference between incorporating depth into a screen and establishing a screen in-depth. The reader is left with a vague idea of the importance of incorporating depth into the screen but no real concrete idea of the variety of techniques that can be used to achieve depth within a screen.

## Proposed definition

Undoubtedly one of the strengths of **Scout Platoon**, and ultimately any successful Army doctrine, is its flexibility. Some cavalry leaders may argue that differentiating between depth as a characteristic of all screens and a screen in-depth as a technique will ultimately reduce this flexibility and potentially restrict cavalry leaders from applying creative solutions to the unique challenges presented by mission variables: mission, enemy, terrain, troops available, time and civil considerations.

In reality, providing a clear definition for a screen in-depth will provide another tool for scout-platoon leaders to consider when planning security missions. A clear definition of a screen in-depth will facilitate creative problem-solving and provide another example for leaders to consider when facing the unique challenges presented by the operational environment.

Scout-platoon leaders would benefit from a potential definition for a screen in-depth such as the following: "A screen in-depth is a technique used by scout-platoon leaders that allows one element of the screen to pass enemy

contact to another element without engaging or displacing by conducting a platoon internal RHO. A screen in-depth is normally achieved by arraying OPs parallel to the enemy's expected avenue of approach. This technique allows the scout platoon to set up engagement areas with a greater chance of achieving flank shots and facilitates passing targets through the assigned element's area of operations."

Most of the first sentence is taken directly from **Scout Platoon**, Paragraph 4-30. Most of the raw material needed to define a screen in-depth can be found in the pages of this publication; it is a matter of separating the explanations of the importance of depth from the descriptions of screens in-depth.

More graphics will undoubtedly aid readers as they attempt to picture the concept of a screen in-depth as it would appear on an operations overlay. It is important that two sets of graphics are used to distinguish a screen in-depth from a stationary screen with depth incorporated. Figure 2 clearly illustrates that a screen in-depth is oriented parallel to the enemy's most likely avenue of approach, with the potential for OPs to pass a target into an engagement area near OPs 1 and 2.

Figure 3 is equally important in that it demonstrates 1) the necessity of incorporating depth to best use the terrain available and avoid compromising OP locations; and 2) passing targets

into an engagement area is often impractical and unnecessary when arrayed in a stationary screen.

## Conclusion

By providing a clear definition of a screen in-depth and graphics that illustrate its unique capabilities, cavalry leaders can provide platoon-level leadership another tool to assist in planning and executing security operations. The unique mission of cavalry organizations requires flexible and clear doctrine that can be used as a framework to guide leaders as they plan missions.

*1LT Caleb Welch is the executive officer of Troop B, 2<sup>nd</sup> Squadron, 107<sup>th</sup> Cavalry Regiment, 37<sup>th</sup> Infantry Brigade Combat Team, Ohio Army National Guard. He concurrently serves as the full-time Active Guard Reserve squadron training officer for 2-107 Cavalry. 1LT Welch previously served as a platoon leader in Troop B, 2-107 Cavalry. His military schools include ABOLC, Air-Assault School, SLC, Pathfinder Course and Maneuver Leader's Maintenance Course. 1LT Welch has a bachelor's of science degree in journalism from Ohio University.*

### ACRONYM QUICK-SCAN

**ABOLC** – Armor Basic Officer Leader's Course  
**ATP** – Army techniques publication  
**OP** – observation post  
**RHO** – reconnaissance handover  
**SLC** – Scout Leader's Course



# TACTICAL DECISION EXERCISE

by LTC Ben Ferguson

Following is the author's solution to the tactical vignette published in *ARMOR*'s Fall 2021 edition. The best solutions from the field for that vignette can still be published in a subsequent issue of *ARMOR*.

"What's Your Next Move?" serves as the first in a new series of scenarios focused on large-scale combat operations. *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 to the scenarios posed in "What's Your Next Move?" Use your doctrinal knowledge and educated assumptions to determine "What's Your Next Move?"

## Situation

You are the commander of A Team (tank heavy), Task Force (TF) 3-8. You are the TF's advance guard as it conducts a movement-to-contact. The TF's mission is to fix and then destroy the

advance guard of a mechanized-rifle division that is moving east toward the international airport. The TF's movement will allow the rest of the brigade to maneuver and destroy the regimental main body, with enough combat power left to block the remainder of the enemy division.

## Scenario

While conducting resupply in Tactical Assembly Area Blast, intelligence, surveillance and reconnaissance reports large groups of enemy tracked vehicles 15 kilometers away from Command Post (CP) 1. The TF commander has directed you via Joint Capabilities Release (JCR) to occupy Battle Position (BP) 1 and delay the enemy force until the rest of the battalion can arrive.

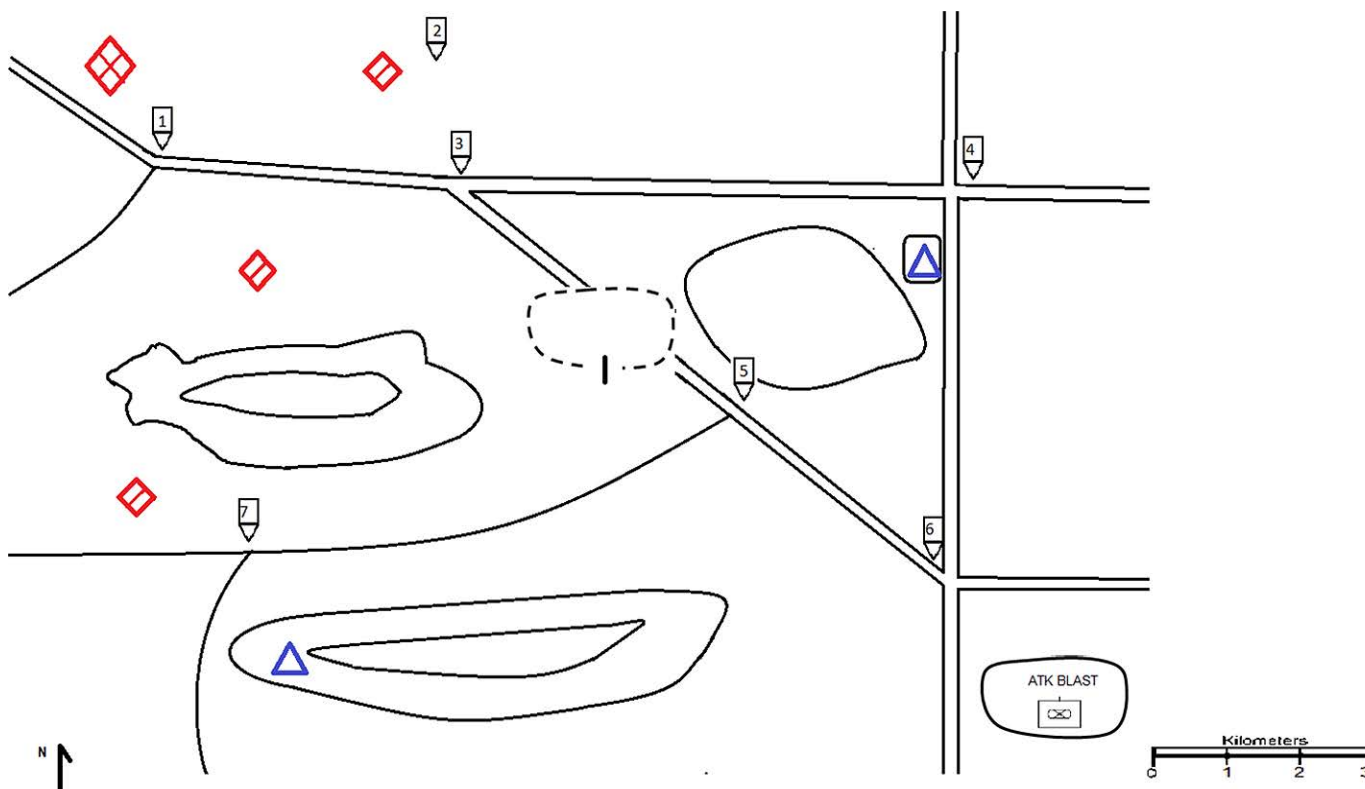
Your team consists of two M1A2 tank platoons and one mechanized-infantry platoon. Your company has tactical control of the battalion scout-platoon section toward the forward-line-of-own-troops and the mortar platoon

# WHAT'S YOUR NEXT MOVE?



follows in support; you have priority of fires, but your fire-support officer has limited contact with the lead firing battery.

The terrain is mostly open, lightly forested prairie with little undulation, with some higher terrain in the center of the zone. As you approach the intersection at CP 6, the easternmost scout-platoon observation (OP) reports visual contact with about 30 vehicles moving east and starting to deploy in the vicinity of CP 1, and movement of a wheeled vehicle just north of CP 7. A moment later, your other mounted scout OP reports they have identified what they assess are threat-vehicle



sections north of Hill 560, moving east toward CP 3 and in the vicinity of CP 2.

What's your next move? Decide what to do and issue your fragmentary order (FRAGO) as if you were speaking on the radio or via JCR message. Following your initial FRAGO, clearly define the problem(s) as you see it/them. Submit both your initial FRAGO and discussion of the problem, assumptions and rationale for your solution to **ARMOR**, [us-army.benning.tradoc.mbx.armor-magazine@army.mil](mailto:us-army.benning.tradoc.mbx.armor-magazine@army.mil), no later than 45 days after this edition is posted on-line.

## Author's proposed FRAGO

"Guidons, this is Black 6, FRAGO follows. Add three graphic-control measures: Platoon (PL) Abe as a straight line between CP7 and CP5; PL Ike as a line between CP7 and CP3; and PL Cal between CP1 and CP2.

**Situation:** The enemy scouts or mounted patrols are moving on east-west avenues of approach; they are deploying a battalion-sized element at CP1 and moving generally east to engage the main body of the task force.

**Mission:** We will attack-by-fire to fix the lead enemy battalion vicinity CP3 to allow the TF to move to a position of advantage to destroy the enemy regiment.

**Intent:** The purpose of our mission is to fix the enemy force at CP3 to allow the TF time to move to a position of advantage and destroy the enemy regiment. We will accomplish this by attacking by fire oriented north and west to defeat the enemy battalion at CP3 and PL Ike. At endstate, the company/team will be arrayed in attack-by-fire positions vicinity BP1 in a left echelon, anchored to the hill to the west and oriented to the west and northwest; the lead enemy battalion fixed vicinity CP3; and the TF maneuvering to destroy the enemy regiment.

**Tasks to subordinate units:** **Green** (mechanized infantry), move to the intervisibility line vicinity hill west of BP, oriented toward PL Ike. Task: Attack-by-fire, orienting anti-tank (AT) fires to CP1 and dismounted AT at CP7. Purpose: To protect the company/team's flank, denying enemy movement

toward the south. Be prepared to cover supplemental avenue of approach from CP7 and move dismounted-infantry squads to block enemy dismounted avenues of approach.

**White**, move east half of BP, oriented north toward CP2 and CP3. Task: Attack-by-fire, orienting direct fire deep on CP2. Purpose: To prevent the enemy from maneuvering to the north and bypassing. Break.

**Blue**, move to southwest corner of BP, oriented west to PL Ike. Task: Attack-by-fire, orienting fires from CP4 to Target Reference Point 1. Purpose: To prevent the enemy from maneuvering north. Break.

**Mortars**, move to Mortar Firing Point 1 south of road and PL Abe. Task: Disrupt the advance guard's main body with high-explosive/smoke between PL Cal and PL Ike. Purpose: Disrupt the enemy's formations, giving us a direct-fire advantage by forcing him to button up and disperse.

**Black Fires**, move to a position vicinity CP5 to regain communications with the task force and call for fires to fix enemy at PL Ike. You have priority of fires.

**Scouts**, continue to observe, destroy enemy scouts and engage mounted targets to prevent enemy penetration of CP7 in the south or CP4 in the north. Identification of enemy committal of platoon or larger-sized elements toward CP7 is commander's critical-information requirement.

**Black 5**, Regain contact with higher, report and determine how long until TF will arrive. Observe location and movement of enemy east of PL Ike and assist in calling for and adjusting fires.

**Black 7**, move trains to a hide position west of CP6; be prepared to execute medical evacuation. Acknowledge, over."

## Rationale

Our mission was to find and fix the lead enemy battalion to enable the brigade, but we now we have to make some assumptions on how long the battalion will take to deploy. The distance and the objective of the enemy must be accounted for (i.e., is he

force-oriented or terrain-oriented) to prevent the possibility of bypass to the north.

There is an inherent dilemma as to whether we should attempt to occupy a static position or potentially accomplish the mission farther north or south to ensure the enemy cannot easily bypass our position.

The company/team does not have the time or the combat power to cover all potential enemy avenues of approach. By establishing a position vicinity the planned BP, we should be able to accomplish the mission of fixing the enemy battalion by destroying the leading two companies along PL Ike and forcing the enemy commander to delay further action before he has time to develop the situation and maneuver against the company/team and our follow-on TF.

By moving the mechanized infantry to higher ground, oriented northwest, the intent is to provide greater survivability and range for the mech infantry's tube-launched, optically tracked, wide-guided missiles. Dismounted Javelin and AT engagements will help block enemy identification of CP7 as a less-defended avenue of approach but would clearly be of greatest concern. Identification of enemy movement of a company-sized element through CP7 would require a difficult reallocation of tanks while under contact or a decision to retrograde to supplementary positions farther southeast.

Don't agree? Following your initial FRAGO, clearly define the problem(s) as you see it/them, then submit both your initial FRAGO and discussion of the problem, assumptions and rationale for your solution to **ARMOR**, [us-army.benning.tradoc.mbx.armor-magazine@army.mil](mailto:us-army.benning.tradoc.mbx.armor-magazine@army.mil) no later than 45 days after this edition is posted on-line.

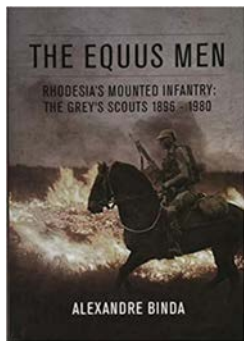
## ACRONYM QUICK-SCAN

**AT** – anti-tank  
**BP** – battle position  
**CP** – command post  
**FRAGO** – fragmentary order  
**JCR** – Joint Capabilities Release  
**OP** – observation post  
**PL** – platoon  
**TF** – task force



# BOOK REVIEWS

**The Equus Men: Rhodesia's Mounted Infantry: The Grey's Scouts, 1896-1980** by Alexandre Binda; United Kingdom: Helion and Company; 2021; 288 pages; \$300 hardcover, \$35.77 paperback.



Is there a role for horse-mounted cavalry in modern warfare? The answer to that question may be found in the story of Rhodesia's own cavalry force during the so-called Bush War of 1964-1979.

Written by Rhodesian-army-veteran author Alexandre Binda, **Equus Men** opens with an account of the emergency stand-up of an *ad hoc* paramilitary cavalry unit during the Matabele Rebellion of 1896, in what would later become Rhodesia (now Zimbabwe). This unit, dubbed Grey's Scouts from its founder Englishman George Grey, served as part of the larger Bulawayo Field Force throughout the 100-day conflict.

Both formations passed into African military history until Rhodesia recognized the need for a cavalry branch as a counterinsurgency tool. Despite some resistance to the idea, the Rhodesian army authorized a provisional cavalry force drawing its lineage from the Grey's. These cavalymen played a pivotal, albeit short-lived, role until Rhodesia collapsed in 1980. The unit disbanded a final time as dictator Robert Mugabe assumed power in the newly renamed Zimbabwe.

The text's middle is a year-by-year analysis of the reformed Grey's in Rhodesia, including combat-informed changes to its organization, structure, employment, personnel, equipment and tactics. Binda concludes the story with a series of appendices listing military honors, the Grey's fallen soldiers and even selections from the unit's songbook.

Binda writes from a position of

expertise, having served in the Rhodesian army as a paymaster to several units, including the Grey's. His research is exhaustive, and the writing is detailed to an extreme. Unfortunately, his writing style is dense, with little in the way of an appealing storyline to the reader.

What **Equus Men** lacks in a narrative is more than made up for in period photographs and information, leaving an overall impression of a unit yearbook rather than historical work. Readers searching for a "one-stop shop" on the Grey's Scouts need look no further.

Rhodesia reintroduced horse cavalry in a search for tactical solutions to an increasingly untenable strategic problem set during the nation's civil war. Petrol shortages, land mines and difficult terrain – combined with declining external material and political support for Rhodesia – required its military leaders to look for novel approaches to counterinsurgency. The idea of an army maintaining a ready, resourced and trained cavalry force may seem anachronistic in 21<sup>st</sup> Century military warfare, and certainly was not the answer to Rhodesia's existential challenges.

Binda presents a compelling case for the maintenance of a small mounted cavalry force as a reconnaissance or counterinsurgency element to augment modern military capabilities. That said, there is a danger of presenting tactical-level solutions as a silver-bullet answer to operational or strategic level challenges – a lesson U.S. Army leaders seem to have largely forgotten in our own counterinsurgency experiences of Iraq and Afghanistan.

LTC CHRISTOPHER J. HEATHERLY

**Stalingrad 1942-1943 (2), The Fight for the City** by Robert Forczyk; Oxford, United Kingdom: Osprey Publishing; 2021; 96 pages; \$24 paperback, \$9.99 Kindle.

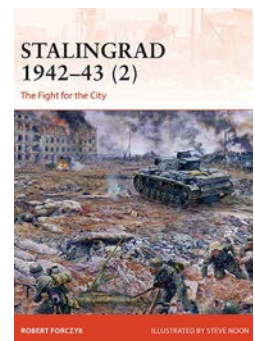
Dr. Robert Forczyk has written three volumes chronicling the Battle of Stalingrad for Osprey's long-running

Campaign Series. Volume 2, the subject of this review, covers the German attack within the city itself. Volume 1 covers the approach of the German army to the city, and Volume 3 deals with the massive and decisive Russian counterattack. A reader interested in the campaign will want to read all three volumes. But this work can stand alone and be read and understood by someone who has not read the others.

Most readers of **ARMOR** will be familiar with Osprey's Campaign Series, of which literally hundreds have been published. These always-concise works range from good to excellent and focus on standard military history. Full of maps, photographs and excellent drawings, they narrate the course of their battles describing the plans and maneuvers of both sides.

This work follows the standard Campaign Series format. It starts out with an analysis of the origins of the campaign, a brief biography of the major commanders of both sides and then an analysis of the contending armies. The book then narrates the battles and ends with a discussion what the battlefield looks like today.

Forczyk, one of today's leading military historians, has produced one of Osprey's best histories with this book. His descriptions of the commanders involved are excellent, and his analyses of the strengths and weaknesses of both sides' armies and air forces are interesting and informative. Most importantly, his battle narrative is clear and easy to follow. Readers often get bogged down in military histories trying to follow the movements of different commanders and their formations over unfamiliar terrain, but there is no problem with that here. Forczyk's clear prose is supported by a host of



excellent and detailed maps. One comes away with a clear understanding of what happened and why.

As always in Osprey books, there are cut-outs in the text that examine portions of the battle in great detail, using three-dimensional terrain depictions. There are also careful drawings with annotations that describe uniforms and equipment in detail.

If you are interested in and want to clearly understand the Battle of Stalingrad in a relatively short, but accurate, work that is packed with detail, this is for you.

**COL (RETIRED) WILLIAM R. BETSON**

***German General on the Eastern Front: the Letters and Diaries of Gotthard Heinrici, 1941-1942*** by Johannes Hurter; United Kingdom: Pen and Sword Books Ltd; 2021; 176 pages; \$34.95 hardcover, \$19.95 paperback.

The Russo-Ukrainian War, Europe's first major conflict since 1945, makes the private letters and diaries of a senior German commander, Generaloberst Gotthard Heinrici – who led combat operations over much of the same ground in World War II – relevant as a glimpse of what warfare in that region, especially in wintertime, entails.

Heinrici knew this region well, having fought over it as a young officer in World War I. Much of his 6½ years of combat experience were spent on the terrain contested during the opening stages of the present fighting in Ukraine. His letters to his wife, private in nature but intended to be preserved as a historical record of what Heinrici saw, offer an almost-daily recounting of what the Wehrmacht encountered once they passed the German frontier bound for the Eurasian heartland. These letters – excerpted to focus on military matters – combined with diary entries, offer a short, pungent recounting of the enemy and elements that ultimately broke the fighting power of the Wehrmacht.

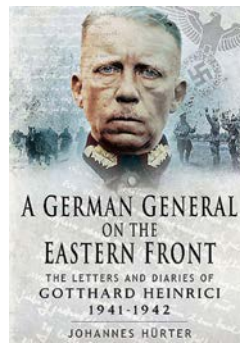
Dr. Johannes Hurter, a distinguished

German historian specializing in this period, discovered Heinrici's private papers in an archive and edited a German edition similar to the now-available English translation. His expertise in this chapter in German history makes his work especially relevant as a retelling of the opening year of the war on the Russian front.

Heinrici records the relentless, ruthless and often savage nature of Russian resistance and the German response to it that characterized combat in his sector. He recounts no acts of mercy or chivalry – such as those that occasionally appear in the memoirs of his colleague GEN Erhard Raus; Heinrici's war was, for his soldiers, one of no quarter asked or given. Nonetheless, Heinrici was not a Nazi and did not engage in wanton destruction.

The savagery of the combat and the scenes of extreme suffering and utter ruin that greeted him everywhere, in contrast to what he'd witnessed in World War I, led him to remark on several occasions that nothing like what he saw had happened in Europe since the Thirty Years' War. A particularly telling example of the intensity of the conflict is Heinrici's relating how a Russian partisan had, prior to execution, made his own noose, exclaiming, "I die for Communism!" as his sentence was carried out.

Partisan warfare was endemic and a regular refrain in Heinrici's writings. Both civilians and Russian soldiers caught behind the leading edge of the German advance would operate independently in the Wehrmacht's rear, frequently equipped with military gear abandoned in forests and swamps during the retreat. Airborne insertions behind the German front added to



partisan strength and made the fight effectively a two-front war before the close of the first year. Partisan efforts to interdict German resupply were a constant source of worry and frustration and contributed materially to the deterioration of Wehrmacht combat effectiveness.

Heinrici observed a number of sharp contrasts to what his soldiers had experienced in operations in the West: "seasons of mud" lasting for months in Fall and Spring; subfreezing temperatures for weeks on end, with lows reaching -30F; a lack of potable water; near-universal poverty, and yet every village had a new, well-equipped public school.

Poor planning, based on German underestimation of Russian morale and fighting ability, caused endless suffering for Heinrici's troops when the hoped-for quick victory failed to materialize. Like the fictional soldiers in ***Cross of Iron***, Heinrici's men lived for months on end in combat, outdoors, in all kinds of weather, without reliable resupply, hungry, cold, ill and bonded to each other in a misery that often produced heroic sacrifice, while the top brass in Berlin continued to live in comfort and believed in fairytales of eventual victory. Stories of men with frostbite, sores and lice remaining in the trenches or on the ground for hours during a sub-arctic winter to hold the line against repeated attacks by better-fed, -clothed and -equipped foes are a regular feature of Heinrici's letters.

The takeaway for the reader is that climate and geography will be critical factors for any would-be combatant planning operations in the realm of "General Winter." Doing so will help avoid the mistakes Heinrici's superiors made in learning the lessons of combat in Eurasia. Germany's failure to learn from history contributed to their "Napoleonic retreat" from a Russia they'd marched into expecting a quick and easy triumph.

**SFC (RETIRED) LLOYD A. CONWAY**



# 635TH ARMOR REGIMENT



Yellow and green are the colors used for Armor. The increased maneuverability, penetrating force and firepower of the modern tank are symbolized by the fusils charged with pheons or broadarrows alongside the destructive and awesome fury of a cyclone. The latter also refers to the sobriquet of Kansas as the "Cyclone State," home area of the organization. The distinctive unit insignia was approved Oct. 5, 1977.

# FUNDAMENTALS OF SECURITY

## ORIENT ON THE FORCE OR FACILITY TO BE SECURED

The security force focuses all its actions on protecting and providing early warning to the secured force or facility. It operates between the main body and known or suspected enemy units. The security force commander must know the main body's scheme of maneuver to keep the security force between the main body and the enemy. The value of terrain occupied by the security force hinges on the protection it provides to the main body commander. FM 3-90.2

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**“Orient on the protected force” is a fundamental of security.** (From the Maneuver Center of Excellence “Fundamentals of Reconnaissance” poster series, <https://www.benning.army.mil/armor/fundamentals/SF-2.html>. See the article “Forgotten Fundamentals in Reconnaissance and Security” by CPT Christopher E. Kiriscioglu and CPT Jordan L. Woodburn inside.