

ARMOR

Mounted Maneuver Journal

Winter 2019



"If the tanks succeed, victory follows."

- Generaloberst Heinz Guderian

ARMOR

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BG David Lesperance
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We Must Be Masters of Our Craft

Our Army's way of war is fighting as a combined-arms team composed of infantry, artillery, attack aviation, engineers and armor -- the combat arm of decision. "If the tanks succeed, victory follows." The quote on the cover of this issue from Heinz Guderian is just as true today as it was during the development of combined-arms theories during the interwar period between World War I and World War II.

Tank and scout platoons are essential in the execution of combined-arms maneuver and are a critical element of the combined-arms team conducting large-scale ground combat. That said, this point does not discount the role of other branches, all of which are absolutely required for combined-arms maneuver. I am emphasizing this point because we must be masters of our craft to enable the synergistic effect of combined-arms maneuver. This idea underscores the essence of what Armor Branch brings to the combined-arms

maneuver fight – decisive action though mobility, firepower and shock effect.

A return to fundamentals in our core competencies does not mean that we are turning away from understanding all the elements of combined-arms maneuver. Rather, it is an acknowledgement that as an Army we can only understand how to fight as a combined-arms team if we first understand how to fight our own formation at its most basic building blocks: the tank, Mobile Gun System and scout platoon.

Armor Branch core competency resides in our armored formations. To ensure our effectiveness in training the fundamentals, we've restructured the Advanced Leader's Course (tank commander and scout-squad leader) and Armor Officer Basic Leader's Course to focus on increasing proficiency on formation-specific combat platforms and

knowledge of troop-leading procedures, action and contact drills. This is an effort to get after formation-specific tactics, techniques and procedures and prime the pump on training readiness on the line.

I know we are nearing the tipping-point for collective expertise. We are seeing steady improvement in unit training management, combat-training-center rotation performance and operational deployments. As leaders gain experience in the force in executing operations in the decisive-action training environment, return to the institutional force and then subsequently back to the operating force, we see organizational experience and culture improving. We cannot let up, despite this initial success in improving our readiness. We must press on! Continue to get after your craft daily.

Forge the Thunderbolt!

CSM Kevin J. Muhlenbeck
Command Sergeant Major
U.S. Army Armor School



Proficiency and Stability

The success of our combat formations starts with training to proficiency and the stabilization of our platform (Abrams, Bradley and Mobile Gun System) crews and scout squads. This success can only be accomplished if leaders exercise talent management at echelon. With the competing requirements for manpower in both the generating and operational force, this is easier said than done, but it can be accomplished if all leaders take ownership of managing talent in their respective organizations.

At the platoon level and below, platoon sergeants must ensure that our staff sergeants and sergeants are assessing their Soldiers fairly and in accordance with Army regulations and approved policies when determining their potential – that they aren't just deciding "he or she is not ready" month after month. If a Soldier or noncommissioned officer (NCO) is not showing the potential for continued service or advancement, use the tools available (bar to continuation of service and counseling) to either motivate the Soldier to correct his or her deficiency or to prepare to start the next chapter in his or her life as a member of the civilian workforce. First sergeants must ensure that platoon sergeants have the required documentation on hand to justify saying "no" when reviewing the promotion rosters and, if needed, override the platoon sergeant, sending the Soldier to the promotion board if documentation does not exist.

At the company and battalion level, first sergeants and battalion command sergeants major must also leverage the tools available to stabilize master gunners (MGs), Bradley/Abrams gunners and commanders. These tools include:

- In Military Personnel (MILPER) Message 18-146, Human Resources Command (HRC) gave first sergeants and battalion command sergeants major a tool to stabilize MGs for 18 months after graduating a platform-specific MG course.
- In MILPER 18-237, HRC gave first sergeants and battalion command sergeants major a tool to stabilize gunners and vehicle commanders in the lead-up to, during and immediately following deployments, rotational training and combat-training centers.
- In MILPER 18-359, HRC gave commanders additional stabilization guidance and options.

Also, command sergeants major and first sergeants must ensure NCOs are being boarded and prepared to attend their scheduled professional military education courses. The current shortage of 19-series sergeants and staff sergeants is hindering the plan to update Department of the Army Pamphlet 600-25 to change tank commander/squad leader time from 18-24 months back to 24-36 months, which is critical to build platform and scout-squad leader proficiency in our combat formations.

With key leaders and crews stabilized, unit home-station training can progress farther and yield more lethal crews, squads and combat formations. However, stabilized crews and improved training are not the sole responsibility of the unit. The Armor School, with amazing support from the Maneuver Center of Excellence at Fort Benning, is changing our programs of instruction across the board so that Soldiers, NCOs and officers return to or arrive at their units ready to start training at crew or higher echelons – instead of needing to learn the basics. First sergeants, please review your GAINS to ensure your inbound Soldiers' additional-skills identifiers match your unit's needs. The Armor School and the Armor Branch at HRC maintain very open and productive lines of communication with leaders at all levels to ensure we are fully nested with the vision and needs of our field commanders at all levels.

It is the Armor School's mission to provide trained and ready Soldiers, NCOs and officers to the operational force and to develop Armor Branch-specific policies to aid in leader development and talent management. What I ask the armor NCOs out there to do is to capture your best practices and systems in writing and share those with the rest of the armored community through **ARMOR** magazine. Please send in articles discussing your best practices and products for executing talent management and readiness

management. These will be published in the **ARMOR** edition handed out at the 2019 Maneuver Warfighter Conference. Highlighting success builds pride and **PRIDE IS CONTAGIOUS!**

(Editor's note: The edition the command sergeant major is referring to is the Summer edition. Suspense for manuscripts is May 15.)

ACRONYM QUICK-SCAN

HRC – Human Resources Command
MG – master gunner
MILPER – military personnel
NCO – noncommissioned officer

Junior Officers Community

Armor and Cavalry junior officers looking for a professional space to connect with like-minded leaders about improving themselves and making their units more effective may wish to check out Junior Officer (JO) (<http://cjo.army.mil>).

JO is an on-line space dedicated to the professional development of Army junior officers and the organizations they lead. In JO, junior officers can find an array of leader development resources, including:

- **Blog:** Original articles on topics relevant to junior officers. New content from junior officers is welcome.
- **Document database:** A repository of professional documents written by other junior officers and shared to help others.
- **CCLPDs:** Mobile-friendly leader professional development modules with short videos, articles and discussion questions.
- **(Coming soon) On-line leader challenge:** Put yourself in the shoes of a junior officer facing a tough dilemma with no clear right answer.
- **On-line forums:** A members-only space where junior officers can share ideas and insights.

For organizations looking to professionally develop their junior officers in person, the Center for Junior Officers (U.S. Military Academy, West Point, NY) will provide a custom training package. Options include:

- **Leader challenge:** Video-based leader development program with discussion.
- **Great-teams exercise:** Share and learn from others' experience on a great team.
- **Dogtag exercise:** Build a visual plot of professional experience to reveal new aspects and talents of your team members.
- **Third-generation leadership talk:** A concept that focuses on impacting leaders who have yet to come into service.
- **Company-level leader Interviews:** Share your experience with a leadership challenge.
- **Leader/visual metaphor exercise:** Identify current values reflected in the organization and discuss future development.
- **Leadership psychology talk:** Presentation on a wide range of topics related to the psychology of leadership.

The Center for Junior Officers is an officially sponsored Army unit that supports junior officers across the force. To find out more, email info@jo.army.mil.

On the Employment of Armor

by MAJ Amos C. Fox

The May-June 1998 issue of *ARMOR* ran an article entitled “The Principles of the Employment of Armor.” The article initially supported institutional education post-World War II as it was included in Special Text No. 28 at Fort Knox, KY. The article provides a salient framework by which to understand armor’s purpose and utility on the battlefield.¹ However, very few articles since “The Principles of the Employment of Armor” have captured the essence of armor, especially given the evolution in war between its publication and today.

Real-world considerations necessitate a fresh look at the employment of armor. To be sure, the re-emergence of conventional land warfare in the Caucasus region of Eurasia and Eastern Europe in the preceding decade has raised the need for re-examining the

principles and ethos on which armor is employed.

Tanks played a central role in the Russo-Georgian War of 2008, while mechanized warfare dominated the initial battles of the Russo-Ukrainian War (2014-present). Stepping away from Eurasia, armor continues to factor into the long-burning conflagrations in the Middle East. Most notable, the Iraqi Army’s 9th Armored Division was a foremost figure in the defeat of the Islamic State of Iraq and Syria (ISIS) during Operation Inherent Resolve. The 9th Iraqi Armored Division, along with the Iraqi Security Forces’ Counter-Terrorist Service, did yeoman’s work during the battle for Ramadi (2014) and the siege of Mosul (2016-2017). Furthermore, and much to the chagrin of the U.S. Army and the U.S.-led coalition to defeat ISIS, Iraq’s 9th Armored Division spearheaded the short-lived campaign to quell the Iraqi Kurd independence

movement in October 2017.²

To a lesser degree, armor has played a continuous role in Syria. Russian proxies and private military companies continue to employ armor to assist Syrian president Bashar al-Assad in his incremental reappropriation of territory from rebels and ISIS in Syria. This use of armor, veiled for a good portion of the Syrian civil war and counter-ISIS fight, came to the forefront in February 2018 when U.S. forces struck the Russian proxy, the Wagner Group, killing hundreds of Russians in the process. The strike, a defensive measure taken by U.S. forces to protect a special-operations outpost in the Syrian desert, destroyed multiple Russian tanks, laying bare the fact that armor is not isolated to the undulating terrain of Eastern Europe.³

As a result of life being breathed back into armored warfare, the U.S. Army

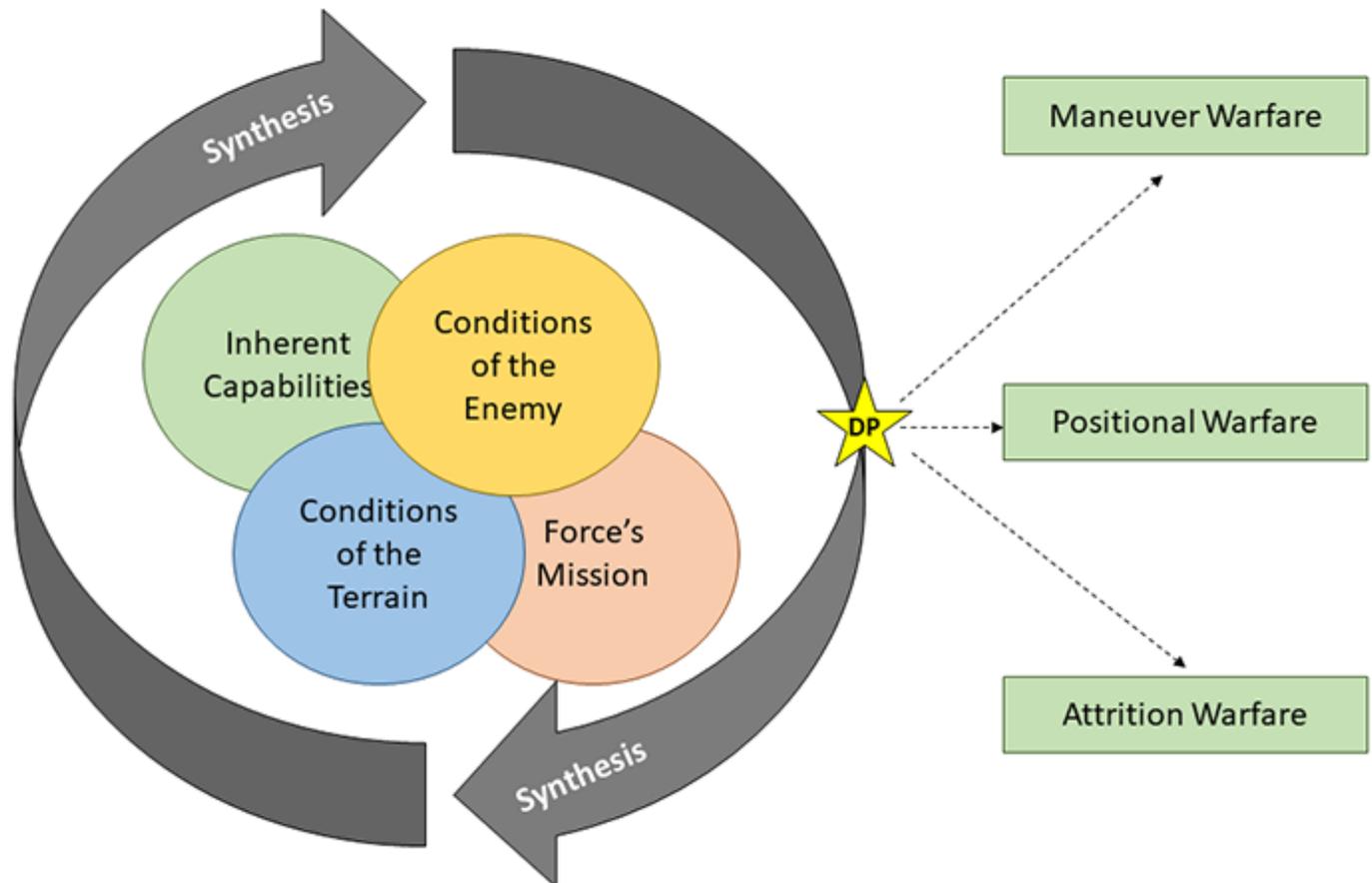


Figure 1. Selection process for the forms of warfare. (Graphic by MAJ Amos C. Fox)

recently decided to increase the number of armored brigade combat teams (ABCTs) by one, raising the number of ABCTs in the Active Component from 11 to 12.⁴ Further, this transition will increase the number of combined-arms battalions, the contemporary heart of the U.S. Army's armored force, by three and will result in one cavalry squadron shifting from lightly armored Stryker reconnaissance-and-security (R&S) formations to armored-cavalry squadrons. While this transition is not expected to be complete until the end of 2020, the need to educate and train armored leaders is critical to this effort.

This article, similar to "The Principles of the Employment of Armor," also provides a set of principles that should govern the employment of armor on the modern battlefield. However, this article is not a facsimile of "Principles." Instead, the values listed here are a modern interpretation of the needs and uses for armor on the battlefield. Moreover, and similar to the original "Principles of the Employment of Armor," this work reminds the reader that the principles listed herein are a mental model, a tool for thinking about employing armor; it is not a "one-size fits all" dictum. To that end, it must be noted that skill, judgment and the situation's conditions play an equally important role in the employment of armor, as does any doctrine, set of principles or theories.

With the scene now set, it is time to review a modern set of thoughts on the employment of armor.

Principle 1

Armored warfare is mobile warfare,

not maneuver warfare. Armored warfare, like any other martial variant, is conditional. The conditions, dominated by the physical environment and one's adversary, do more to dictate the manner in which a force fights than does one's doctrine or institutional preference for warfighting. The resultant effect is that armor must be adept at **thinking** and **fighting** mobile wars of maneuver, positional wars that manipulate the physical environment and an opponent's cognitive bias, as well as bludgeoning wars of attrition.⁵ In all instances, mobility is the substance that lubricates the engine of battle. (Figure 1).

The U.S. Army maintains an arsenal of guns, cannons and anti-tank weapons that outrange the tank. Also, a throng of vehicles exist within the Army's strategic motorpool that provide protection. However, mobility – tactical and operational – is armor's distinctive feature. This feature is brought about by the nexus of firepower, protection and crew mobility. Armor leaders must never forget that the ability to move rapidly – whether from intervisibility line to intervisibility line, or from one operational objective to the next – is where armor's true battlefield value lies. As a result, armor leaders must think in terms of mapsheets and not grid squares. Mobility isn't reserved for offensive action but also provides a distinct advantage in the defense as well. Mobility in the defense provides armor leaders flexibility and options while providing the opportunity to counterpunch. Further, armor leaders must understand that logistics and maintenance are the lifeblood of armor's tactical and operational mobility,

and therefore they mustn't short-shrift functions. Failure to develop a logistics and maintenance mindset will undercut the ability of armor to put its distinctive feature – tactical and operational mobility – into use in combat.

Further, mobile warfare or armored warfare is not maneuver warfare. Moreover, the trope, "maneuver is maneuver," which is often overheard when one is brushing aside the polarity among armor, cavalry or infantry in battle, illustrates a significant depravity in understanding land warfare. Armor embodies mobile warfare, which is significantly different from cavalry operations or infantry-centric land warfare. Armor's protection, mobility and firepower allow it to move faster, farther and with more gusto and panache than its lightly armed, foot-powered counterparts in the infantry. Armor's purpose – employment of mobility to penetrate, exploit and pursue – make it distinctly ill-suited for purpose of the cavalry and vice versa. Armor leaders must appreciate the nuance that resides among the combat arms and be able to factor that into their understanding of how each arm thinks and fights.

Principle 2

Armor dictates the tempo of engagements and battles. By virtue of its tactical and operational mobility, armor dictates tactical tempo. Tempo and speed go hand in hand and complement one another; however, it is important to note that tempo and speed are not the same thing. Tempo is the frequency and amount of activity in a battle or campaign.⁶ Tempo is measured in degrees between high

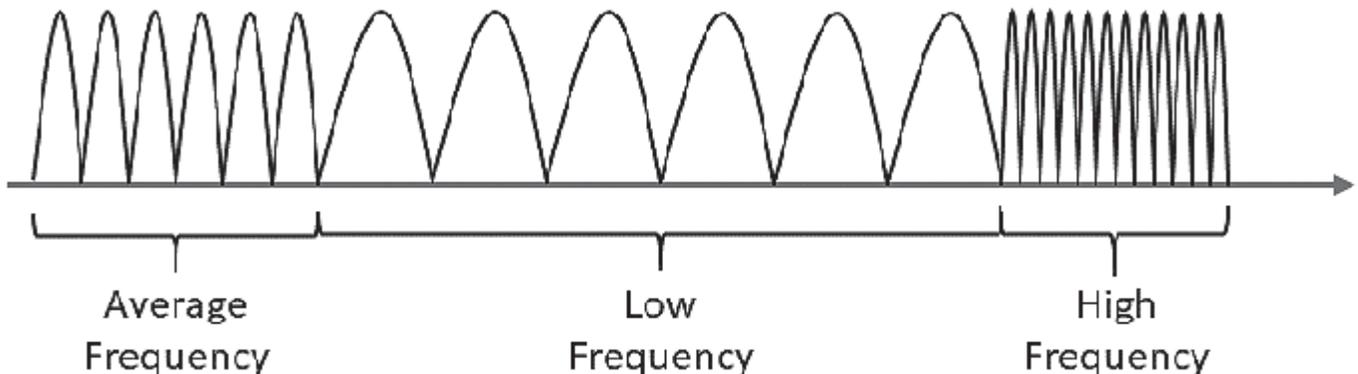


Figure 2. Tempo in battles and campaigns is the frequency and amount of activity in battles and campaigns. (Graphic by MAJ Amos C. Fox)

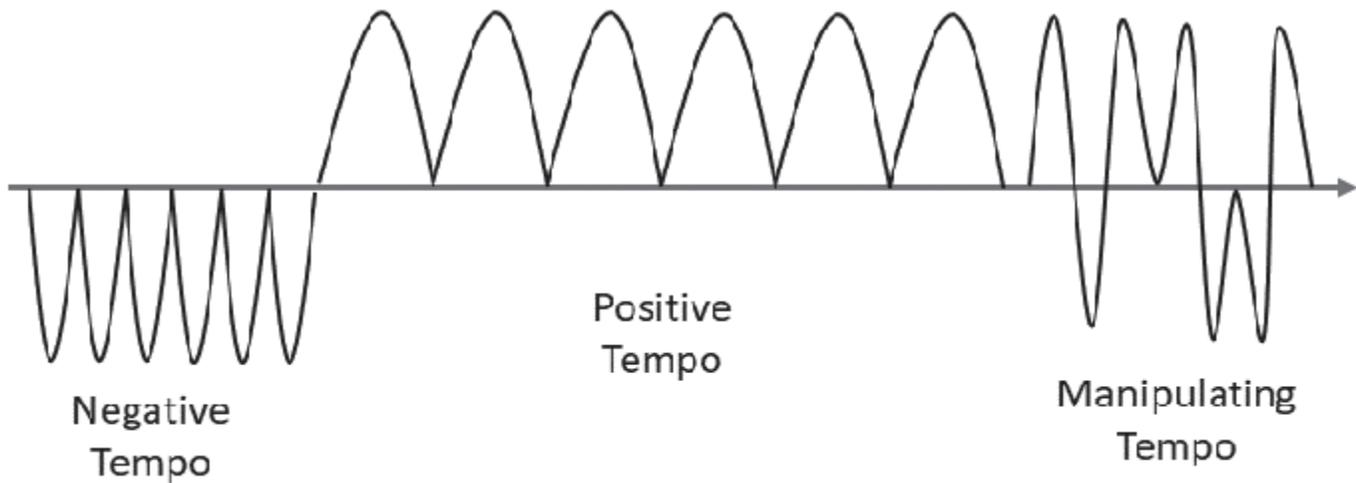


Figure 3. Positive and negative tempo. (Graphic by MAJ Amos C. Fox)

frequency and low frequency (Figure 2). The ability to manipulate the frequency and amount of activity in battle and campaigns is generally a result of sufficient or excess resources and not moving faster than one's opponent.

Furthermore, manipulating tempo in battle is intentional and is commonly the result of adding to existing offensive action or deliberately using defensive, positional, or attrition tactics to slow down one's opponent. At the same time, tempo can be positive or negative. Positive tempo is increasing the frequency of activity, while negative tempo is decreasing the frequency of activity (Figure 3).

Speed, on the other hand, is scalar and binary. Speed is the resultant effect of the amount of time it takes to cover a specific distance. Speed can be useful in manipulating tempo, but speed is not synonymous with tempo. Speed is usually measured in terms such as fast and slow.

The purpose of commanding tempo and manipulating the speed of battle is to keep an opponent on its back foot and reactive. The goal of keeping an opponent off balance is to economize effort and the expenditure of resources in pursuit of one's respective objective.

To command tempo in battle and

campaigns, armor leaders must engage in timely and thorough planning, engaged and decisive leadership, and the positive use of reconnaissance. MG Ernie Harmon wrote an excellent report following World War II's North African Campaign that highlights this point. Harmon states that "[s]peed can be made by rapid decisions, by going from one reconnoitered place to another, by thinking ahead and being prepared with the solution for emergency when it arises, and, above all, by forethought as to how to handle the contingencies of battle when they come up. ... The mark of a well-trained and superior outfit is the deliberate and assured way it goes into battle, checking every

$$\text{Speed} = \frac{\text{Distance}}{\text{Time}}$$



Figure 4. Speed in warfare. (Graphic by MAJ Amos C. Fox)

detail, seeing that everything is set, making provisions for what will probably happen in the immediate future.”⁷

While the conditions have changed, armor’s ability change the tempo of battle – either increasing or decreasing the frequency and speed of action – remains as germane today as it did in the deserts of North African in 1942. In either case, the armor leader’s role in commanding the rhythm of battle is indispensable.

Principle 3

Armor leaders are decisive and involved. The very character of mobile warfare – the ability to devour prodigious swaths of land while bringing combined arms to bear in battle – mandates involved and decisive leadership. To be sure, mobile warfare’s celerity and harmonization of arms requires engaged leadership from the

outset of the planning process. Unwelcome and unneeded are leaders that provide poor guidance, only show for briefs, act as though the plan is that of the staff and not their own, and refuse to make substantive decisions. Leader involvement is pivotal in the planning and operations process because it creates the environment in which formations can move beyond reactive action and instead dictate the sequence and tempo of battle and operations.

To do so, armor leaders must sense the *pace* and *timing* of battle and the ability to feel the *influence of terrain* on tactical action. Involved and decisive leaders then brandish these intangible conditions to empower their formation, and those within their sphere of influence, to “see the other side of the hill,” thus moving into a proactive posture. Many theorists, from Carl von Clausewitz to B.H. Liddell Hart, refer to

these qualities as *fingerspitzengefühl* or *coup d’œil*, and argue that they are the result of genius. While innate mental skill likely plays a role in *fingerspitzengefühl* and *coup d’œil*, what is more important is a leader who cares enough to be involved. Anemic minds and uninvolved or lazy leadership are anathema to the employment of armor. Individuals falling into those categories should be culled from the armored force at the first opportunity, as they are not the type of leader armor needs to thrive on the battlefield.

Principle 4

Armor penetrates, exploits and pursues. Armor’s purpose is not to line up and smash into other armored formations. To be sure, this approach is antithetical to combined-arms operations and violates the tenets of combined-arms warfighting theory.⁸ American

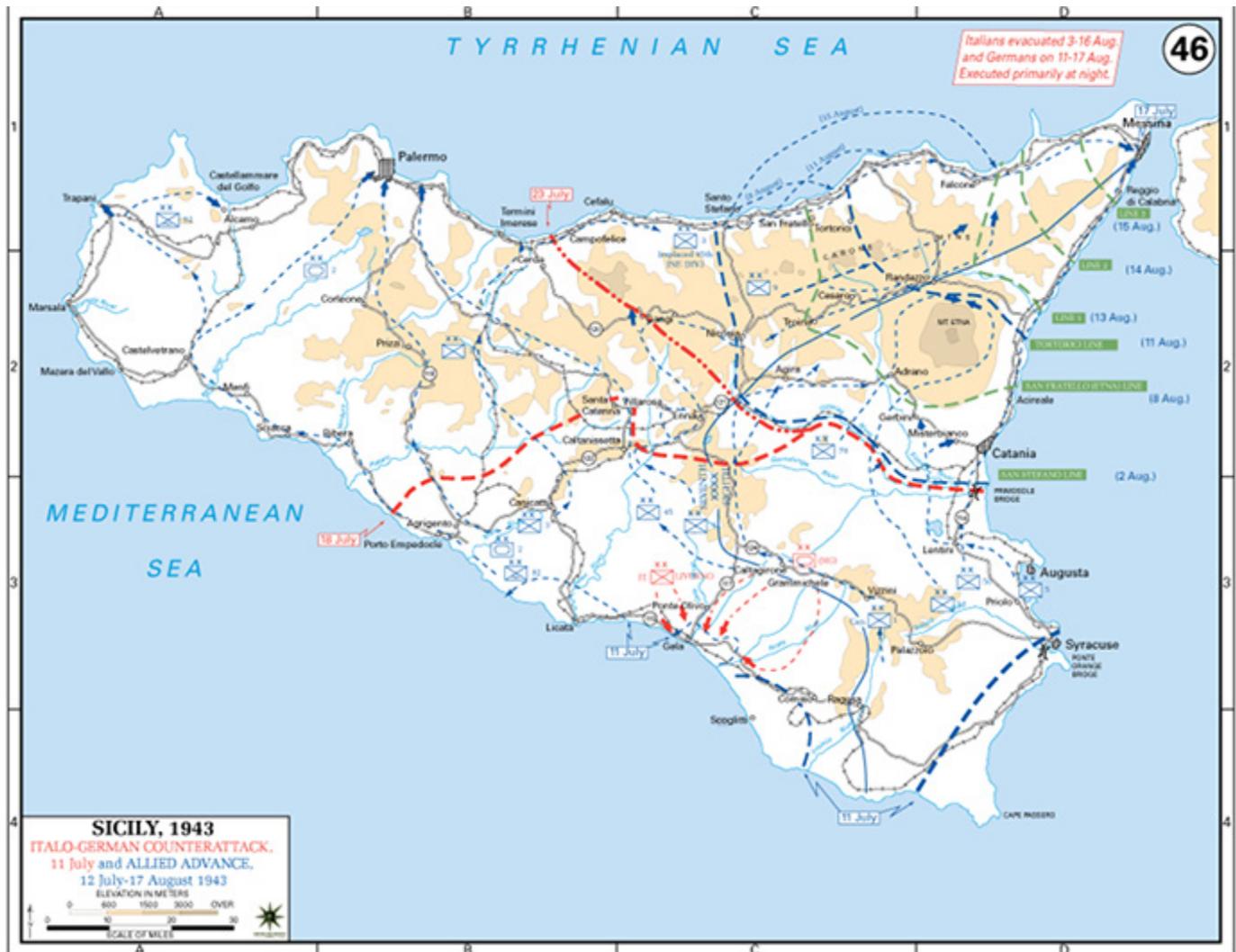


Figure 5. Battle map of the Sicilian Campaign. (Map by U.S. Military Academy Department of History)

tanker LTG George S. Patton Jr. argued that “[t]he primary mission of armored units is the attacking of infantry and artillery. The enemy’s rear is the happy hunting ground for armor. Use every means to get in there.”⁹ Patton’s 7th Army during the Sicilian Campaign provides an instructive example.

The strike to Palermo, like Patton’s other operations on the island, was underwritten by his infantry grabbing hold of the retreating enemy, punching a hole through the enemy’s defenses through the combination of cavalry, artillery and infantry, and then feeding his armor through the resultant gaps. The armor, then carrying the old horse cavalry’s mantle, exploited the gaps by penetrating and pursuing the enemy. On Patton at Palermo, historian Matthew Morton writes, “Marching [100] miles in four days, the drive to Palermo

validated the ‘indispensable role’ of the armored division. ... [Patton] credited his success to a willingness to hold back his tank units until the infantry found the holes in the enemy line through which to send the tanks ‘in large numbers and fast.’”¹⁰ (See Figure 5.) Armor formations must be conditioned – mentally and physically – to penetrate, exploit and pursue. No other formation in the U.S. Army possesses the innate capability to do so, and therefore leaders must develop that ethos within their formations.

Principle 5

Rugged ground cavalry drives armored operations. Ground cavalry activities, oriented on R&S operations, are a proven means for enabling armored warfare. On the other hand, aerial reconnaissance as the primary means of deep strike and R&S operations in

support of mobile land warfare has proven unreliable at best. The most recent and striking example can be found in the shortcomings of 11th Attack Aviation Regiment during the 2003 invasion of Iraq, which saw the regiment’s deep-strike doctrine and aerial reconnaissance foiled by very low-tech Iraqi methods around Baghdad’s southern belt.¹¹ Furthermore, unmanned aerial vehicles and the new AH-64 Apache helicopter-based air-cavalry formations have yet to be proven in mobile land warfare against a peer-competitor.

Until aerial reconnaissance and technocratic surveillance means prove themselves in major combat operations against peer competitors, rugged ground cavalry formations – proven time and again throughout the history of warfare – remain armor’s primary enabler in battle. As a result, tactical

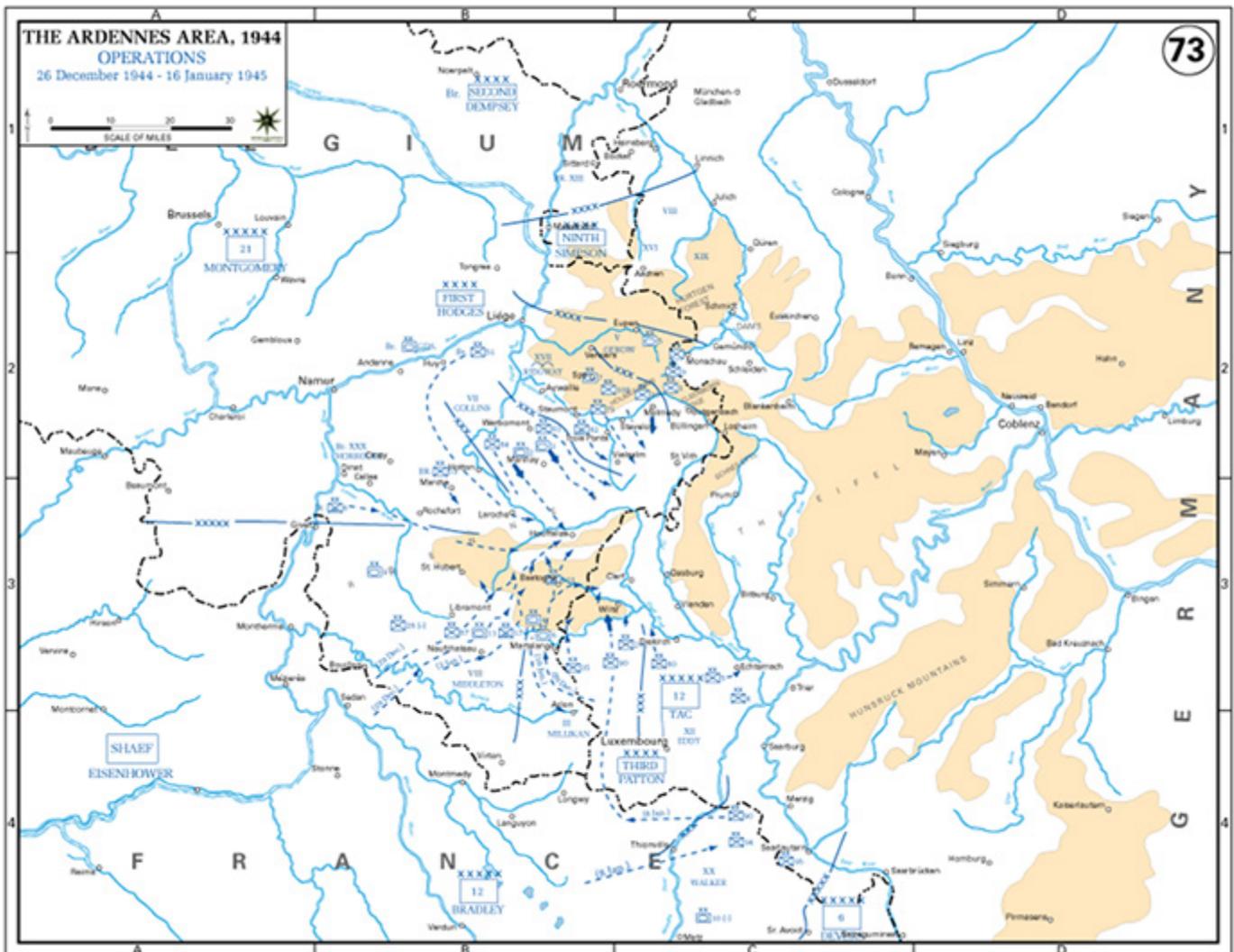


Figure 6. The Ardennes area, 1944. (Map by U.S. Military Academy Department of History)

armor leaders from the division down to the tank crew must master the use of its cavalry and scout formations.

Principle 6

Armor runs the marathon. “Armor runs the marathon” is a metaphor. While armored units are not concerned with physically running 26.2 miles, they must condition themselves for the marathon of battle. Perhaps the apogee of armor running the marathon is found in Patton’s relief of 101st Airborne Division at Bastogne in December 1944. As is well noted, Patton swung his 3rd Army 90 degrees to the north and slammed into the Germans besieging 101st Airborne Division at Bastogne, Belgium. While in the attack, 3rd Army transitioned north and fought for three straight days, closing the distance between it and the town of Bastogne before making contact with the

Germans Dec. 26, 1944. Upon making contact, 4th Armored Division, the spearhead of Patton’s 3rd Army, penetrated the German perimeter at Bastogne, linked up with 101st Airborne Division and fought on for several more days before being able to take a knee and catch its breath.¹² (Figure 6.)

The U.S. 3rd Infantry Division’s three-week odyssey to capture Baghdad in the 2003 invasion of Iraq is a more recent example of armor’s ability to run the marathon. In light of this often-overlooked requirement, armor leaders must focus on developing formations and Soldiers who are mentally and emotionally able to persist in the face of fatigue, hunger and depravity. While infantrymen tend to focus more on the physical element of fitness, armor in battle must be more mentally and emotionally fit to cope with and

overcome the rigors of tempo and long ground movement. (Figure 7.)

Principle 7

Armored units and leaders know how to fight. Data, Digital Training Management System training statistics and “green gum balls” on quarterly training-briefing slides do not measure or articulate an armored unit’s ability to fight. These metrics provide comfort to commanders and leaders in various meetings, yet none of this information gets at the heart of whether or not an armored unit can fight.

Two conditions determine whether or not an armored unit can fight: 1) an armored unit knows how to fight (i.e., possesses the requisite technical and tactical knowledge) and 2) an armored unit is capable of fighting (i.e., possesses the requisite skill or the physical

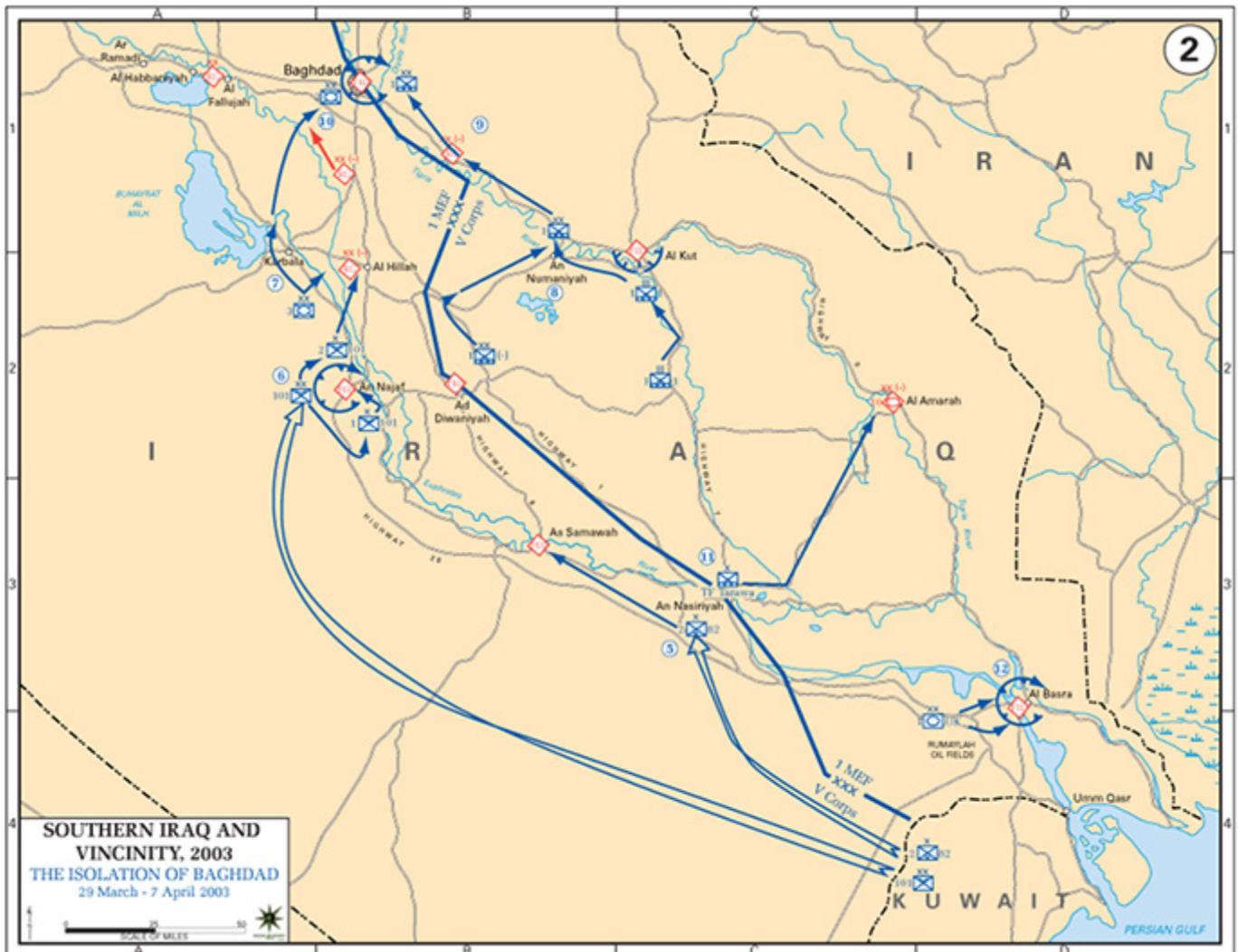


Figure 7. Southern Iraq and vicinity, 2003. (Map by U.S. Military Academy Department of History)

application of the requisite technical and tactical knowledge). Both these conditions are intangible and not easily measured in quantifiable value, but instead are measured through the art of command. Commanders and staffs assess the ability of their unit's capability to effectively engage in battle through first-hand observation while putting their unit through its paces in tough, realistic training.

Further, preparing for battle means stepping beyond the confines of existing doctrine and educating one's formation on the character of war.

Contemporary warfare is dominated by three types of warfare: proxy warfare, positional warfare and attrition warfare. (**Editor's note:** Please see Fox's article, "A Solution Looking for a Problem: Illuminating Misconceptions in Maneuver-Warfare Doctrine," in *ARMOR*'s Fall 2017 edition, <http://www.benning.army.mil/Armor/eARMOR/content/issues/2017/Fall/4Fox17.pdf>.) None of these forms of warfare are addressed in U.S. Army doctrine, which is precariously focused on maneuver warfare. Nevertheless, proxy, positional and attritional environments, or a combination thereof, is where armor will find itself committed for the foreseeable future. Armor leaders must push themselves and their formations to look beyond the cozy confines of thinking and training for how the U.S. Army *wants* to fight and instead think about and train for how it *will* fight. Moreover, armor leaders should liberate themselves from metric-focused parameters for assessing warfighting capability and instead get into the field training and assess their formations.

Principle 8

Armor fights from the hatch. Armored formations are built for unencumbered activity. They are not meant to be tethered, whether digitally or physically, to static command posts (CPs). The notion that armored divisions, in a convention fight against a peer competitor, will have the time to establish an elaborate array of tentage for CPs is fallacious. Further, this point becomes even more striking as one moves down the tactical ladder, from the division to the battalion- and company-level. On a mobile battlefield against peer

competitors, an array of tents does little but invite attack, create requirements that slow down armored operations and disrupt armored formations from fighting in accordance with their *raison d'être*. The battle and campaign are best served when armored formations are unleashed and allowed to wreak havoc against their adversary.

The ongoing Russo-Ukrainian war serves as an instructive example of why armored formations should not be tethered to digitally enhanced, static CPs. In the early morning hours of July 11, 2014, the Ukrainian 24th Mechanized Brigade, 72nd Mechanized Brigade and 79th Armored Brigade were laagered in an assembly area preparing to launch an offensive in the Luhansk oblast.¹³ The purpose of the upcoming operation was to retake lost territory and to defeat Russian and separatist forces in Luhansk. At about 4:30 a.m., the Ukrainians lost the ability to communicate due to Russian cyber and electronic attack. The formations, prostrate and unable to communicate, were then ruthlessly attacked by Russian multiple-launch rockets and run-of-the-mill tube artillery.¹⁴ The attack crippled the assembled Ukrainian brigades.

Reports indicate that the thrust left 30 Ukrainian soldiers dead and another several hundred injured, and destroyed well over two battalions' worth of vehicles and equipment.¹⁵ The Russian strike at Zelenopillya is a cautionary tale about the perils of keeping armor static on the battlefield and being overly reliant on a digital infrastructure. U.S. Army armor, from the platoon to the division, must break from the digital leash and fight from the hatch. To do otherwise risks quick detection and rapid destruction on the modern battlefield.

Principle 9

Armor is a weapon of opportunity. Building on the idea of armor being employed in accordance with its *raison d'être*, armor's mobility makes it uniquely suited to capitalize on windows of tactical and operational opportunity. Writing on the U.S. Army's armored divisions leading into World War II, MG Bruce Magruder wrote that "[t]he armored division is a weapon of

opportunity. Through its speed, firepower and flexibility of maneuver, it is capable of surprising the enemy and attacking him before he is capable of defense."¹⁶

Although Magruder was writing about U.S. armored divisions, the principle transcends the defined echelon and instead applies to the function of armor. Armor exists to exploit temporal or situational windows of opportunity. Armor leaders and their formations must be in tune with the flow of battle and be mentally prepared for rapid repurposing to take advantage of the fleeting prospects of providence.

Conclusion

The previously published "The Principles of the Employment of Armor" set the course for thinking about armor operations upon its initial publication. However, time, an evolving threat environment and technological changes necessitate a fresh look at those principles. Modern armed conflict continues to illustrate that armored warfare isn't going anywhere; it is just adapting to its political, physical and threat environment.

Armor's defining characteristic, tactical and operational mobility, remains just as relevant today as it was when the initial principles were published. Mobility remains armor's baseline, and everything else armor does serves to retain that mobility. That idea – mobility is what sets armor apart from the other combat arms – is what underpins this work and helped generate the updated principles for the employment of armor, which are restated following:

- Principle 1: Armored warfare is mobile warfare, not maneuver warfare;
- Principle 2: Armor dictates the tempo of engagements and battles;
- Principle 3: Armor leaders are decisive and involved;
- Principle 4: Armor penetrates, exploits and pursues;
- Principle 5: Rugged ground cavalry drives armored operations;
- Principle 6: Armor runs the marathon;
- Principle 7: Armored units and leaders know how to fight;
- Principle 8: Armor fights from the

hatch; and

- Principle 9: Armor is a weapon of opportunity.

These principles are not meant to serve as a checklist to drive armor operations. Instead, they are proffered as a mental framework for leaders to think about when framing the employment of armored formations. Seminal armored-warfare theorist Liddell Hart reminds the student of war that “[t]he influence of thought on thought is the most influential factor in history. Yet, being intangible, it is less perceptible than the effects of action and has received far less attention from writers of history.”¹⁷ The principles listed herein are intended to help shape the thought on thought as it relates to the modern employment of armor.

Armor, the combat arm of decision, still holds a special place on the battlefield. Because of this, armor leaders must have a clear understanding of why armor exists and how it should be employed. The principles listed in this article, building on those tendered following World War II, are a place to begin that discussion.

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Notes

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¹⁰ Matthew D. Morton, *Men on Iron Ponies*, DeKalb, IL: Northern Illinois University Press, 2009.

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¹³ Amos Fox, *Hybrid Warfare: The 21st Century Russian Way of War*, monograph, School of Advanced Military Studies, Fort Leavenworth, KS, 2017, <http://www.dtic.mil/dtic/tr/fulltext/u2/1038987.pdf>.

¹⁴ Ibid.

¹⁵ Ibid.

¹⁶ Bruce Magruder, *The Armored Division*, Officers’ School, 1st Armored Division Conference No.3, Fort Knox, KY, 1941.

¹⁷ B.H. Liddell Hart, *The Ghost of Napoleon*, New Haven, CT: Yale University Press, 1934.

ACRONYM QUICK-SCAN

ABCT – armored brigade combat team
ACR – armored-cavalry regiment
CP – command post
ISIS – Islamic State of Iraq and Syria
R&S – reconnaissance and security

Principles of the employment of armor:

- Principle 1: Armored warfare is mobile warfare, not maneuver warfare;
- Principle 2: Armor dictates the tempo of engagements and battles;

- Principle 3: Armor leaders are decisive and involved;
- Principle 4: Armor penetrates, exploits and pursues;
- Principle 5: Rugged ground cavalry drives armored operations;
- Principle 6: Armor runs the

marathon;

- Principle 7: Armored units and leaders know how to fight;
- Principle 8: Armor fights from the hatch; and
- Principle 9: Armor is a weapon of opportunity.

Force Modernization of the Armored Brigade Combat Team



Figure 1. An Abrams tank with 2nd Battalion, 198th Armored Regiment, fires a 120mm projectile during battalion hasty-defense live-fire training at the National Training Center, Fort Irwin, CA. The unit is part of 155th Armored Brigade Combat Team, Mississippi Army National Guard. (Photo by SSG Shane Hamann, 102nd Public Affairs Detachment)

by COL Dawson A. Plummer, MAJ K. Derrick Rice and CPT Horace H. Peek V

The force-modernization efforts directed by Army Chief of Staff GEN Mark A. Milley are gaining momentum throughout our formations as the Army transitions from the old method of waiting for technology to evolve to a perceived final endstate to one focused on providing interim solutions and upgrades.

In the past, when technology reached its perceived endstate, the Army executed 100-percent fielding of selected future platforms and equipment and then integrated all armored brigade combat teams (ABCTs) at the same time. Now the focus is to provide interim solutions and upgrades to a select few ABCTs and to Army Prepositioned Stock (APS), and then conduct phased fielding of advanced upgrades to the initial platforms in the remaining brigade combat teams (BCT). This is an important step in Army modernization

due to lessons-learned from missed opportunities when integrating advanced technologies in the past.

The modernization effort begins with the flagship platform of the ABCT, the Abrams M1A2 Systems Enhancement Package Version 3 (M1A2SEpv3) tank, which is an upgrade of the Army's previous main battle tank, the M1A2SEpv2, that entered service in 2007. The new M1A2SEpv3 tank incorporates improved network capabilities, power generation and increased sustainability with the addition of the Under Armor Auxiliary Power Unit. In the near term, the Army will develop and field the Abrams variant to APS in Europe. Then, starting in Fiscal Year (FY) 2020, the Army will field the variant tank to five ABCTs at the rate of one brigade set per year. Units can expect to see the M1A2SEpv3 tanks by the end of 2020.

Abrams upgrade

The Abrams will receive an upgrade to its world-class main gun in the form of the advanced multi-purpose (AMP) smart round. The AMP round combines the effects of four different legacy main-gun rounds into a single cartridge with the added effect of defeating enemy anti-tank guided missile (ATGM) teams at extended ranges. This increased capability provides crews with similar responses to enemy threats as previous technology, but it greatly reduces the logistical friction of accounting for and carrying multiple cartridge types. Beginning in 2020, ABCTs will start to receive the AMP round to dramatically increase their tank crew's effectiveness and survivability, resulting in overmatch with peer and near-peer adversaries.

Another combat-tested ground platform, the Bradley Infantry Fighting Vehicle (IFV), is being upgraded to



Figure 2. The M1 Abrams is America's sole main battle tank and is considered the best tank in the world. It sports a 120mm main gun and is powered by a 1,500-horsepower turbine engine that makes it highly maneuverable. The M1 has been consistently tested at U.S. Army Yuma Proving Ground, AZ, since its first development in the late 1970s because it is being constantly improved. There are some 8,000 Abrams tanks in the inventory. (Photo by Mark Schauer)

maintain overmatch with peer and near-peer adversaries. The M2A4 Bradley increases electrical capacity in preparation for hosting future technologies. The loss of capability that resulted from adding force-protection packages has been rectified with engine and powertrain upgrades to retain mobility. The Army will equip an APS set in Europe and five ABCTs with the M2A4 Bradley IFV, matching the fielding plan for the Abrams SEPv3. Each ABCT will receive 138 M2A4 Bradley IFVs through a mix of the four mission roles: infantry, cavalry, engineer and fire support. Fielding will be limited to five BCTs, pending the first unit to be equipped with the Next-Generation Combat Vehicle's Optionally Manned Fighting Vehicle.

Army senior leaders started initiatives Sept. 29, 2016, to pursue vehicle-protection system (VPS) materiel solutions and announced efforts to purchase a

BCT's worth of systems for units in the European theater by 2020. This decision marks a major step in achieving a capability with significant scientific and technological advances compared to our adversaries. A little more than a year later, Army leaders determined they needed to field an interim VPS solution for the Abrams, Stryker and Bradley. They decided to rapidly assess off-the-shelf VPS systems to fulfill an urgent operational need.

The Army is assessing multiple VPS systems for its platforms. The Trophy VPS is designed to supplement the armor of both light and heavy armored fighting vehicles. The system intercepts and destroys incoming missiles and rockets with a shotgun-like blast. The system can simultaneously engage several threats, arriving from different directions; is effective on stationary or moving platforms; and is effective against short- and long-range threats such as

rocket-propelled grenades (RPGs) and ATGMs. It has three elements providing threat, detection, tracking, launching and intercept functions. Trophy was designed to be effective in open or closed terrain, including urban areas, and can be operated under all weather conditions. Trophy APS is scheduled to be installed on Abrams tanks across four different ABCTs by the end of FY2020.

VPS not limited to tanks

VPS will not be limited to the Abrams fleet. The Product Manager-Bradley Fighting Vehicles initiated efforts to characterize a hard-kill VPS. Iron Fist-Light Decoupled (IF-LD) uses optical sensors, radar, computer processing, fire-control technology and interceptors to identify, track and intercept incoming enemy RPGs, ATGMs and recoilless-rifle rounds. IF-LD is composed of two launchers. Each contains two countermeasures and infrared optics



Figure 3. A Soldier assigned to 1st Squadron, 1st Cavalry Regiment, 2nd Armored Brigade Combat Team, 1st Armored Division, Fort Bliss, TX, looks out from a Bradley Fighting Vehicle during gunnery training at Doña Ana Range, NM, Oct. 12, 2018. (Photo by Winifred Brown)

for threat firing identification, and radar for accuracy in tracking and interception. Milley approved the fielding of one brigade set to support the European Reassurance Initiative.

A foundation of the new modernization initiative is newer, more lethal, mobile and protected platforms to support multi-domain operations. The armored multi-purpose vehicle (AMPV) is the Army's replacement for the legacy M113 family of vehicles (FoV) that includes mission command, medical treatment and transportation, mortar carrier and general-purpose troop-transport functions for the ABCT. The AMPV is more mobile, survivable and lethal, and it incorporates a more technically advanced infrastructure to improve command and control for the BCT and its subordinate units than its predecessor. It can keep pace with the other combat vehicles in current ABCTs.

Moreover, AMPV provides mobility and



Figure 4. Soldiers from 4th Squadron, 9th Cavalry Regiment, 2nd Armored Brigade Combat Team, 1st Cavalry Division, Fort Hood, TX, are escorted by observer-controllers from U.S. Army Operational Test Command after completing field testing the AMPV Sept. 24, 2018. (Photo by MAJ Carson Petry, 1st Cavalry Division Public Affairs)

sustainability capabilities similar to the Bradley, supporting combat overmatch. The AMPV will serve as the base and host platform within the ABCT to incorporate new technologies and advanced Army network capabilities. AMPV platforms are currently in developmental testing. Operational testing for AMPVs was done during Summer 2018. The AMPV will replace ABCTs' M113s on a one-for-one basis, with the first unit equipped scheduled for 2022 at a rate of one brigade per year up to 2036. Though the AMPV is similar in many ways to the Bradley FoV, its improvements in protection, power and ability to incorporate new technologies make it the appropriate modern platform for the ABCT and future combat operations.

The Joint Light Tactical Vehicle (JLTV) family of vehicles is a joint Army and Marine Corps program that uses a common vehicle platform capable of performing a variety of mission roles while providing protected, sustained and networked mobility for personnel

and payloads across the full spectrum of military operations. JLTV consists of two variants: a two-seat utility version and a four-seat version, with three mission packages, including general-purpose, heavy-weapons carrier and close-combat weapons carrier equipped with a tube-launched, optically tracked, wire-guided weapon system. JLTV will be fully amphibious and used for expeditionary operations. JLTV will replace the legacy humvee fleet, providing warfighters with a substantially more protected, mobile and reliable light tactical vehicle.

The fielding of JLTV to an ABCT will occur in FY2019. The 1st Armored Brigade Combat Team, 3rd Infantry Division, will be the first Army unit to receive the JLTV platform.

Takeaway

These upgrades are just a small portion of the current vehicle modernization initiatives that are underway for ABCTs across a number of platforms and their associated systems. These

modernization strategies will ensure the ABCT retains overmatch against peer and near-peer threats. They will also better enable the Army to conduct operations across multiple domains as part of the joint force.

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Figure 5. A JLTV climbs extreme terrain at the U.S. Marine Corps Transportation Demonstration Support Area, Marine Corps Base Quantico, VA.

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ACRONYM QUICK-SCAN

ABCT – armored brigade combat team
AMP – advanced multi-purpose
AMPV – armored multi-purpose vehicle
APS – Army prepositioned stock
ATGM – anti-tank guided missile
BCT – brigade combat team
FoV – family of vehicles
FY – fiscal year
CGSC – Command and General Staff College
IF-LD – Iron Fist-Light Decoupled
IFV – Infantry Fighting Vehicle
JLTV – joint light tactical vehicle
MCoE – Maneuver Center of Excellence
RPG – rocket-propelled grenade
SBCT – Stryker brigade combat team
SEP – Systems Enhancement Package
TCM – (U.S. Army) Training and Doctrine Command capabilities manager
VPS – vehicle protection system

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‘Kachi Kapshida!’

Rotational Armored Brigade

Combat Team Experience in Korea

by COL Steven J. Adams and
MAJ Nate Garner

A rotational deployment to the Republic of Korea (RoK) has a number of benefits to the operational force writ large and to the Army’s armored brigade combat teams (ABCTs) in particular. This article explains some of our key takeaways from a rotational brigade deployment to the RoK but will not discuss whether or not an ABCT is the appropriate formation for such a mission.

Higher combat readiness

A rotational ABCT arrives in the RoK

with a higher degree of combat readiness than a permanently stationed ABCT. An ABCT, for example, will go through an extensive train-up during the course of a year to hone its warfighting skills. The brigade begins by developing mastery at the individual and crew level while training and certifying its leaders. This training then progresses to collective-level proficiency at platoon through brigade level at home station, developing proficiency in all mission-essential tasks (METs). The training culminates with a rotation to a combat-training center (CTC) to validate the ABCT’s ability to conduct

combat operations under realistic conditions. The result is a trained and certified lethal brigade combat team ready for a combat deployment or other operational requirement.

Training doesn’t stop here. Units deploying to the RoK continue with an aggressive training regime to sustain MET proficiency. The resources exist to effectively build combat readiness at the individual to platoon level throughout the rotation. Commanders and staffs at echelon are also able to increase their proficiency through a multitude of training events and exercises, both



Figure 1. A 120mm round from an M1A2 Abrams tank impacts one of many targets during the qualification course at Rodriguez Live Fire Complex. (Photo by SGT Patrick Eakin, 2nd ABCT Public Affairs)

live and in simulation. A robust emergency-deployment readiness exercise program in support of the Korea mission also enhances a unit's readiness. Units in Korea adopt a "fight tonight" mentality, which allows them to routinely alert and rapidly execute a series of tasks that make them ready for operations on a moment's notice. This is a level of preparedness that many units don't achieve at home station and a great benefit to ABCTs afforded the opportunity to experience a rotation to Korea.

Training in Korea not only builds on the decisive-action METs, but it also incorporates two more non-standard METs for the rotational ABCT: "conduct non-combatant evacuation operations" and "conduct weapons of mass destruction [WMD] elimination operations." The new mission sets are challenging to resource, train and evaluate at home station due to limited expertise in these types of operations, but they are absolutely essential to the success of the brigade during the rotation. The rotational ABCT must spend a considerable amount of time training for these new tasks to rapidly gain proficiency, and training alongside our RoK partners is an added plus.

While training in the Korean Theater of

Operations (KTO) comes with many advantages, there are some limitations that affect readiness. Range availability and maneuver space remains the single largest training constraint for ABCTs in Korea. Because of this, ABCTs tend to lose combined-arms maneuver proficiency at the company to brigade level over time. This requires units to leverage the live, virtual, gaming and simulation training aids available in theater to maintain proficiency. This goes back to the original point: an ABCT that conducts a full train-up at home station and a CTC rotation, with all the training areas and resources that come along with that, has the opportunity to achieve a much higher level of combat readiness than an ABCT permanently stationed in Korea.

Building generation of leaders

Combined operations with the RoK army strengthen the alliance and develop leaders. With a continual rotation of forces to the Korean peninsula, we are building a generation of leaders who are able to work closely with RoK army allies at the tactical level and are familiar with operating in the KTO. Most of the training events in Korea are combined, affording U.S. forces an opportunity to continually work

through problems at the small unit to theater level. These events generate incredibly valuable dialogue between leaders at echelon as they grind through and solve problems. The more leaders and units with this combined experience, the better prepared we are for anything that should happen on the peninsula.

Seeing the terrain and experiencing the environment first-hand is also invaluable to the force. The Korean environment is unique and generally doesn't look like other locations where we train ABCTs. The terrain is dominated by highly restrictive maneuver corridors with frequent river crossings. Maneuvering an ABCT in this type of environment requires special considerations that units in Korea have to struggle through. Also, the temperatures in Korea vary significantly from sweltering heat and humidity in the summer to frigid temperatures in the winter that freeze water supplies for both sustainment and decontamination operations. These conditions expose leaders to problems that are not easy to replicate all in one location. The Korean experience builds competencies in leaders that will set their units up for success.

Every Soldier within the ABCT



Figure 2. An M1A2 Abrams tank from Bravo Company, 1-9 Cavalry, fires its 120mm cannon during qualification Table XII at Rodriguez Live Fire Complex. (Photo by SGT Patrick Eakin, 2nd ABCT Public Affairs)

formation will engage with the Korean people on some level. From combined training events, to partnered cultural events, to social interactions off duty, the U.S. Army presence among the Korean population is ubiquitous. This experience builds more adaptive leaders and grows a needed competency across the force.

Mastery of CBRN

To conduct counter-WMD, units must first be able to operate in a chemical, biological, radiological and nuclear (CBRN) environment. Mastering the fundamentals in CBRN tasks requires subject-matter expertise (which is limited in the ABCT), quality repetitions and, most importantly, leader emphasis. Developing a cadre of CBRN subject-matter experts to evaluate individual task proficiency to ensure Soldiers are meeting the standard is critical to closing this expertise gap. Incorporating CBRN enablers (hazard-assessment platoons and chemical-response teams) into leader-development events – and home-station training – builds a foundation of trust and confidence in this counter-WMD team.

The ABCT must conduct counter-WMD operations at home station, leveraging CBRN experts and technical enablers as part of its training plan. These company-level training events should be planned as separate situational-training-exercise lanes to allow units to focus the military decision-making process on this specific operation, providing the focus it requires to achieve proficiency. Fighting and winning on a contaminated battlefield depends on our Soldiers' abilities to detect, protect and decontaminate CBRN hazards. Units must also be able to treat casualties in a contaminated environment as well as effectively conduct subterranean operations, as WMD sites are often located in underground facilities.

In Korea, partnership with the RoK army is key to training and building proficiency in CBRN operations. Combined exercises allow the ABCT to practice how counter-WMD operations will be executed during a time of war. It helps to identify key points of friction with regard to interoperability of mission-command systems and standard operating procedures for tactical operations. While units will rarely have the opportunity to work with RoK army units prior to their Korea rotation, they will get substantial opportunities while on the peninsula.

In conclusion, the benefits of a Korea deployment are many:

- A rotational deployment in the RoK increases the ABCT's combat readiness as well as the U.S. Forces Korea's combat readiness to meet any challenge faced on the peninsula. An ABCT that conducts a full train-up at home station and a CTC rotation has the opportunity to achieve a much higher level of combat readiness than an ABCT permanently assigned to Korea.
- Rotations of ABCTs to the KTO are building a generation of leaders who can work with foreign partners, in this case the RoK army, in the Korean environment and terrain.
- Finally, a rotation to the Korean theater forces a (re)mastery of CBRN skills once heavily emphasized in the U.S. Army, but in recent years has not received the requisite amount of attention.

The rotational experience of an ABCT to Korea cannot be replicated at home station or at a CTC. The challenges posed by the Korean environment and terrain are crucial in honing the adaptability and flexibility of an armored force and its leaders. There are costs,

for example, to training readiness over time, but the leaders and Soldiers who participate in a Korea rotation seed the force with invaluable experience.

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ACRONYM QUICK-SCAN

ABCT – armored brigade combat team
CBRN – chemical, biological, radiological and nuclear
CTC – combat-training center
KTO – Korean Theater of Operations
MET – mission-essential task
RoK – Republic of Korea
USMA – U.S. Military Academy
WMD – weapon of mass destruction

Soviet IS-3 ‘Stalin’ Heavy Tank: Importance of Getting Assessment Right

by retired MAJ James M. Warford

In June 2014, anti-government separatists in Ukraine decided to include an IS-3 Stalin heavy tank built in 1946 that was anchoring a Ukrainian monument to the Great Patriotic War in their struggle against federal forces. After some coaxing from local mechanics and the belching of a lot of smoke from the engine, the pedestal-mounted tank started up. The IS-3 was driven off the monument platform and assumed new duties with the separatists for six months or so. According to separatist forces, the IS-3 was used in battle June 30, 2014. Eventually, Ukrainian federal forces regained control of the local area and recaptured the tank. This infamous IS-3 is now on display near Kiev at Ukraine’s National Military History Museum.

While not very surprising to those familiar with the simplicity and robust nature of Soviet-era engineering, the story of that reborn IS-3 Stalin brings the tank’s performance and quality assessments to mind. Were American,

British and ultimately North Atlantic Treaty Organization (NATO) intelligence assessments too critical of the IS-3? Was this impressive-looking heavy tank truly just intended for show and post-World War II propaganda purposes? More recent assessments of this popular tank confuse things even more by arguing that the IS-3 has historically been overrated.

Eliminating confusion like that surrounding the IS-3 must be a priority in today’s military environment. As the world situation changes and continues to remind us of the Cold War years, success on the battlefield may depend on getting it right.

The IS-3 heavy tank was first seen by the Western Powers during the Sept. 7, 1945, Allied victory parade when 52 of the new tanks rumbled through Berlin. The IS-3s belonged to 71st Guard Heavy Tank Regiment of 2nd Guards Tank Army. This new Soviet tank clearly came as a significant surprise to American and British leaders. A photograph taken during the parade

highlighting a very concerned GEN Dwight D. Eisenhower may have been an indicator of things to come. The IS-3 was a game-changer. The Soviets had developed a tank that was far more advanced than anything in the American and British arsenals. The message was loud and clear: the new Soviet IS-3 represented the first volley in the “action-reaction” tank-development cycle that became a defining characteristic of the Cold War.

Impressive design

The design of the IS-3, even by today’s standards, was impressive. The tank was built from the ground up to provide the best possible ballistic protection from all directions of attack. The new hemispherical turret and “pike-nose” glacis were both heavily armored and so well-shaped from a ballistic-protection point of view that they basically eliminated any potential weak points to attack. The IS-3 was fitted with the very powerful D-25T 122mm main gun, well-known by the end of World War II, that was a proven killer of German heavy armor during the war.

The reaction caused by the appearance of the IS-3 was significant, pushing the Americans and British to develop their own heavy tanks as quickly as possible to counter this new threat. The resulting heavy tanks were the American M103 and the British Conqueror.

According to declassified intelligence reports from 1954 and 1958, key details regarding the IS-3 are included following. It’s important to note that some Russian open sources have reported even thicker frontal armor protection than what’s included here:

- Weight: 46 tons.
- Crew: four.
- Engine: 520 HP V-12 diesel.
- Speed: 25 mph.
- Armament: 122mm D-25T (12.7mm AA MG/7.62mm coax machinegun).
- Armor: Glacis: 4.7 inches (119mm)



Figure 1. An IS-3M “Joseph Stalin” tank in the “Arena” at TankFest 2018. (Photo by the author)

angled at 55 degrees = 8.2 inches (208mm); main gun mantlet: 7.9 inches (201mm) curved; turret sides: 7.9 inches (201mm) curved.

- Production: 1945-1946 (2,310 produced).

For the rest of the 1940s and 1950s, the IS-3 was photographed and paraded as often as possible by the Soviets, and reports were released to the public that highlighted the tank's participation in various Soviet-army exercises. As time went by, however, all this attention led to more information being learned by American and NATO intelligence organizations. This information included reports that the cutting-edge Soviet tank was suffering from important mechanical and structural problems. These problems ranged from production hull welds being stressed to the point of failing and engine-reliability issues to a series of problems resulting from mounting such a large and heavy main gun in such a small turret. These problems may have been the deciding factor in the decision to end production in 1946.

Soviets make upgrades

The Soviets were very aware of these problems and launched a series of upgrade efforts for the IS-3 between 1948 and 1952. Perhaps the most significant upgrade took place in 1957, resulting in the improved and iconic Cold War version of the tank designated as the IS-3M. The tank's reputation, however, seemed damaged beyond repair. Prior to the fielding of the IS-3M, the IS-3's reputation actually went from bad to worse in 1956 when its performance was assessed after its first confirmed use in combat during the Soviet invasion of Hungary.

On Nov. 4, 1956, the Soviet Army invaded Hungary with 17 divisions to "smash the counter revolution" going on in that country. Codenamed Operation Whirlwind, Soviet forces quickly encircled Budapest, split the city in half and began attacking Hungarian-army facilities. The Hungarian army put up mostly sporadic resistance. In fact, most Hungarian soldiers were loyal to the revolution and either deserted or fought with Hungarian resistance fighters. In some cases, whole Hungarian-army units refused to relinquish their

weapons to the invading Soviets. Interestingly enough, participating in the fight against the defending Hungarians was not universally accepted by the Soviet forces in Hungary. According to a declassified Central Intelligence Agency (CIA) information report dated Oct. 30, 1956, "a sizeable defection to the rebel forces is taking place among Soviet troops in Hungary."

The assessment of the IS-3's performance during the fighting in Hungary is normally characterized as being very poor. For many observers, the dramatic photos of destroyed IS-3s, including a well-known photo published in *Life* magazine showing a number of coffins in the street alongside a destroyed IS-3 after a battle, provide all the information needed. The damage to the reputation of the IS-3 was now set, and performance assessments of the tank incorrectly judged it as a failure.

The reality is that several factors that characterized the fighting in Hungary were not usually taken into account, ranging from poor leadership and communication to the minimized capabilities accredited to the resistance fighters. It's important to remember that these resistance fighters included Hungarian- and Soviet-army regulars. Finally, it's clear that the Soviet army failed to use the tactics for fighting in urban areas that it had mastered during World War II. However, the resistance fighters knew how to defend and were masters of the molotov cocktail.

A year before the invasion of Hungary, events were taking place in the Middle East that would set the stage for the second combat use of the IS-3 that would be fought 11 years later during the Six Day War in 1967. In 1955, open-source press reporting confirmed a significant arms deal was in the works between Czechoslovakia and Egypt that had the potential to increase tensions between Egypt and Israel to the breaking point. Although the weapons reportedly were coming from Czechoslovakia, the deal was part of a series of deals between Egypt and the Soviet Union. Worth about \$62 million, the deal included small arms, anti-aircraft guns, aircraft, artillery and tanks. According to a declassified report from September 1956, the deal included 170 T-34/85 medium tanks, 25 SU-100 as-

sault guns and 60 IS-3M heavy tanks.

The declassified Oct. 4, 1955, edition of the CIA's *Central Intelligence Bulletin* confirmed the arrival of the first arms shipment and included the following: "Egypt's acquisition of heavy tanks, when made effective by training in their use, will introduce a new element into Middle Eastern military tactics, since neither the Arab states nor Israel has hitherto had equipment of this caliber." Interestingly enough, according to the declassified CIA *Central Intelligence Bulletin* dated May 26, 1956, a conversation took place between the Soviet military attaché and the American army attaché in Syria. The Soviet officer stated that "while the T-34 medium tank was suitable for use in Syria, he was opposed to Syria receiving IS-3M heavy tanks and had so recommended. He added that the Syrians would be better off fighting on camels than in tanks." However, the Egyptians, like the Soviets at the end of World War II, were happy to show off their new IS-3Ms, and *Life* magazine provided extensive coverage of the IS-3Ms as they were first paraded through Cairo July 23, 1956.

Breaking point

The breaking point in the Middle East was finally achieved June 5, 1967, when the Israeli air force launched a series of very successful air strikes against Arab airfields, giving the Israelis almost complete air superiority from the beginning of the Six Day War. Israeli tanks from MG Israel Tal's division attacked quickly into the Sinai Desert, into the heart of Egyptian-army defensive positions. In the key battle fought at Rafah Junction, the Egyptian 7th Infantry Division was supported by IS-3M heavy tanks. The Israelis were very aware of the Egyptian IS-3Ms and considered them very dangerous opponents. Authoritative Israeli references on the Six Day War include several instances where IS-3Ms were described using verbiage like "the most heavily armored tanks ever built," "World War II monsters" and simply as being "terrifying." Some translations of these battlefield accounts from Hebrew to English also identify the Egyptian IS-3Ms as "Stalinists."

The fighting in the critical Rafah Junction area can be characterized as tank

vs. tank with Egyptian “Stalinists” facing off against Israeli U.S.-made M48 Patton tanks. The Israeli plan of attack was designed specifically to avoid a “toe-to-toe” frontal fight with these IS-3Ms and their 122mm main guns and thick frontal armor. When the battle was finally over, most of the battalion of IS-3Ms in the Rafah Junction area was destroyed by the more modern and more maneuverable Israeli tanks. The Israelis suffered significant losses, too, including several of their M48s destroyed by IS-3M main-gun fire (using Soviet armor-piercing ammunition dating back to 1945-47) and the loss of the most decorated soldier in the Israeli army, CPT Nechemiah Cohen.

The assessment of the IS-3M’s performance during the fighting in the Sinai is normally characterized as very poor. Like the assessments following the fighting in Hungary in 1956, the IS-3M’s performance assessment from the

fighting in 1967 was heavily and incorrectly influenced by a few key photographs taken during that conflict. Many observers cite well-known photographs that showed a destroyed IS-3M with its turret blown off, and another of a rusty and mostly sand-covered IS-3M in the desert, as confirmation of the tank’s poor performance.

Poor training’s impact

Assessing the tank’s performance during the Six Day War had the additional challenge of analyzing the events that led to a large number of IS-3Ms being captured intact after being abandoned by their Egyptian crews. The Egyptian Army’s 125th Tank Brigade was equipped with 60 IS-3Ms deployed in defensive positions in the El-Kuntilla area. After fighting against the advancing Israelis, many Egyptian tank crews abandoned their fully operational IS-3Ms and scattered in the desert. This desperate action had nothing to do

with the capabilities of their tanks. It was in fact all about poor training, low skill level and lack of motivation in those Egyptian tank units.

At war’s end, the Israelis had destroyed some 16 IS-3Ms and captured about 30. Some sources put the combined total of IS-3M losses as high as 73. Finally, as previously mentioned, the Israelis were very aware of the IS-3M’s capabilities, and they understood that their 90mm tank guns probably wouldn’t be able to penetrate the armor of the Egyptian heavy tanks. Prior to the war, the Israelis launched an upgrade program that added the powerful 105mm main gun to many of their Centurion and M48 tanks. The fighting in the Rafah Junction area included the one company of M48s in the entire Israeli army that had their 90mm main guns replaced by the new 105mm main guns.

While this tank company was very



Figure 2. An IS-3M tank on static display at TankFest 2018. (Photo by the author)

successful during the Six Day War and was decorated by Tal, declassified photographs showing the results from live-fire testing done in Israel after the war tell an interesting story. During this testing, captured Egyptian IS-3Ms were repeatedly fired on and hit by 105mm Armor-Piercing Discarding Sabot ammunition without the tank's frontal armor being penetrated.

In many ways, the IS-3 heavy tank represents one of the very first "shots" of the Cold War. It certainly came as a big surprise to all those who saw it, and the countries it was intended to impress or intimidate were compelled into action. Increasingly negative reviews as more was learned about the IS-3 only put the tank's potential adversaries into the dangerous position of underestimating this important Soviet tank. U.S. and NATO focus on learning as much about Soviet weapons systems as possible was constantly challenged by persistent naysayers who continued to report that Soviet tanks and the technology they represented were not truly a threat.

The Cold War years can be characterized by the massive efforts expended (in some cases not so successfully) to get these assessments right. Historic examples include the struggle to

correctly identify the T-64 and T-72 main battle tanks, trying to confirm Soviet intent around which weapon systems participated in Red Square parades. NATO and U.S. analysts also tried very hard to determine the relationship between Soviet export weapons and those not intended for export.

In today's world, increasingly dangerous battlefields make truly knowing our enemies and accurately assessing their capabilities more important than ever.

Retired MAJ Jim Warford is a program manager and "scrum master" working for a Fortune 500 company in the Kansas City area. During his career, he served in various command and staff positions that included 42 months of company-command time. He commanded Company D, 1st Battalion, 66th Armor, 2nd Armored Division, Fort Hood, TX; and both Company A and Headquarters and Headquarters Company, 2nd Battalion, 66th Armor, 2nd Armored Division (Forward), Garlstadt, Germany. He also served as a tactics instructor at the U.S. Army Command and General Staff College (CGSC), Fort Leavenworth, KS; and as the S-3 (operations) officer for both 2nd Squadron, 4th Cavalry, and 2nd Brigade, 24th Infantry Division, Fort Stewart, GA. His

military education includes the Armor Officer Basic Course, Armor Officer Advanced Course and CGSC. MAJ Warford was commissioned in armor in 1979 as a distinguished military graduate from the University of Santa Clara. While there, he earned a bachelor's of arts degree. He also holds a master's of military art and science degree from CGSC and a master's of arts degree from Webster University.

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ACRONYM QUICK-SCAN

CGSC – Command and General Staff College
CIA – Central Intelligence Agency
NATO – North Atlantic Treaty Organization

Armored Fighting Vehicles of the World

Schützenpanzer Puma



German infantry fighting vehicle, first fielded in 2015. Unmanned off-center turret, three- to six-man crew. Weight: 29.4 to 43 tons depending on protection level. Primary weapon: 30mm MK 30-2/ABM autocannon. Secondary armament: 7.62 machine gun, Spike LR anti-tank missile. Interchangeable, modular armor. In service with: German army.

Reconsidering Division Cavalry Squadrons

Part III: 1st Squadron, 4th Cavalry Regiment, in Operation Desert Storm

by MAJ Nathan Jennings

(Editor's note: This is the third in a four-part series that describes the problem, history and potential solutions for the U.S. Army's lack of dedicated division-level ground reconnaissance-and-security (R&S) capacity.)

Reconnaissance operations, like security efforts, are central to shaping favorable conditions for division maneuver during offensive, defensive, stability and even civil-assistance operations. As defined by Army division doctrine, they are missions "undertaken to obtain, by visual observation or other detection methods, information about the activities and resources of an enemy." While adversaries often demand the most attention – especially during forcible entry in expeditionary theaters – a variety of manned and unmanned sensors also collect "data concerning the meteorological, hydrographic or geographic characteristics of a particular area."¹ Similar to security efforts designed to protect main-force units, cavalry has specialized in proactive information collection (IC) and reporting since antiquity.

Divisions doctrinally execute four types of reconnaissance designed to orient "on the enemy, terrain, infrastructure and society to collect information" that is then "turned into intelligence products that influence the conduct of current and future operations."² These tasks include conducting zone reconnaissance across a linear area with defined boundaries, area reconnaissance around a specific location, route reconnaissance along roads and highways, and reconnaissance-in-force to test enemy strengths and dispositions. Cavalry formations, depending on the habitual or *ad hoc* force mix of armored, wheeled, dismounted and aerial platforms, also execute counter-reconnaissance against enemy scouts to deprive opposing commanders of battlefield clarity.³

DivCav recon

The campaign histories of 1st Squadron, 4th Cavalry Regiment, again include a germane case study for assessing direct-reporting scouts in support of division maneuver. As the primary ground-reconnaissance element of 1st Infantry Division ("Big Red One") during the First Persian Gulf War in 1991,

it executed a variety of IC tasks, counter-reconnaissance actions and even attacks to seize critical objectives as they enabled the Big Red One, and ultimately the Army's VII Corps, to defeat entrenched Iraqi armored forces in the southern deserts of Mesopotamia. According to the squadron's Meritorious Unit Award citation, it "destroyed 65 tanks, 66 armored personnel carriers, 66 trucks, 91 bunkers and captured 3,010 enemy soldiers" during the brief campaign to liberate Kuwait.⁴

The Quarterhorse Squadron received notification that it would deploy to Southwest Asia from its home station at Fort Riley, KS, while operating under the Reorganization of Army Divisions J-series design. Organically allocated two ground troops with M3A2 Cavalry Fighting Vehicles (CFVs) and two air cavalry troops with a mix of OH-58 Kiowa scout and AH-1 Cobra attack helicopters, the formation specialized in moderately contested reconnaissance. MG Thomas Rhame, the Big Red One commander, appreciated the armored profile of the Iraqi army and accordingly allocated the squadron nine M1A1 Abrams tanks, drawn from theater

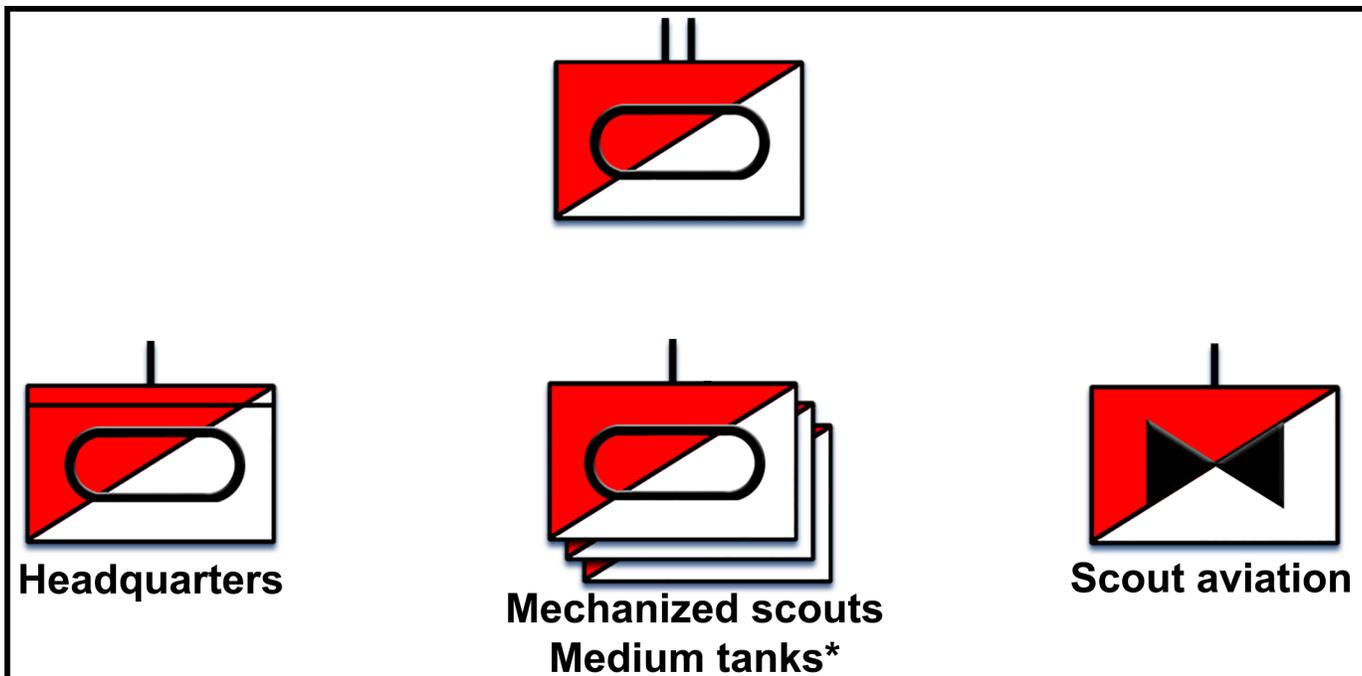


Figure 1. 1-4 Cav's organization during the first Persian Gulf War.

depots, to provide capability to execute more forceful scouting. The squadron commander also reorganized a third air troop from assigned rotary-wing assets. Upon drawing vehicles in Saudi Arabia, Troops A and B reconfigured with a mix of mechanized scouts and heavy tanks.⁵

The squadron task force's first duty was to screen to protect the massing of 1st Infantry Division at Logistics Base Echo and then Assembly Area Junction City, along the northern border of Saudi Arabia near a town named Hafr Al Batin. Throughout January and February 1991, Troop B, and then Troops C and D, patrolled north of the division, while Troop A lagged behind in drawing vehicles. During this time, the squadron's pilots destroyed an enemy reconnaissance vehicle, and its ground scouts captured several Iraqi soldiers, again proving the value of combining integrated air-ground teams. The squadron's tanks, which were then untested against Soviet-grade armor, provided overwatch along the screen line.⁶

Recon in force

On Feb. 24, with the Big Red One as its main effort, VII Corps began its attack north to envelop Iraq's Republican Guard Corps -- then considered to be its strongest armored force -- in defensive positions west and north of Kuwait. Quarterhorse initially moved under control of the division's 1st Brigade and subsequently followed the armor and mechanized-infantry battalions through marked breach lanes. After crossing, the squadron separated to conduct a forward reconnaissance and mobile screen along the division main body's northern flank as it advanced. Now reporting directly to Rhame, the cavalry Soldiers destroyed three anti-tank guns, two armored scout trucks and four truck carriers, and captured 145 prisoners as they maneuvered east.⁷

The squadron made contact with rear elements of 2nd Armored Cavalry Regiment (ACR) Feb. 26 to coordinate a passage of lines for its parent command. The regiment had conducted an advance guard as it led VII Corps' sweeping eastward advance. While 1st Infantry Division was consolidating to the southwest, the ACR located the

Tawakalna Division and destroyed its 50th and 18th Brigades. Stephen Bourque, who served in 1st Infantry Division's headquarters during the war, said the opposing Iraqi forces "found no respite from constant ground, artillery and air attacks" as the "dragoons" prepared to "pass the attack to the Big Red One." Far to the north, 3rd ACR likewise led XVIII Corp's attack along the coalition's left axis.⁸

Throughout the night, the brigades of 1st Infantry Division transitioned through 2nd ACR's positions. Four hours into the passage of lines -- considered a high-risk operation due to potential for fratricide -- the squadron emerged and launched another moving screen along its division's northern boundary with 1st Armored Division. By advancing parallel to the main body, the cavalry allowed Rhame to preserve his infantry and armor battalions for the impending fight. During its movement, Quarterhorse located and destroyed an isolated tank platoon. Then, discovering an Iraqi logistical base guarded by a company of armor, infantry and artillery, Quarterhorse conducted a rapid attack that left dozens of burning enemy vehicles in its wake.⁹

Thus far in the offensive, 1-4 Cav had performed traditional and doctrinal tasks in support of large-scale maneuver. By screening to protect the initial massing of friendly forces, coordinating with corps cavalry to allow unscathed passage to the main battle zone and reconnoitering its higher command's exposed northern flank during the subsequent advance, it had employed expanded combined-arms capabilities to shape favorable conditions. This success was in large part facilitated by integrating heavy armor into reconnaissance teams with supporting attack aviation. LTC Robert Wilson, the squadron commander during the campaign, later wrote that his tanks "were indispensable in accomplishing the mission" and that having them "in the squadron gave the division commander more options and greater flexibility."¹⁰

High tempo, enhanced lethality

On the morning of Feb. 27, after a tactical pause, the Big Red One resumed

movement toward the Iraqi Republican Guard. Quarterhorse continued its flank screen with aero scouts conducting reconnaissance ahead, ground scouts traveling along the projected screen line and tanks moving to the inside as quick-response forces. The squadron, and Troop A in particular, destroyed 26 enemy tanks and 25 personnel carriers during the advance, though many appeared abandoned. The division, after pausing again in the afternoon to coordinate with VII Corps, resumed its drive to cut off the retreating Iraqi army by blocking the Basra Highway, which led north into Iraq. Rhame then ordered 1-4 Cav to protect his northern flank with a defensive position astride the highway, while his 2nd Brigade blocked farther south.¹¹

Quarterhorse, with its air scouts far to the front, conducted a hasty reconnaissance-in-force to seize its assigned blocking positions. However, when it lost all communications with the division, it became apparent it had moved too far east and had separated from 2nd Brigade. The error, originating from confusion in the division headquarters, left them exposed and beyond friendly-support range as the easternmost element of VII Corps. That afternoon the squadron destroyed several retreating Iraqi tanks and soon encountered thousands of Iraqi soldiers straggling north toward the international border. As darkness fell, Wilson ordered his troops into a defensive coil to wait out the night. By morning, they re-established contact with 2nd Brigade and had taken more than 2,000 prisoners.¹²

Similar to the Vietnam War, Operation Desert Storm featured a variety of divisional cavalries with varying compositions. XVIII Corps, as the allies' most diverse corps, benefited from three squadrons that each organized differently. While 1st Squadron, 17th Cavalry Regiment, supported 82nd Airborne Division with one humvee-mounted troop and three air troops, 2nd Squadron, 4th Cavalry Regiment, supported 24th Infantry Division (Mechanized) with one CFV troop, two tank and CFV mixed troops, and two air troops. The 2nd Squadron, 17th Cavalry Regiment, enabled the fast-moving 101st Airborne Division with a purely aerial squadron. This variance in mobility profiles

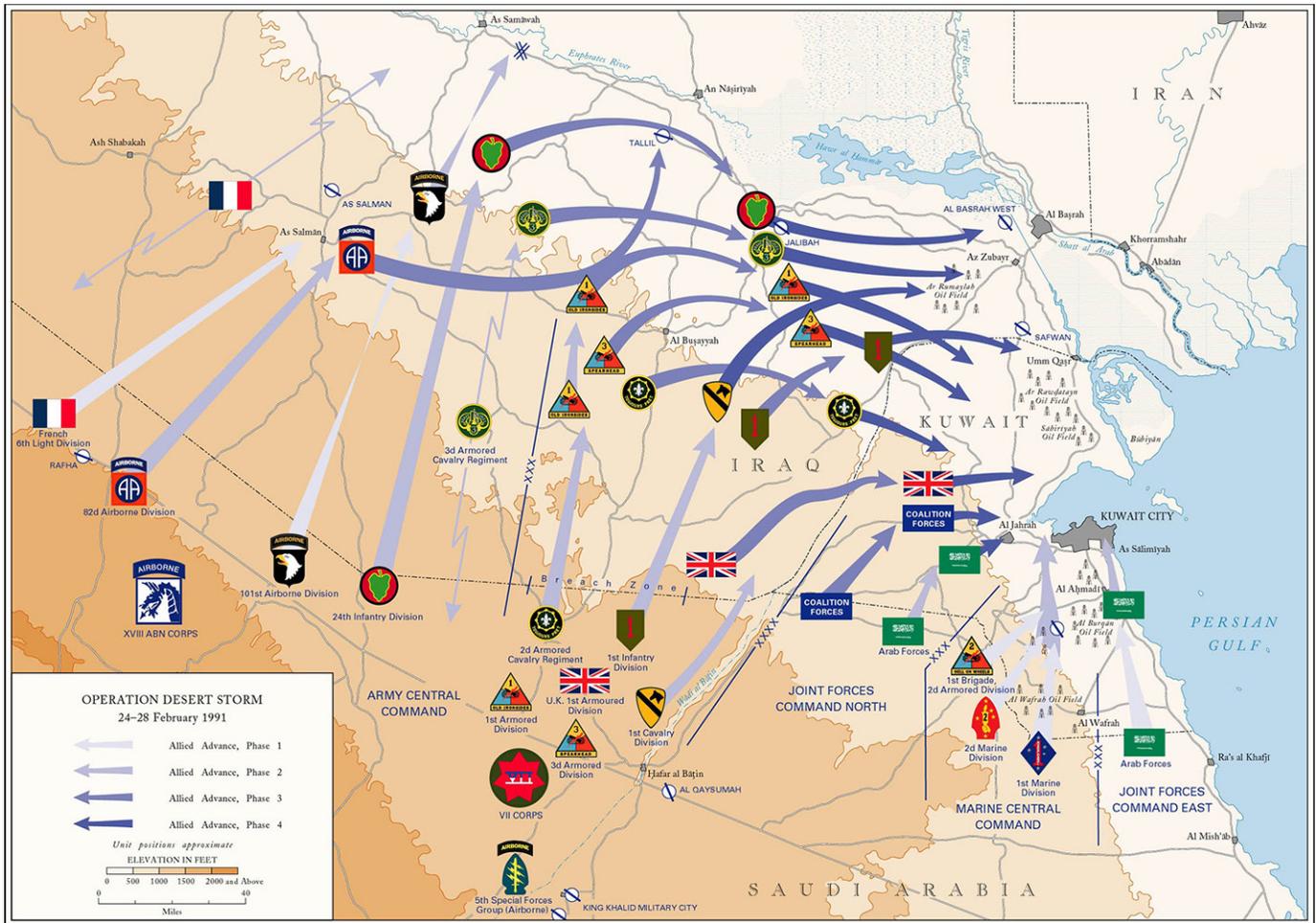


Figure 2. Operation Desert Storm unit movements. (Source: Wikipedia Commons, https://en.wikipedia.org/wiki/Gulf_War)

allowed each cavalry force to support its parent division according to specific informational requirements.¹³

On March 1, Quarterhorse conducted one of the coalition’s final tactical actions of the war when it seized the Safwan airfield in Iraq to serve as the site of peace negotiations. The VII Corps commander, LTG Frederick Franks, ordered Rhame (as remembered by 1-4 Cav’s operations officer) to “reconnoiter the area” around the airbase “but avoid becoming decisively engaged.”¹⁴ Now supported by an AH-64 Apache helicopter company from 11th Aviation Brigade, 1-4 Cav accordingly moved across the border to find elements of the Hammurabi Division on-site. The Iraqis departed after a tense standoff and allowed the Americans to occupy the airbase. While no fighting occurred, the air troop conducted a useful area reconnaissance of the Iraqi positions, which allowed Wilson to position his ground troops in a credible, yet

not overly threatening, posture.¹⁵

Quarterhorse completed its wartime service by moving 100 kilometers west to establish traffic-control points along the post-war demarcation line. The squadron processed thousands of refugees and paroled prisoners as displaced Iraqis civilians and soldiers struggled to return home. This final act included providing medical care to several hundred children, women and men who had suffered injuries during the conflict. On April 15, 1991, the command finally collapsed its operations and moved south to turn in vehicles at theater depots and begin redeployment to Kansas.¹⁶

Combined-arms value

The R&S actions of 1-4 Cav in the First Gulf War, even when considering Iraqi deficiencies, demonstrated the potency of cavalry teams when empowered with cross-domain capability. Wilson wrote in *ARMOR* of the confrontation

at Safwan that “tanks were indispensable in this operation, not only for their killing power but as a deterrent to a would-be attacker against an isolated force.” The future lieutenant general likewise attested of the entire campaign that “the air/ground cavalry mix was very effective and enabled the squadron to move rapidly and cover a large area of operations.”¹⁷ These successes, stemming from Quarterhorse’s unique tactical versatility, allowed it to enable their division throughout the vast envelopment operation.

Opinions like Wilson’s quickly moved beyond participatory commentary and into institutional consensus. In the Armor Center’s official review of Operation Desert Storm, its commanding general, MG Thomas Foley, wrote that “adding tanks enabled a faster reconnaissance tempo and added depth to the security mission.” He also complained that just “two ground troops were insufficient to accomplish normal

missions.”¹⁸ Two years later, even as it downsized, the Army established robust L-series squadrons that included three ground troops containing Abrams and CFV platoons, along with two air troops with Apaches and Kiowa scouts. After decades of vacillation over whether division cavalry should optimize for stealthy or forceful reconnaissance, it had once again chosen maximal capability.¹⁹

The next and final part of this series will employ historical lessons to explore solutions for creating division-cavalry capability in the 21st Century.

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Career Course, Armor Officer Basic Course and Air-Assault and Airborne schools. MAJ Jennings holds a bachelor’s of arts degree in history from Northwestern State University of Louisiana and a master’s of arts degree in American history from the University of Texas at Austin. He won the Perry Prize for the best master’s thesis at the University of Texas at Austin in 2013 and 1st place in the U.S. Army Armor School’s 2015 Starry Writing Competition. He is author of the book, *Riding for the Lone Star: Frontier Cavalry and the Texas Way of War, 1822-1865*.

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¹⁹ McGrath.

ACRONYM QUICK-SCAN

AAR – after-action report
ACR – armored-cavalry regiment
BCT – brigade combat team
CFV – Cavalry Fighting Vehicle
IC – information collection
R&S – reconnaissance and security

Mounted Infantry Brigade Combat Team Scout Platoons Struggle With Stealth

by 1LT J. Brian Sikma Jr.

Reconnaissance leaders must constantly balance competing priorities and assume risks to rapidly provide commanders with accurate information. Mission variables remain substantially similar across company- and platoon-level organizations throughout the Army. But for reconnaissance units, the organization of the scout platoon – the “troops” in mission, enemy, terrain and weather, troops and support available, time available, civil considerations – often determines whether it is possible for a single platoon to accomplish a reconnaissance mission within the higher commander’s reconnaissance guidance. As they are currently constituted, motorized reconnaissance platoons in infantry brigade combat teams (IBCTs) are poorly organized to carry out missions where commanders require stealth.

When commanders direct that reconnaissance be “stealthy,” they expect scouts to take extra precautions to avoid detection and engagement. Paragraph 3-12 in Army Technical

Publication (ATP) 3-20.98, *Reconnaissance Platoon*, explains: “Stealthy reconnaissance occurs when the platoon conducts a methodical, time-consuming mission that minimizes chance enemy contact.”

For mission planning, the directive to be stealthy – as opposed to forceful – is the commander’s expression of the intent behind his or her engagement criteria. Platoon leaders rely on this expression of intent as they employ troop-leading procedures to formulate a tentative plan and initiative necessary movement. Task-organizing the platoon is an important part of both planning and executing a mission.

Maximizing scouts

When the mission calls for stealth, the platoon leader must organize the platoon in a way that maximizes the number of dismounted scouts. Paragraph 3-12 in ATP 3-20.98 also offers some helpful guidance about the conduct of stealthy operations: “It is usually conducted dismounted. ... The lighter an organization, the more stealth becomes essential.” Ironically, perhaps, this is where the motorized reconnaissance platoon falls short.

Under the current 6x24 configuration, 24 scouts are spread across six humvees. That comes to four Soldiers per

vehicle, not counting attachments (frequently only a military-occupation specialty (MOS) 68W Combat Medic Specialist in the platoon sergeant’s No. 4 truck). Each humvee requires a driver and a gunner – an irreducibly minimum crew. A truck commander and dismounted scout round out each vehicle’s normal complement. Truck commanders can and should dismount when the mission requires an increase in the number of scouts operating beyond the vehicles.

From the start, then, it is theoretically possible to deploy a maximum of 12 dismounted scouts for missions requiring stealth. But this is only a theoretical maximum. Six dismounted scouts per three-vehicle sections create a reasonably sized reconnaissance element that can move to the forward and flanks of each mounted section. Reality tends to intervene, however, and prevent this from happening.

At a recent exportable combat-training-capability rotation, it became painfully evident that when motorized platoons lose scouts for various details and real-life injuries, not to mention assessed casualties, the number of scouts available for dismounting drops significantly. Even minor changes – such as losing three scouts in the platoon – reduces the total dismounts in



each section to around four. This means a leader has at most two teams of two scouts per section who must work in conjunction with both each other and the mounted element to stealthily move along mobility corridors or cross-country to observe specific named areas of interest.

Even when steps are taken to reduce the signature of vehicle platforms, shrinking the size of a dismounted element shortens the distance it can operate away from the mounted element. In security and surveillance missions, this distance may not be as limited as it is in mobile-reconnaissance missions. Bringing trucks closer to dismounts increases the risk of enemy detection and chance contact. Such a loss of stealth can severely compromise not only the reconnaissance mission but also negatively impact the missions of follow-on maneuver forces.

Assessing configuration

Fortunately, the Army is looking to change the configuration of the IBCT's motorized reconnaissance troops to platoons that are based on the 6x36 configuration. The arrival of the Joint

Light Tactical Vehicle and its six-seat B variant will make this organization possible. Leaders and thinkers within the armor and cavalry community have touted this new organization as a more flexible and dynamic tool for reconnaissance. They are right, and the challenges of performing stealthy reconnaissance with the current configuration only confirm their assessments.

Of the several reconnaissance-platoon organizations spread across the various brigade combat team types, it is the motorized scout platoons of an IBCT that must excel at stealthy reconnaissance. IBCTs are highly versatile formations, but they lack the firepower, rapid mobility and survivability of heavier units. Thus, they and their cavalry squadrons must leverage their smaller signature through stealth to ensure survivability on the battlefield.

Fortunately, cavalry squadrons in IBCTs do not have to wait for the 6x36 force-design update to take effect before finding a solution to the problem of too few dismounts. By integrating dismounted scouts from the squadron's Troop C (which normally focuses on surveillance) with the mounted

platoons of Troops A and B, mission-specific task-organizations can eliminate the deficit of mounted-platoon dismounts. In this scenario, dismounted scouts (both MOS 19D and 11B) can work in larger teams spread over a greater supporting distance than would otherwise be possible, while mounted scouts perform overwatch, prepared to rapidly move wherever their overwhelming firepower is required to gain fire superiority and prevent a decisive engagement.

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ACRONYM QUICK-SCAN

- ATP – Army technical publication
- IBCT – infantry brigade combat team
- MOS – military-occupation specialty

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12th Cavalry Regiment's Early Contribution to Building Post-Vietnam Armored Force: Ground Force for Air-Cavalry Combat Brigade Tests I and II

by retired LTC Tom Rozman

It was 1971; the Army was following a trajectory of disengagement from its operations of the last decade in Vietnam. Looming large on the horizon was the Army's viability to confront an aggressive Soviet Bloc force on the plains of Europe, especially with its diminished armored-force capabilities of the day.

To remedy this shortfall, the Army had begun a range of force-design initiatives that would result in the fielding of the AH-64 Apache attack helicopter, M-1 Abrams main battle tank, M-2 Bradley Infantry Fighting Vehicle, M-3 Bradley Cavalry Vehicle and other systems, as well as the modified tables of organization and equipment that were introduced for U.S. armored forces in the middle 1980s.

Two of the early initiatives in this massive project occurred at Fort Hood, TX, in 1971-72. The 1st Battalion, 12th Cavalry, and 1st Battalion, 13th Armor, played significant roles in this effort.

The first of these two initiatives was the extensive six-month program of Air-Cavalry Combat Brigade (ACCB) Test I conducted at Fort Hood and administered by the U.S. Army's Modern Army Selected Systems Test, Evaluation and Review project. The test was an effort to study and evaluate how experience and lessons-learned in the application of air-assault and attack-helicopter capabilities developed and applied in Vietnam might also apply to a European situation against Soviet ground forces. The 1st Cavalry Division had been returned from Vietnam and reorganized as a tri-capability division with one armored brigade, one attack-helicopter brigade and one air-assault brigade to support the test.

Company A of the division's 1st Brigade, 2nd Battalion, 12th Cavalry Regiment, saw its 1st Platoon placed under the operational control of Company A, 1st Battalion, 13th Armored Regiment, for the six months of Test I. The platoon

returned to the control of its parent unit at the conclusion of the test.

Preparing to deploy

The parent company of the test platoon then needed to prepare for deployment with the entire 2nd Battalion for the several weeks of maneuver that would comprise Test II. Unfortunately, due to other missions and funding, the other elements of Company A had only limited opportunity to train and exercise tactically during the preceding six months.

In addition, a new company commander had taken command two months earlier. Although he was an infantry captain, he had no prior experience with mechanized infantry. Fortunately, he was an open-minded officer with prior enlisted service, most as a non-commissioned officer, so the new company commander called the 1st Platoon leader to his office for a meeting shortly after assuming command. The purpose of the meeting was to discuss development of a plan to tap into the maneuver expertise developed by the



Figure 1. A Company A platoon leader observes forward from a track in a defensive position during ACCB II.

platoon leader and Soldiers of 1st Platoon by devising an accelerated training program to bring the company and its other platoons to an enhanced level of maneuver proficiency. There was a limited time window to put a training effort in motion before the company would deploy for Test II. Time was of the essence.

The two officers discussed several concepts regarding how the compressed training program could be managed in the limited time available. The format decided on was almost entirely experiential, and it would apply a “lane training approach.” Using a “demonstration and do” format within the lane training approach, the two officers expected to achieve a viable training compression – a sort of crash course for the company. The leaders of the other platoons were responsible for preliminary checks, inspection of equipment and baseline individual and collective preparatory training with training objectives identified by the 1st Platoon leader. The effort would be an intense

immersion in tactical maneuver by the platoons of Company A, 2–12 Cav.

Emphasizing intensity

To emphasize the intensity, the platoons of Company A would be exercised in various tactical-movement, defense and attack missions and scenarios in lanes, allowing units to observe the veteran 1st Platoon, then execute with critique and execute again. This process continued until the platoons were proficient with the movement and employment of tracks, squads and platoons on the different scenarios to the standard the 1st platoon leader indicated.

The company dedicated a full week to this concentrated maneuver-training rodeo. The 1st Platoon leader, who served as the company’s training officer, coordinated with range control for an excellent maneuver box he was familiar with in detail from Test II. It was selected for its ideal terrain for the purpose of this training concentration and for its close proximity to the

cantonment to minimize lost time to travel. Some maneuver boxes were significant distances from the barracks – upward of 10 to 25 miles in some cases. The distances would support movement-to-contact exercises.

The company commander issued the order to deploy, and the company training officer took control of the company for the exercise. For a week, the platoons of the company savored the unique flavor of the dust of Central Texas as they went through one iteration of movement-to-contact, attack, defend and do it again. They had feedback and lessons-learned sessions included in the training.

By the end of the week, the platoons and their squads were proficient in these exercises. The squads, platoons and their vehicle crews became confident in their equipment and their ability to exercise it in these maneuvers. Attention was also given to mounted land navigation and command-and-control communications.

At about midpoint in the training density, the company commander took command of the lanes’ maneuvers from his command track, gaining experience moving and maneuvering the company tactically from the track. By the end of the week, he was experienced in the movement of the company and command-and-control sufficient to deploy on Test II. Some more work would be done the following week to further enhance his abilities.

The program developed by the 1st Platoon leader and the company commander worked well. Two weeks later, when the company crossed the start point for movement to its initial tactical assembly area for Test II, the company moved with confidence. It would continually improve on the skills and abilities gained during the weeks of the Test II.

Lessons learned

The vignette illustrates some interesting takeaways of effective leadership under less-than-ideal conditions. A key constraint was a shortage of time to prepare a fairly large and complex organization, one that had not recently exercised and with a new leader who was not familiar with the type of organization.



Figure 2. A Company A platoon sergeant and track driver work on an engine problem during ACCB II.

The first takeaway: The leader did not stand on bluffing or posturing around his lack of experience. He recognized that he had an expert source in a subordinate and promptly appealed to that source to jointly develop a plan to prepare and then work the plan. He gave the subordinate the necessary authority to act.

The subordinate accepted the task and responsibility. He acted swiftly to develop the plan, coordinate it and provide the necessary support. He aggressively executed the plan, while being careful to respect the commander's prerogatives and position.

When the company deployed and executed its maneuver missions during the test, it did so with skill and competency under the company commander's command. None of this would have been possible had leaders not moved beyond ego and focused instead on the mission, how best to prepare, doing that preparation and keeping leadership flexible and tailored to the task. Although inexperienced at the start, a



Figure 3. The Company A commander provides guidance during ACCB II.

competent leader team formed among the officers and noncommissioned officers. They gelled through the lane training and even more so during the test. The company would continue to build on this foundation, eventually

deploying on the first Continental U.S. multidivision force-on-force maneuver exercise to be conducted by the Army as it came out of Vietnam. The multi-week Gallant Hand Exercise saw Company A perform well as a mechanized-infantry company.

The company met its regimental motto well: "Semper Paratus" or "always prepared."

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ACCB – air-cavalry combat brigade



Figure 4, left. A squad leader in 1st Platoon mounts up his squad during ACCB II.

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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.

BLACKMAR, WILMON W. LT

Unit: Company H, 1st West Virginia Cavalry. Place and date of action: Five Forks, VA, April 1, 1865. Born: Bristol, PA. Date of issue: Oct. 23, 1897. Citation: At a critical stage of the battle, without orders, led a successful advance upon the enemy.

BLISS, GEORGE N. CPT

Unit: Company C, 1st Rhode Island Cavalry. Place and date of action: Waynesboro, VA, Sept. 28, 1864. Born: Tiverton, RI. Date of issue: Aug. 3, 1897. Citation: While in command of the provost guard in the village, he saw the Union lines returning before the attack of a greatly superior force of the enemy, mustered his guard, and, without orders, joined in the defense and charged the enemy without support. He received three saber wounds, his horse was shot, and he was taken prisoner.

BLUNT, JOHN W. 1LT

Unit: Company K, 6th New York Cavalry. Place and date of action: Cedar Creek, VA, Oct. 19, 1864. Entered service: Chatham, Four Corners, NY. Born: Columbia County, NY. Date of issue: Unknown. Citation: Voluntarily led a charge across a narrow bridge over the creek against the lines of the enemy.



Protection across the Domains: Electronic Warfare in the Armored-Cavalry Squadron

by CPT Kevin Zhang and
CPT Michael Grdina

Current military conflicts in Iraq, Syria and Ukraine show how civilian drone technologies are cheap, plentiful, sophisticated and effective when employed in a military manner. The armored reconnaissance squadron's (ARS) modified table of organization

and equipment (MTOE) has no viable response as of 2018. In fact, while assigned electronic-warfare (EW) personnel by MTOE, the ARS does not actually own any EW equipment.

Right now, there is a window of opportunity for the ARS (and the cavalry community as a whole) to step forward as the leader in the brigade's EW fight

and to shape how the ARS will integrate itself into the Army's multi-domain battle for years to come.

Protection gap

Two excerpts from the *Russian New-Generation Warfare Study* conducted by the Potomac Institute and published on *ARMY* magazine's Website in 2016 highlight the current risk to the



modern ARS: “Ukrainian units have observed up to eight Russian [unmanned aerial vehicle] overflights per day, and the constant awareness of being observed and targeted is often a traumatic experience that instills fear and inhibits movement, particularly in daylight. The combination of small-size, limited radar cross-section or infrared signature, and lack of acquisition until they are over or past the target, makes engagement with surface-to-air missiles a low-probability and high-cost proposition.”

And: “In July 2014, Russia launched fire strikes with long-range artillery and multiple-rocket launchers employing top-attack munitions and thermobaric warheads against two Ukrainian mechanized battalions in the open. This intensely concentrated fire strike lasted only a few minutes, yet inflicted high casualties and destroyed most armored vehicles, rendering both battalions combat-ineffective.”

The preceding should not be a surprise. The exact situation described was replicated and documented in our own training centers and relayed to this very publication. In the July-September 2016 issue of **ARMOR**, CPT Joshua Christian published a piece perfectly outlining the gap in EW protection. Christian describes how a cavalry squadron executed a screening operation and attempted to gain contact with the opposing force (OPFOR) during an exercise at the Joint Multinational Readiness Center. Without warning, the squadron command post (CP) is destroyed when the OPFOR gains a line of bearing to the squadron CP with electromagnetic (EM) detection equipment, cues a reconnaissance asset (a drone in this case), gains an accurate grid and destroys the CP with massed indirect fires.¹

All this occurred without the squadron or troops identifying any form of contact prior to indirect fire on their positions.

Christian used the preceding scenario to demonstrate in his article the importance of passive protection, but what should be addressed is the role of **active** protection in this scenario. Army Technical Publication (ATP) 3-20.98 identifies the purpose of the

cavalry squadron in security operations as “provide early warning and reaction time, deny enemy reconnaissance efforts and protect the security area to give the commander freedom of maneuver.” Right now the question the cavalry community should be asking itself is: “Does the cavalry squadron have the capability to do this?” The answer unfortunately is no.

The unit tasked with providing security and reconnaissance for the rest of the brigade is at risk of becoming fundamentally obsolete if it cannot protect itself from being observed, disrupted and engaged without providing early warning and maneuver space to the brigade. Passive measures are indeed a part of the solution, but the squadron must leverage active measures to adapt to the rapidly changing technological environment and avoid obsolescence.

Integrating active EW into reconnaissance formations

The squadron is the logical home for a robust and thorough EW capability. A doctrinal screen line consists of multiple observation posts (OPs) operating in depth, within supporting range and distance of each other, and large lines-of-sight overlooking likely avenues of approach and named areas of interest. Consequently, supplementing our OPs with EW equipment would simultaneously enhance the OPs and the equipment’s capabilities. Integrating EW into the ARS’s MTOE allows the squadron screen or guard to instantly begin operating among multiple domains.

Despite the rumors, unmanned aerial systems (UASs) and intelligence, surveillance and reconnaissance systems are not undetectable, invulnerable, invisible platforms. Indeed, they may be difficult to see, hard to hear and hard to engage, but they emit detectable electromagnetic (EM) signatures all the same. The technology to detect these signatures is real, proven and in use in combat zones around the world. Systems like the Danish Wingman from Mydefense or the Versatile Radio Observation and Direction (VROD) the Army is now taking steps to field provide electronic-frequency-detection capabilities. These devices are

manportable sensors that alert the user with an audible or visual cue when a UAS’ distinct EM signature is received by the antenna. However, current fielding sees these devices consolidated at the brigade level, along with the rest of the brigade’s EW and counter-UAS capability. While these fieldings are a step in the right direction, they do not go far enough and need to be organic to the ARS.

Another method of reinforcing the ARS’ EW capabilities is to provide it more active EW jamming capabilities. Using currently fielded kinetic air-defense assets to engage UAS assets is an unrealistic proposition for multiple reasons. It remains an economically poor trade-off to kinetically engage cheap drones with sophisticated guided missiles. Also, detecting the physical signature of small UASs is a daunting prospect under field conditions.

A promising option for the cavalry community is therefore active EM jamming. Active jamming can occur at echelon from the OP and upward. Systems such as VROD Modular Adaptive Transmit (VMAX) currently in use or the Northrup Grumman’s Drake system are manportable EM jammers that can deny UAS command and control and Global Positioning System signals in a large area. Active jamming can be used in the same manner as an “area effect” weapons system. Area jamming is preferable to more traditional point weapons systems, as it allows the individual Soldier to cover a greater area, something critical for any force establishing a screen line.

There is a trade-off in weight, power and EM signature requirements, but there is an overall net increase in protection for the squadron and the brigade. Multiple OPs linked with common active EW equipment in a screen or guard could be quite effective in disrupting or denying enemy UAS reconnaissance efforts.

Some may argue that the brigade-level EW team could simply be tactically controlled by the ARS, but devices such as the VROD and VMAX could more easily be carried forward by a 19D onto an OP and operated passively for hours, only raising an alarm when there is a UAS within line-of-sight of

the system. The ARS screen would now have the ability to gain EM contact with the UAS and can report its presence, even if it could not be physically seen. This vital reporting could facilitate more active or passive measures in alignment with the commander's reconnaissance and security guidance, cue additional reconnaissance or air-defense assets at echelon or even facilitate informing decisions linked to the commander's critical-intelligence requirements.

Larger and more powerful systems such as the Army's vehicle-mounted Sable Fury jamming and signal-detection system could (and should) be echeloned at critical nodes such as the troop CP, squadron CP and various squadron-trains locations. These sites have inherently larger physical signatures, lack immediate mobility, have lower protection and have higher pay-off value for the enemy. The squadron's command and sustainment nodes are likely the closest to the enemy and are in most danger of detection as it coordinates the ARS across the entire brigade's frontage. Vehicle-mounted passive sensors and active jammers would add to the security and capability of these critical nodes with low or no impact to the staff and logistical personnel using them. Setting chemical sensors out with the establishment of a CP or tactical-assembly area for protection is normal, and so now too should be the establishment of EM sensors.

By integrating EW ability into the ARS, the possibility of EW fratricide increases measurably. The use of EW systems will unavoidably degrade an ARS' own ability to communicate with friendly forces no matter how well positioned or aimed those systems are, and if not planned or coordinated, may prevent an armored brigade combat team (ABCT) from being able to use its own mission-command systems to maximum effect. This degradation can be heavily (if not entirely) mitigated by adding (and using) EW personnel at the squadron level who can collaborate efforts horizontally and vertically to minimize EW fratricide. ATP 3-20.96 identifies that an ARS staff should plan to operate beyond traditional frequency-modulation communications, using alternate communications methods and

retransmission stations as necessary.² The ARS should be, by doctrine, the unit most familiar operating in a constrained communications environment, and an EW-saturated area is just one example of that possible constraint.

Current EW assets potentially available to U.S. and allied forces are controlled at brigade and echelons above brigade and are not organic to Army maneuver forces – and certainly not the squadron. EW will play its most decisive role in the opening salvos of any conflict, long before any theater- or division-level assets can be expected to action in support. The primary EW gap in today's fight is persistent EW capability available to the line units required to screen and advance against potential adversaries. Current platforms are often mounted on vulnerable and highly visible aerial platforms that, by their nature, will not be responsive to the requirements of forces potentially in contact.

What is needed are assets and tactics at the troop and squadron level that can mitigate the negative impacts of such emergent technologies on U.S. operations while simultaneously leveraging them to enable the U.S. warfighter to perform his or her job in a changing environment.

Integrating active EW into indirect fires

The solution to the current capability gap in electronic warfare is threefold: 1) integrate counter-UAS technology in the short to medium term; 2) continue to develop active anti-UAS technology in the long term; and 3) integrate counter-UAS EW capability into the maneuver and fires warfighting functions (WfF).

Counter-UAS technology often consists of radio jammers that deny the ability to control and communicate with any UAS assets. Such equipment could be used simultaneously to prevent unwanted communications while also denying enemy UAS freedom of maneuver. There are multiple systems on the market as well as being fielded now that will provide mounted and dismounted forces the ability to detect and deny enemy UAS effective operation.

Active EW capabilities, although most complementary to the missions of cavalry squadrons, would be of distinct use to the fires and protection WfFs. For example: first deployed in the mid-80s, the Bulgarian R-045 Sharshel is an electronic area-denial weapon deployable by 122mm and 152mm artillery.³ A battery fire mission provides the capability of jamming communications in nearly an entire grid square for up to an hour. The same technology can be integrated into our own indirect fires and operate in a similar fashion as the family of scatterable mines. In today's complex and nebulous conflicts where multiple state and non-state actors of varying alignments and allegiances operate in close quarters, the ability to employ non-lethal but selective counter-capability weapon systems should not be overlooked.

An ABCT's ARS is the logical home for counter-UAS capability. A doctrinal screen line consists of multiple OPs, operating in depth and within supporting range and distance of one another. By integrating counter-UAS systems into an ARS's MTOE, an ABCT's screen becomes capable of denying enemy forces the ability to easily achieve their own reconnaissance or security objectives.

Neither does integrating counter-UAS and EW assets into the ARS preclude retaining the same complementary capabilities at brigade level. Reconnaissance formations must always orient on force, facility or area to be protected, thereby placing them in the ideal location to employ and position EW assets.

The ability to deny any potential enemy the ability to freely use drone and radio communications within an area is absolutely critical. With the current ongoing developments in drone technology, such capabilities should be considered and controlled at the same level that obscuration indirect fires are. While pushing down such capabilities will needlessly complicate communications in any attempts to use rotary and fixed-wing assets, the requisite additional planning time required will be more than offset in the ability to protect friendly forces from easy detection and destruction.

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Company, 1-8 Cavalry, 2/1 ABCT, Fort Hood, TX, and has recently returned from a deployment to the Korean Theater of Operations. Previous assignments include battalion plans officer, 1-8 Cav; squadron assistant S-3 for 4-10 Cav, 3rd ABCT, 4th Infantry Division, Fort Carson, CO, forward-deployed to Jordan; executive officer, Troop C, 4-10 Cav, 3rd ABCT, 4th Infantry Division, Fort Carson; and platoon leader, Troop A, 4-10 Cav, 3rd ABCT, 4th Infantry Division, Fort Carson. CPT Zhang's military schools include Armor Basic Officer Leader's Course (ABOLC), Maneuver Captain's Career Course (MCCC), Air-Assault School, Airborne School and Army Reconnaissance Course (ARC). He holds a bachelor's of science degree in military history from the U.S. Military Academy (USMA), West Point, NY.

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Notes

¹ CPT Joshua T. Christian, "Mastery of the Fundamentals of Passive Counter-reconnaissance to Survive against a Hybrid Threat," *ARMOR*, July-September 2016.

² ATP 3-20.96, *Cavalry Squadron*, Washington, DC: Government Printing Office, May 2016.

³ "Wingman 101: Wearable Drone Detector," *MyDefense*; accessed May 4, 2018, <http://mydefense.dk/military-customers/wingman101/>.

⁴ "Company's mobile acoustic sensing and electronic attack innovations detect and defeat emerging threats in complex scenarios," Northrup Grumman; accessed May 10, 2018, <https://news.northrop-grumman.com/news/releases/northrop-grumman-demonstrates-counter-uas-technologies-at-black-dart-exercise>.

⁵ "Electronic Warfare Equipment," Defense Industry Group PLC Bulgaria; accessed June 10, 2018, <http://www.digplc.com/communicationselectronics5.html>.

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ACRONYM QUICK-SCAN

ABCT – armored brigade combat team
ABOLC – Armor Basic Officer Leader's Course
ARC – Army Reconnaissance Course
ARS – armored reconnaissance squadron
ATP – Army technical publication
CP – command post
EM – electromagnetic
EW – electronic warfare
MCCC – Maneuver Captain's Career Course
MTOE – modified table of organization and equipment
OP – observation post
OPFOR – opposing force
UAS – unmanned aerial system
USMA – U.S. Military Academy
VMAX – VROD Modular Adaptive Transmit
VROD – Versatile Radio Observation and Direction
WFF – warfighting function

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hosts Armor student papers on various subjects,

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<http://www.benning.army.mil/library/content/Virtual/CavalryArmorJournal/index.htm>

— currently through 1888-1973 but building up to the early 1980s.

Some back issues are also available on e*ARMOR*,

<http://www.benning.army.mil/armor/earmor/>

MOS 19M: The Mechanized Warrior

by Alex Turkatte

The 2001 elimination of Military-Occupation Specialty (MOS) 11M Mechanized Infantry, without a replacement MOS or an additional-skill identifier (ASI)¹, has left the Infantry Branch without a professionally trained mounted fighting force. This article will review a concept for an enlisted MOS dedicated to professional mechanized warfare.

In a critical time when the Army is considering consolidation of MOSs to maximize personnel fill across generalized assignments, the rise of near-peer adversaries such as Russia make evident the need for specialty training in platform-based lethality and overmatch. Although the recent addition of a 30mm cannon to Stryker Infantry Carrier Vehicles provides more firepower, there remains a lack of mobile protected firepower (MPF) when compared with armored-brigade platforms. The lack of defensive capabilities and soft-soil maneuver ability from U.S. formations stationed in Europe required the return of a rotational armored brigade combat team (ABCT).

The U.S. formations that would be called upon during a European conflict are assigned universal infantrymen that must perform specialized tasks across a myriad of assignments within the Stryker brigade combat team, infantry brigade combat team (IBCT) and rotational ABCT. Despite the current need for increased maneuver, lethality and survivability, the primary specialized training for the infantryman is only through tab or badge-producing functional courses focused on light team and squad-level organizations:

- Special Qualifications Indicator (SQI) P + badge – basic airborne course;
- SQI G + tab – Ranger Course (SQI V when combined with airborne course);
- ASI 5W + badge – Jumpmaster Course;
- ASI 2B + badge – Air-Assault Course;
- ASI F7 + badge – Pathfinder Course;
- ASI 6B – Reconnaissance and Surveillance Leader's Course (team-



Figure 1. Bradley Fighting Vehicle (BFV) firing at Fort Benning.

level training);

- ASI B4 – Sniper Course; and
- ASI B8 – Heavy Weapon Leader's Course (former MOS 11H tube-launched, optically tracked, wire guided missile and small-arms training).

The one infantry course that provides technical assignment-oriented training for the highest form of lethality is the Bradley Master Gunner (BMG) Course.² BMG awards ASI J3, which is used for matching trained personnel to a modified table of organization and equipment-required duty position. However, the BMG course is only authorized to be instructed by 11B Soldiers, which causes it to be one of the lowest priority for fill vs. light-infantry classes on Fort Benning. In fact, 19D Soldiers are called on to fill the routine 11B BMG instructor vacancies to meet rotational ABCT and operational-force mission requirements. This MOS misalignment comes at the expense of creating instructor billpayer vacancies within high-lethality and maneuver courses where 19Ds are critical.

Armor Branch career-management field (CMF) 19 is the only branch within the U.S. Army that is dedicated to direct-combat mounted warfare throughout all three brigade combat teams, to include the light IBCT.

Although only one-third the size of Infantry Branch, CMF 19 Soldiers attend more than eight assignment-oriented courses that produce specialized ASIs required on operational tables of organization and equipment (TOE). These skills provide the CMF 19 Soldier with competencies at platoon level and above which are necessary to fight and win against a near-peer adversary.

The TOE-required ASI courses following provide the highest form of maneuver, reconnaissance³ and lethality to close with and destroy our enemies:

- ASI B9 – M2A3/M3A3 (Bradley) operator/system maintainer;
- ASI D3 – BFV operations and maintenance;
- ASI K8 – M1A2 Systems Enhancement Program Abrams Master Gunner Course;*
- ASI A8 – M1A1 Abrams Master Gunner Course (requires K8 course completion);
- ASI R8 – Stryker Master Gunner Course;*
- ASI R4 – Mobile Gun System commander;
- ASIR7 – Army Reconnaissance Course (platoon-level reconnaissance training); and
- ASI C6 – Cavalry Leader's Course (company-level reconnaissance

training).

*J3, K8 and R8 courses currently require completion of master-gunner common core.

The 19M concept proposal is a return of the former MOS 11M, except under the management and career oversight of the armor-personnel proponent within the Office of the Chief of Armor (OCA). MOS 19M would begin initial-entry training (IET) with professional instruction on the lethality and overmatch of tracked-vehicle platforms and weapons systems such as the BFV. Upon completion of IET, the 19M would be assigned to ABCT formations, with possible generating-force assignments at combat-training centers or at the Fort Benning schoolhouse. More duty positions could be created where MPF crews are required, such as within U.S. Army Forces Command at echelons above brigade.

A draft career map for MOS 19M is provided in Figure 2, using U.S. Army Training and Doctrine Command (TRADOC)'s format for the enlisted talent-development model (TDM).

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ACRONYM QUICK-SCAN	
ABCT	– armored brigade combat team
ASI	– additional skill identifier
BFV	– Bradley Fighting Vehicle
BMG	– Bradley master gunner
CMF	– career-management field
IBCT	– infantry brigade combat team
IET	– initial-entry training
MOS	– military-occupation specialty
MPF	– mobile protected firepower
OCA	– Office Chief of Armor
SQI	– special qualifications indicator
TDM	– talent-development model
TOE	– table of organization and equipment
TRADOC	– (U.S. Army) Training and Doctrine Command

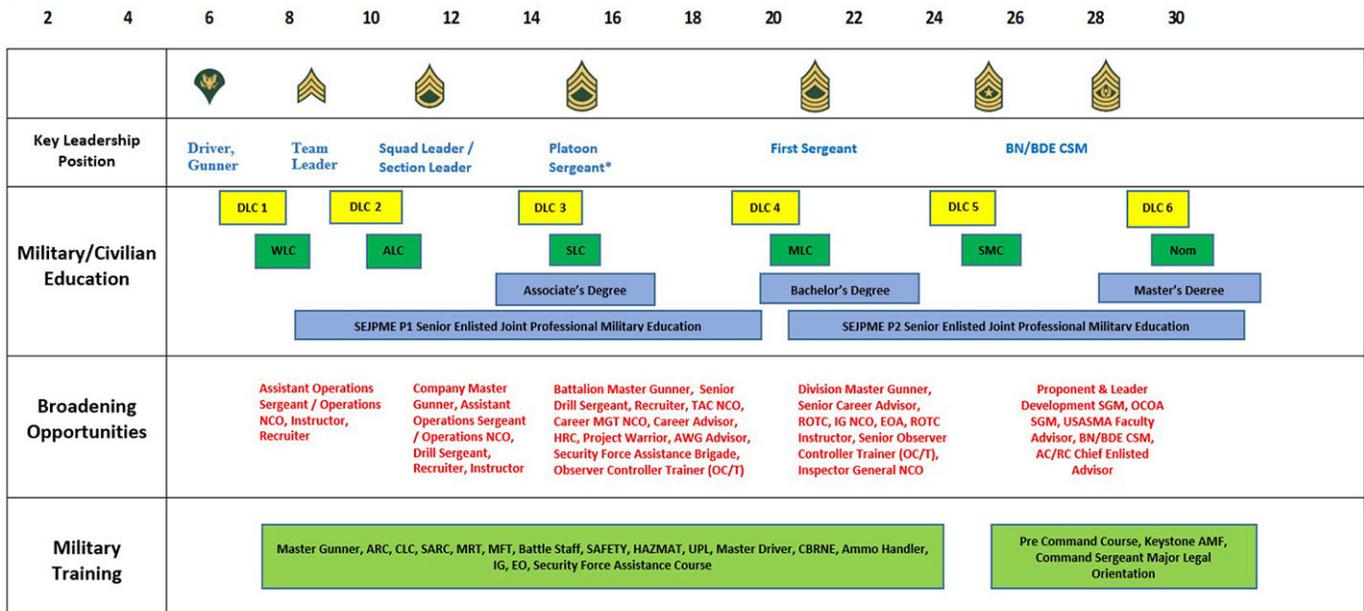
Notes

¹ DA Pamphlet 611-21, ASI Table 12-2, <https://www.milsuite.mil/book/docs/DOC-197933>.

² Bradley Infantry Fighting Vehicle Systems Master Gunner Course, 1-29th Infantry Battalion, <https://www.benning.army.mil/Armor/316thCav/129/BMG/>.

³ 316th Cavalry Brigade, course programs of instruction, https://www.benning.army.mil/Armor/316thCav/index.html?_=2114#Pol.

Years of Service



* Platoon Sergeant within ABCT Cavalry Squadron require completion of Bradley Master Gunner, ASI J3.

Figure 2. MOS 19M TDM.

'Rough-Cut CoAs' and Other Ways to Modify Military Decision-Making Process for Constrained Planning Timelines

by MAJ Gary M. Klein

Your brigade headquarters has just given your unit a tactical-operations order and told your battalion to execute in six days. The amount of time available seems adequate to conduct the military decision-making process (MDMP). However, your companies and platoons must conduct their own planning, and you need to conduct rehearsals, pre-combat checks and inspections to ensure readiness as well. For these reasons, the Army suggests a one-third, two-thirds rule whereby units use a maximum of one third of the available time for their own planning.¹ After reflecting on your planning timeline further, you realize you only have two days before you should issue your operations order. Suddenly, you worry that you do not have enough time to complete all the steps of MDMP.

Most leaders who have led MDMP or troop-leading procedures have experienced the tension between the desire to create the "perfect" operations order and the time available for planning. Planners can always use more time to add details, refine final products or develop branch plans. However, the reality is that planners have limited time and a duty to abide by the "one-third, two-thirds rule" (commanders use one-third of available time before mission execution for their planning, allocating the remaining two-thirds to subordinates). This rule enables their subordinate units to plan and prepare as well.

So the question then becomes: how can commanders and leaders modify MDMP to account for the time available? It is tempting to shorten the

amount of time allotted to each step of MDMP; but without enough time, some steps begin to lose their value. Instead, planners should revise, rearrange or eliminate steps to save time during MDMP.

This article presents three ways to modify MDMP, and it qualitatively compares the resulting three processes along two spectrums: the amount of time required and the number of options each process creates. Finally, this article will introduce and recommend the use of "rough-cut" courses of action (CoAs) to enable the commander's involvement in the planning process and CoA development guidance.

MDMP is a planning methodology designed to help commanders and their staffs understand their assigned mission and situation, develop a CoA and

Full MDMP, as per FM 6-0							Time:	Courses of action:		
Receipt of mission	Mission analysis	Course of action development (CoA 1)	Course of action development (CoA 2)	CoA analysis (CoA 1)	CoA analysis (CoA 2)	CoA comparison	CoA approval	Orders production	Requires the most time	Generates and analyzes the most options
Option 1) Modified MDMP; CoA comparison/selection prior to CoA analysis										
Receipt of mission	Mission analysis	Course of action development (CoA 1)	Course of action development (CoA 2)	CoA comparison	CoA analysis	CoA approval	Orders production		Requires the second most amount of time	Generates multiple CoAs, like #1, but doesn't analyze each
Option 2) Modified MDMP; "rough-cut" CoA comparison to enable a directed CoA										
Receipt of mission	Mission analysis	"Rough-cut" CoA 1	"Rough-cut" CoA 2	CoA comparison	Course of action (CoA) development	CoA analysis	CoA approval	Orders production	Requires the third most amount of time	Generates multiple conceptual CoAs but only one complete CoA
Option 3) Modified MDMP; directed CoA										
Receipt of mission	Mission analysis	Course of action (CoA) development	CoA analysis	CoA approval	Orders production				Requires the least time	Generates only one CoA

Figure 1. Doctrinal, full MDMP and three modified MDMP options. The commander and staff are able to balance the desire to develop options with the amount of time required to plan by conducting CoA comparison (red block) and selecting a CoA earlier in the planning process.

create an operations order.² (See Figure 1 for a schematic representation of full MDMP as per Field Manual (FM) 6-0, **Commander and Staff Organization and Operations**.) FM 6-0 states that in a time-constrained environment, commanders may direct their staffs to conduct only those steps necessary to reach the required decisions.³ It goes on to specify five time-saving techniques:

- Increasing the commander's involvement;
- Limiting the number of CoAs to develop;
- Maximizing parallel planning;
- Increasing collaborative planning; and
- Using liaison officers between echelons.⁴

However, it does not make any recommendations as to which steps of

MDMP commanders and leaders might eliminate.

Directed CoA (Option 3)

The most common way to abbreviate MDMP is for commanders to limit the number of CoAs to develop. Along these lines, commanders sometimes direct their staff to develop a single directed CoA. A directed CoA negates the need for staffs to conduct CoA analysis on multiple CoAs and removes the requirement to conduct CoA comparison (Figure 1, Option 3). As compared to the doctrinal full MDMP, a directed CoA is one of the most effective ways to reduce the amount of time required for MDMP. However, it incurs risk by analyzing only one option. Developing a directed CoA risks constraining leaders' situational understanding and ability to adapt to unanticipated situations.

A CoA describes one understanding and visualization for how an operation might unfold based on a set of planning assumptions. Using an analogy of a traveler, a CoA represents one path for how a unit might travel from its current state to the desired endstate.⁵ So, what happens when the unit has considered only one path, the planning assumptions prove to be incorrect and the operation does not go as planned? Having analyzed only one CoA, leaders must then change course in real-time without having explored different planning factors or alternative paths.

Developing multiple CoAs forces commanders and staffs to consider options, such as different task-organizations, priorities of support, avenues of approach, sequences of actions and ways to synchronize units. The completed operations order will necessarily prescribe one way of accomplishing

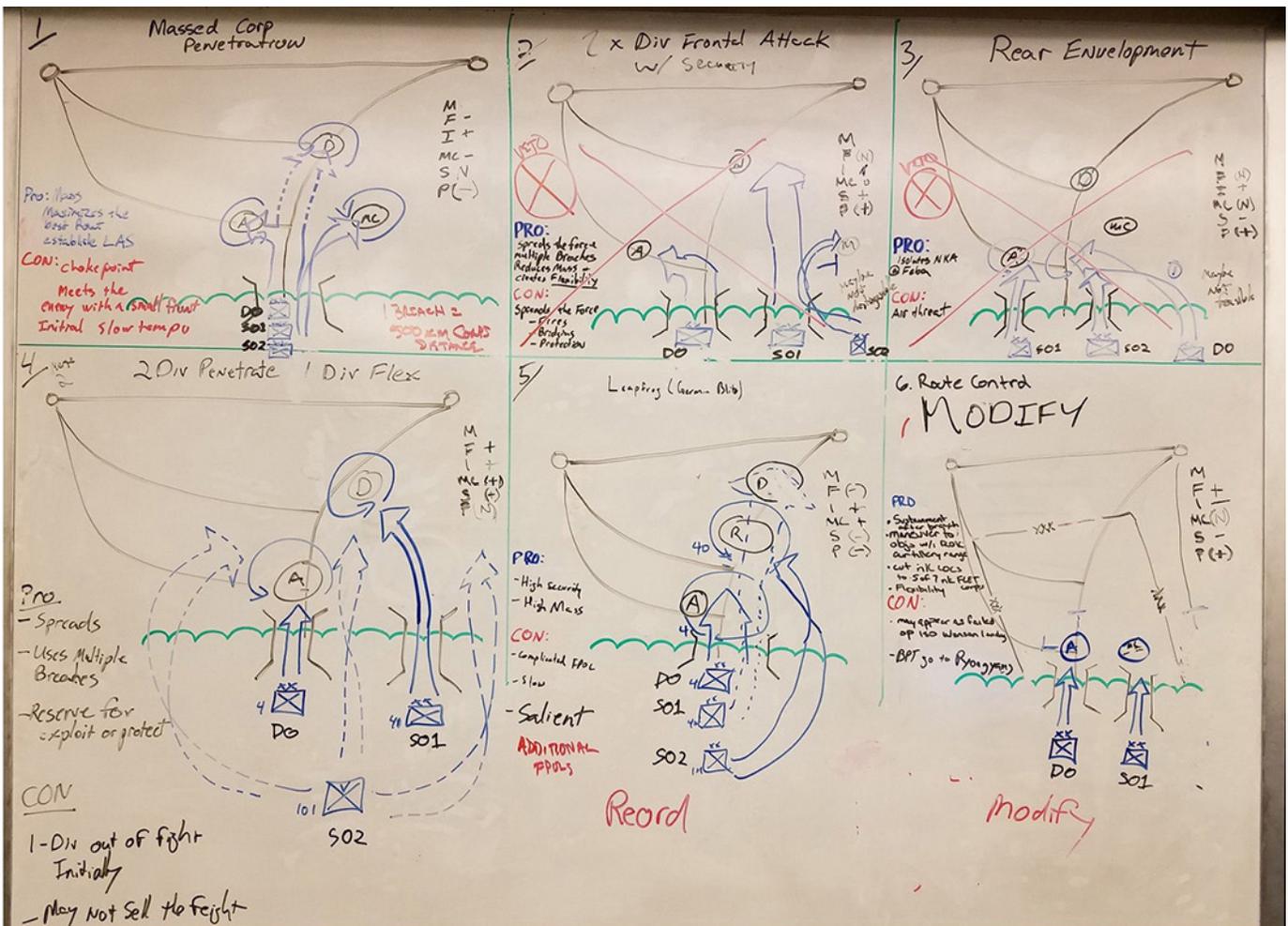


Figure 2. Rough-cut CoAs. These are whiteboard sketches of rough-cut CoAs created at the School of Advanced Military Studies (SAMS) in Spring 2018. They are noticeably unpolished, but they represent a valuable tool that enables the commander's involvement, guidance and dialogue with the staff. For a more polished example, see Figure 3.

the mission, but the other options considered during planning provide leaders a broader understanding of the situation and potential branch plans. If leaders must restrict themselves to developing one CoA, they can wargame critical events and areas of perceived risk to increase situational understanding and consider more options.

Selection before analysis (Option 1)

Another way to modify MDMP is for leaders to conduct CoA comparison and selection before CoA analysis (Figure 1, Option 1). This method is similar to the British army's combat-estimate planning process, also known as the "seven questions." This planning process allows staffs to develop multiple CoAs but compares and selects one of them prior to CoA analysis.⁶

Conducting CoA comparison and selection prior to the CoA analysis reduces the amount of time required to conduct MDMP by requiring the staff to conduct CoA analysis on only one CoA. To save more time, staffs may elect to withhold developing all requisite control measures – a step required to complete the CoA – until after CoA analysis.

The risk inherent in this option is that the commander and staff discard a CoA before they are able to fully analyze it and compare the relative advantages and disadvantages of each CoA in depth.

Rough-cut CoAs (Option 2)

Another option is for leaders to modify

MDMP by developing "rough-cut" CoAs, following mission analysis to enable a directed CoA (Figure 1, Option 2). This method borrows from the U.S. Marine Corps' planning process, which provides an option for the staff to present a rough-cut CoA brief to the commander as an informal review early in the CoA development process.⁷ During a rough-cut CoA brief, the staff compares conceptual CoAs to enable the commander to select a single CoA early in the planning process.

Presenting rough-cut CoAs to the commander after mission analysis enables a good compromise between the amount of time required and the number of options created during planning. Rough-cut CoAs require the staff to develop and compare multiple CoAs – which is an advantage – but it does so conceptually, thereby saving time as compared to completing CoA development on multiple CoAs. This prevents the staff from spending time completing and refining CoAs that the commander would not have selected.

Intro to rough-cut CoAs

Most leaders are unfamiliar with "rough-cut CoAs," so the next two paragraphs and the accompanying figures explain the concept using U.S. Marine Corps doctrine and the author's personal experience. Marine Corps doctrine does not deliberately define a rough-cut CoA, but based on the context of this term's use, a rough-cut CoA is an initial, unrefined or conceptual CoA. Presenting rough-cut CoAs enables the commander's involvement in the planning process and generates dialogue and guidance

before the staff invests more time refining the CoA(s).⁸

Figures 2 and 3 are examples of rough-cut CoAs with a schematic representation of the terrain, templated enemy disposition, friendly units, axes of advance and tactical tasks.⁹ These rough-cut CoAs included inputs from all warfighting functions to ensure they met four out of the five screening criteria (i.e., feasible, acceptable, suitable and distinct). These four criteria ensure the CoAs can:

- Accomplish the mission with the resources available;
- Balance risk vs. reward adequately;
- Accomplish the mission within the commander's intent; and
- Are unique from other CoAs.¹⁰

The amount of detail contained in a rough-cut CoA can vary, but Figures 2 and 3 lack enough control measures and do not have the details necessary to synchronize all warfighting functions. The staff completed those details later, after the commander selected one or more rough-cut CoA(s) for further development.

Conclusion

Leaders must balance the natural tension between creating the perfect operations order and the amount of time available for planning. This article presented three options for balancing these two demands and then qualitatively compared these options against two variables: the relative time required to complete MDMP and how many options (conceptual or complete) each option generated.

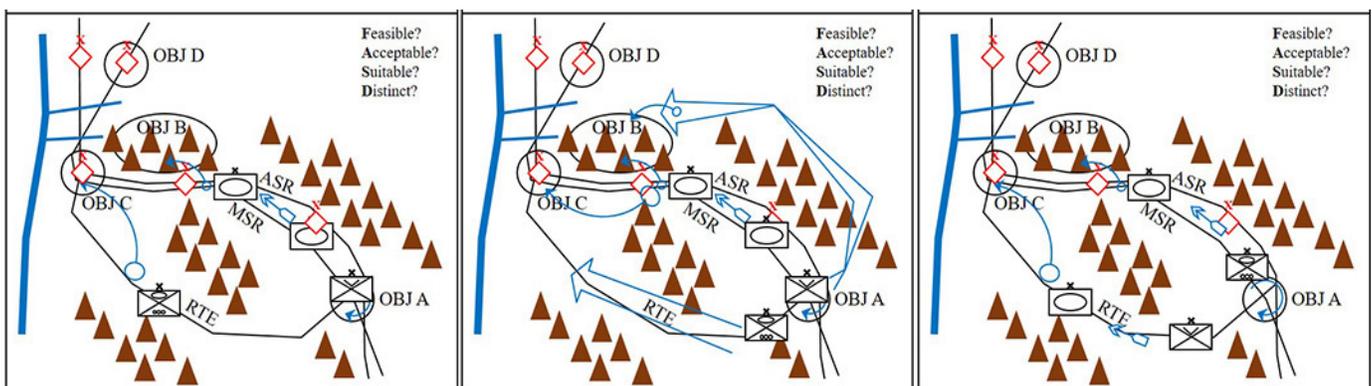


Figure 3. Schematic rough-cut CoAs. These schematics are adapted from rough-cut CoAs developed during a 1st Armored Division command-post exercise in Summer 2018. Left side: CoA 1: two up, one back, one in reserve. Center: CoA 2: one up, two back, battalion air assault. Right: CoA 3: two up, two back.

Full MDMP (Option 1) enables the greatest understanding and the largest number of options, but it requires the most time to complete. Options 2, 3 and 4 save more time respectively, but they do so at the increasing expense of a broader understanding and potential adaptability. Rough-cut CoAs (Option 3) balance the advantages and disadvantages of these methods and provide an outstanding tool to enable the commander's involvement in the planning process and CoA development guidance.

The three MDMP options described in this article rearranged the seven steps of MDMP to direct or enable selecting a CoA earlier in the planning process to minimize the amount of time developing and analyzing CoAs. It is important that leaders learn and understand MDMP doctrine. However, given the time-constrained environment leaders face on a daily basis, it may be even more important that leaders are able to deliberately modify these steps to account for the planning time available. Leaders must recognize how to direct their teams to develop a plan that is good enough for the demands of their unique situation.

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Tactics Directorate, Maneuver Center of Excellence, Fort Benning, GA; troop senior observer/coach/trainer, Task Force 4, Operations Group, Joint Readiness Training Center, Fort Polk, LA; commander, Troop B and Headquarters and Headquarters Company, 1st Squadron, 33rd Cavalry Regiment, Fort Campbell, KY; assistant operations officer, Headquarters and Headquarters Troop, 1-33 Cav, Fort Campbell; and tank-platoon leader and company executive officer, Company D, 1st Squadron, 5th Cavalry Regiment, Fort Hood, TX. MAJ Klein's military schools include the Advanced Military Studies Program, Command and General Staff Officer Course, MCCC, Armor Basic Officer Leadership Course, Ranger School, Airborne School and Air Assault School. He holds a bachelor's of science degree in biochemistry from the University of Michigan, a master's of science degree in medicinal chemistry from the University of Illinois-Chicago and a master's of arts degree in military operations from SAMS.

Notes

¹ Department of the Army, FM 6-0, **Commander and Staff Organization and Operations**, Washington, DC: Government Printing Office, 2014.

² Ibid.

³ Ibid.

⁴ Ibid.

⁵ Huba Wass de Czege, "Thinking and Acting Like an Early Explorer: Operational Art Is Not a Level of War," **Small Wars Journal**, March 14, 2011, <http://smallwarsjournal.com/jrnl/art/operational-art-is-not-a-level-of-war>.

⁶ Directorate of Land Warfare, **The Staff Officer's Handbook**, Electronic Version, Warminster, UK: Land Warfare Centre, 2014.

⁷ Headquarters U.S. Marine Corps, Marine Corps Warfare Publication 5-10, **Marine Corps Planning Process**, Washington, DC: Government Printing Office, 2016.

⁸ Ibid.

⁹ MAJ Gary M. Klein documented these examples of "rough-cut" CoAs as a student in SAMS' Advanced Military Studies Program during academic year 2017-18 (Figure 2) and as a G-5 plans officer in 1st Armored Division during Command Post Exercise 3 in Summer 2018 (Figure 3). Dr. Bruce E. Stanley and the SAMS faculty shared this planning technique.

¹⁰ Department of the Army, FM 6-0.

ACRONYM QUICK-SCAN

CoA – course of action
FM – field manual
MCCC – Maneuver Captain's Career Course
MDMP – military decision-making process
SAMS – School of Advanced Military Studies

What Now?

Rapid Decision-Making Synchronization Process: the Planning Tool You Didn't Know You Were Missing

by COL Esli T. Pitts

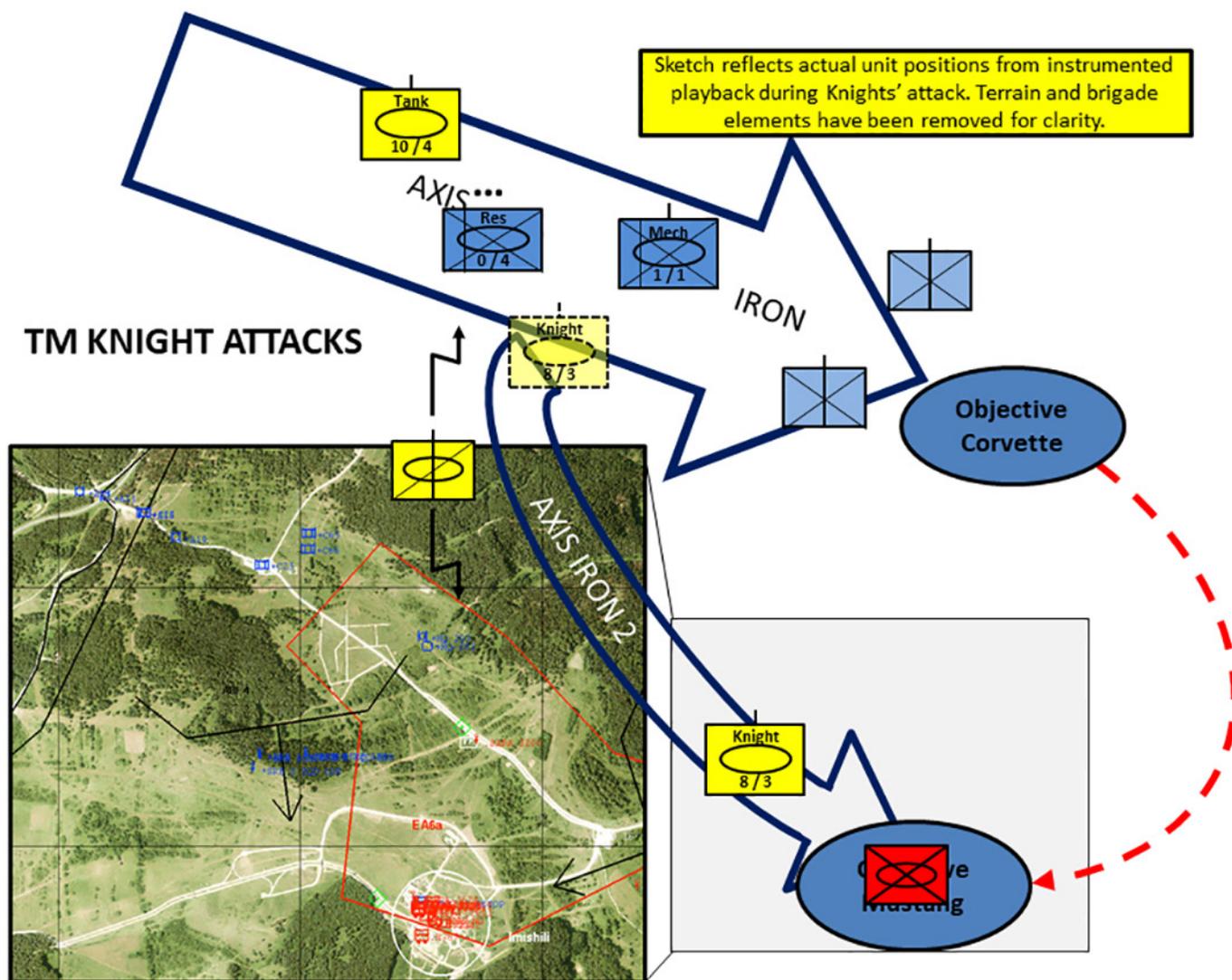
It was approaching late morning, and the multinational brigade's attack into the northern objective (Objective Corvette) had ground to a halt. Task Force (TF) Lancer was set in covered positions to the rear, waiting for the brigade to commit them to the fight. Lancers' task-organization included the organic scout and mortar platoons, task-force reserve (a mechanized platoon), two tank companies and a

heavily-attrited mechanized-infantry company. The battalion had detached the second mechanized-infantry company but was reinforced with a U.S. cavalry troop and two multinational motorized rifle companies.

The two motorized companies were in the lead and in close proximity to Objective Corvette, but not in significant contact. The cavalry troop was deployed in a screen line to the TF's south, oriented to the east. The

brigade was picking up indications and warnings that an enemy force was displacing from Objective Corvette and moving to the south, apparently to occupy Objective Mustang (Figure 1).

At 1145, after hearing some traffic on the brigade command net, Lancer 6 calls Black Knight 6: "Knight 6, be prepared to move south on Axis Iron 2 on order." (Knights' combat power consists of eight tanks and three Bradleys.) At 1215, Lancer takes advantage of the



Instrumented playback shot of Knight attacking along Axis Iron 2 into enemy forces on Objective Mustang

Figure 1. Attack along Axis Iron 2.

lull in the brigade attack to refuel the companies. They direct the priority of fueling as Axe (mech) and then Dragon (tank). Knight had only drawn 1,600 gallons of fuel prior to the operation, which had not topped them off. Now, even though they have been running for more than five hours and had just received word to be prepared to conduct an attack, they are not part of the refueling plan.

At 1253, Lancer 5 and Lancer 6 discuss the situation, and their consensus is that Knight will move south on Axis Iron 2 and regain contact with enemy before they can reinforce Objective Mustang.

At 1309, Knight starts movement down Axis Iron 2 toward Objective Mustang, passing within 800 meters of Lancer's fuelers and 3,150 gallons of fuel. Knight is reinforced by Lancer 3 and Lancer 6, who leave the other five companies in the TF behind. Shortly after starting movement on Axis Iron 2, Knight makes contact with enemy vehicles and obstacles.

At 1314, Knight 6 backbriefs Lancer elements: "My task and purpose is to go all the way to seize Objective Mustang if my combat power allows it." He is corrected by Lancer 5: "Conduct a movement-to-contact to defeat that

force; no need to enter Objective Mustang."

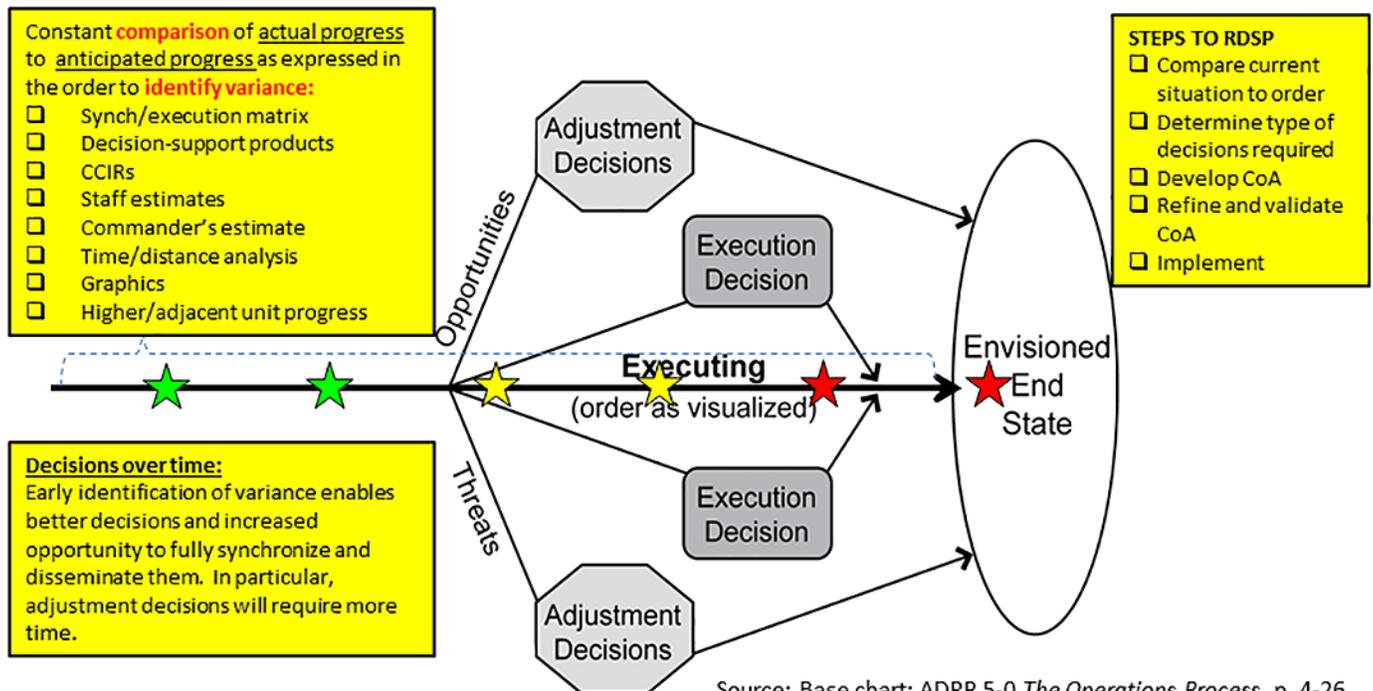
At 1420, Knight continues the attack and finds itself in heavy contact in the vicinity of Objective Mustang. Knight sustains significant combat losses while achieving minimal effects on the enemy force. Also, while it was irrelevant to the notionally dead vehicles, Lancer wound up with a significant real-world refueling issue for the scattered combat vehicles after the attack.

At 1725, TF Lancer initiated a second, mostly unplanned, company-level attack into Objective Mustang. This time they used Team Griffin, a multinational motorized company, and a platoon or so of U.S. mechanized forces. It was winter and darkness had fallen, but Griffin had minimal training, equipment or capability to operate at night. Lancer's failure to establish common direct-fire-control measures (DFCMs) on Objective Mustang meant that the United States and multinational forces could not coordinate direct fires, preventing the mechanized force from supporting Griffin, which was literally operating in the dark. Griffin's aggression enabled it to achieve a foothold on Objective Mustang; however, the results were again predictable. This time, instead of casualties and a fuel issue for the tanks, TF Lancer was

presented with a dilemma in casualty evacuation, which was cut short as Joint Multinational Readiness Center (JMRC) initiated change of mission.

Though Lancer had about two hours and 20 minutes to prepare for this significant change of mission, they launched Knight without the benefit of updated graphics, direct-fires planning, a battalion fire-support plan or information-collection (IC) plan. When it arrived at Objective Mustang, Knight's tanks had been running for at least seven hours, but as the battalion's new main effort, they were not prioritized for refueling even though refueling operations were ongoing. Acknowledging that there was still a brigade attack, Lancer left behind four other companies (and the remnants of a fifth) and did not weight the new attack with mortars, scouts or the reserve. As a result, first Knight, and then Griffin, were unable to successfully execute the mission.

This attack really happened. I observed it at JMRC while serving as the task-force senior maneuver trainer. The names have been changed, but the essential facts played out as described even though the platoons, companies and battalion were filled with Soldiers who were trained, engaged, cared and



Source: Base chart: ADRP 5-0 *The Operations Process*, p. 4-26

Figure 2. RDSP model.

wanted to win. Much like your own formation!

How did this happen? How could they have done better? More importantly, how can you keep this from happening to you during your next rotation, wherever or whenever that may be?

RDSP

Most of us have been hearing some variation of the phrases “You were wedded to your plan” or “You fought the plan, not the enemy” for much of our careers. However, there is a doctrinal method by which we can avoid the tyranny of “fighting the plan.” The secret is called the Rapid Decision-Making Synchronization Process (RDSP).

I first heard of RDSP as a student at the Command and General Staff College (CGSC). I’ll admit I didn’t grasp its importance until I later served as an instructor there, when I actually taught the class. During my own battalion command, I incorporated an iteration into several of the battalion-level training events we conducted and employed it with good effects during a brigade defense at the National Training Center. As a trainer at JMRC, I offered a class to rotational units prior to rolling into the box and also made it a point of emphasis during after-action reviews.

RDSP is still current doctrine, as found in Army Doctrinal Reference Publication (ADRP) 5-0, *The Operations Process*, and to the extent that it is emphasized by individual instructors, it is part of the Advanced Operations Course at CGSC.

So what is RDSP? And how does it work? This article will review the five steps to RDSP and talk about some ways to implement it in training.

Step 1: compare current situation to order

RDSP is a natural transition from the fourth step in the operations process: “assess.” As we assess an ongoing operation, we are constantly comparing our actual current and likely future progress to what we anticipated in planning and preparation and looking for variance between them.

Information identified as variance often meets the definition of *exceptional*

information, defined as “information that would have answered one of the commander’s critical information requirements [CCIR] if the requirement for it had been foreseen and stated as one of the [CCIRs].”¹

While this step says we are comparing the current situation to the order, we are actually comparing our current situation to a variety of inputs. Certainly the order is the source of some key products, including execution, synchronization and decision matrices. But we can (and should) consider our running estimates and our understanding of aspects of time/distance analysis, and compare our progress to reporting from adjacent and higher units.

Anybody might recognize variance. Consider the following situations:

- The flank-guard platoon leader just identified the regimental commander’s tank and some command vehicles under nets on his left flank.
- The support force just reported there are no obstacles in the enemy’s main defensive area – at least not where templated.
- The breach force just lost its third mine plow and the roller was already gone.
- The scouts report that the enemy is 2,500 meters farther east than the graphics show.
- The battle captain realizes your lead company is 30 minutes behind the timeline.
- The S-2 plots a unique high-value enemy asset in an unexpected but accessible location.
- You are executing a decision, branch or contingency plan that was not already planned in detail.
- The battle noncommissioned officer recognizes that the main-effort company doesn’t have enough combat power to achieve the decisive operation.
- The executive officer realizes that the adjacent battalion is moving fast and there is now a 45-minute gap.
- Your higher headquarters has just directed you to attack to a new objective in response to a shifting enemy force (see the opening vignette).

These examples all sound overly obvious. My experience, however, is that in the noise and confusion of maneuver, the subtleties of key reporting are often missed or misunderstood. The information was sent, but nobody recognized the significance of it.

For instance, when I served as battle captain during a brigade attack at Hohenfels, my new radio-telephone operator (RTO) received a timely report of an “AT8” (anti-tank system) but recorded it as a report of an “88” (recovery vehicle) at a particular grid. Not recognizing the significance of a reported “88,” the spot report died at his station. The AT8 crew quickly went on to destroy most of a company.

Identifying variance is meaningless if somebody doesn’t take action on it. Essential to this step is that somebody then says something, whether that’s a net call or announcing “Attention in the TOC [tactical-operations center]!”

Inexperienced units rarely see the variance until it comes out in the after-action review (AAR). Good units recognize variance as it emerges through constant comparison of the situation to multiple sources: the synch matrix, the commander’s estimate, battle-tracking, situation reports and gut feelings. Great units recognize variance and conduct RDSP to quickly identify and analyze the problem, and then create a fragmentary order (FRAGO) to disseminate the solution.

The key to success with RDSP lies in the recognition of variance early enough to make a decision with enough time to execute it against a live enemy force.

Step 2: determine the type of decision required

There are two essential decisions to make. The first decision is whether to act at all. Variance can present itself in the form of *threats* or *opportunities*. In most if not all cases, the unit must respond to threats to mission accomplishment or threats to the force, while lesser threats might be ignored. At minimum, the commander must balance the risk of not taking action. The unit also may or may not choose to take advantage of opportunities. For instance, a battalion conducting an

attack on a force-oriented objective might choose to instead take advantage of a significant terrain-based opportunity. Whether or not it does so, the unit should recognize the opportunity and make a deliberate decision.

The second decision is one of a matter of degree of change. Variance may only require a small change to the plan, called an *execution decision*. Execution decisions are generally within the existing concept of operations, and those decisions may have been delegated to the staff, the TOC, etc. Execution decisions can also involve conducting branch plans or contingency plans that were already developed to support anticipated commander's decisions per the decision-support matrix. Changes that are more complex, involving major changes to the course of action (CoA), are called *adjustment changes*. Adjustment decisions are generally the result of unanticipated events. They will, at minimum, require approval from the unit commander and may require approval of the next-higher commander as well.

The line between execution decisions and adjustment decisions is pretty blurred. Decisions should be evaluated in terms of a graduated scale of complexity. Maybe the necessary decision was for the battle captain to approve a temporary boundary change, with associated unit crosstalk and updated graphics in the TOC, at which time the process was done. At some point, factoring in experience, willingness to delegate and staff proficiency, decisions rapidly become the commander's responsibility. Eventually, they become complex enough that they require conducting the next step.

Step 3: develop a CoA

Though this is starting to sound like the military decision-making process (MDMP), it is not MDMP. ADRP 5-0 says the following: "While [MDMP] seeks the optimal solution, RDSP seeks a timely and effective solution."² One key difference is that the start point of RDSP is the actual situation the unit finds itself in when variance was first observed and the need for a decision was identified. You are subject to the very real constraints presented by your available combat power, logistical sta-

tus and disposition on the battlefield.

By its very nature, it starts as a reactive event. From that point, the CoA could be one directed by the commander, a hasty product developed in the TOC after a quick "two-minute drill" with the executive officer and then cross-talked between the tactical command post (TAC) and TOC, or a detailed and entirely new plan.

Some initial considerations include whether the mission, commander's intent, CCIRs, decisive operation, shaping operations and potential decisions need to be changed. Do graphics require changing? Do we need to change the task-organization, allocate a reserve, reconstitute a reserve or shift the main effort?

More advanced: what are the ramifications of your changes on your higher headquarters? As an example: what if you change your scheme of fires and update your high-payoff target list (HPTL)? Be aware that your changes, and requested support, might significantly impact your higher headquarters' deep fight, either through inadvertently duplicating their efforts, or more likely by creating a gap in their plans through diverted assets.

The CoA might be as simple as a change to the scheme of maneuver. Consider the earlier example of variance in which our scout platoon identified that the objective is actually 2,500 meters farther to the east. Is it enough to identify a center-mass grid to the new objective, new point of breach, point of penetration and associated support- and attack-by-fire positions, build them in Joint Capabilities Release (JCR) and blast it out to the force? Maybe. Or maybe not -- let's look at the next step.

Step 4: refine and validate CoA

While ADRP 5-0 breaks this process into Steps 3 and 4, my opinion and experience at the battalion are that they are largely one continuous flow. A first consideration in this step is an assessment that your initial maneuver CoA is feasible, acceptable and suitable. It is not yet complete, and may never be. However, synchronization of all the warfighting functions (WfF) is inherent

within the name of the process.

Continuing the example of the newly found objective, we already designed a new ground scheme of maneuver, but simply extending the battalion's graphics for 2,500 meters was insufficient in this case.

Let's refine the CoA by adding just some of many possible additional considerations per WfF:

- **Movement and maneuver:** We'll add a new phase line at which to transition to bounding overwatch as well as designate and assign target-reference points (TRPs) on the new objective to control direct fires.
- **Intelligence:** Let's establish named areas of interest (NAIs) to help us confirm obstacles associated with the new objective and identify the enemy's reserve force. We'll also refine the HPTL.
- **Fires:** A CoA might be simple enough to simply refine existing targets. However, our example includes significant changes, so we'll develop a new plan with new grids for the same targets we already planned. We'll be sure to update our tactical and technical triggers, too. We'll also establish a new mortar firing point (MFP) and adjust supporting radar coverage through brigade.
- **Protection:** Based on our deeper penetration into the enemy's defensive positions, we'll change our air-defense threat warning and weapons-control status. We'll also review the location and employment of our critical assets and adjust (or request) our air defense, engineer and military police to better protect them.
- **Sustainment:** We'll establish an additional logistics release point and reposition our emergency Class (CL) III and CL V emergency resupply, and also jump the main aid station (MAS) forward one more terrain feature.
- **Mission command:** We'll need to move the retransmission team forward quickly. We also need to develop additional triggers to control if and when we jump the TOC or TAC forward one more bound.

The combinations are endless. The point is that changes to the scheme of

maneuver will almost always generate changes in the other Wffs. The essential point is that the CoA is synchronized, and this can actually be done relatively quickly in the TOC.

See Figure 3 for a partial list of considerations for a counterattack.

Lastly, before going final, the unit must ensure that its new CoA still nests with and supports its higher headquarters' plan and, if necessary, it has approval to execute it.

Step 5: implement

Implementing the new CoA could be as simple as a verbal directive from the TOC or the commander. Ideally, it begins to take advantage of mission-command tools such as JCR or Force XXI Battle Command Brigade and Below to develop and disseminate updated graphics and a written or verbal FRA-GO.

If enough time is available, the unit should continue to refine and disseminate associated products: graphics, decision-support products, fire-support plans, synch matrix, execution checklist, etc. But not at the expense of time or clarity – the keys to RDSP are rapidity and synchronization. RDSP done too late will only cause confusion. LTG George S. Patton Jr.'s famous maxim that "a good plan violently executed now is better than a perfect plan executed next week" is still relevant.

What now?

RDSP is the staff answer to the age-old question: "What now, lieutenant (captain, major, lieutenant colonel, colonel)?" My own experience is that it is a useful process that helps units leverage flexibility and resist the tendency to "fight the plan" even when that plan is no longer relevant. Unfortunately, my informal survey of recent graduates of CGSC, intermediate-level education, sister-service schools and combat-training center leader-training programs reveals that it is not taught – or, if it is, it is not emphasized.

I opened this article with an overview of RDSP that was conspicuous by its absence. You might have already said to yourself that you already do RDSP, but you don't call it RDSP. My observations of RDSP (by any name) being

-
- Intelligence
 - Enemy assessment
 - Composition/disposition
 - IC plan/ISR assets
 - Movement and maneuver
 - Mission/intent
 - Adjacent units
 - Task and purpose by HQ
 - Security: advance guard /screen
 - Formations/techniques
 - Tempo
 - DFCM s/TRPs/RFLs
 - Boundaries/graphics
 - Task-organization changes
 - FPoL/RPoL
 - March objective/LoA
 - Reserve
 - Fire support
 - Focus of fires
 - Brigade fires
 - FSO/FO locations
 - Protection
 - Mortars/MFPs
 - CAS/attack aviation
 - Smoke
 - Radars
 - FSCM/ NFA s
 - Sustainment
 - CBRN posture/decon
 - Mobility support
 - Air defense
 - Critical assets
 - Mission command
 - CL III/V status (assessment)
 - AXPs
 - Split/jump FAS/MAS
 - Emergency resupply
 - PACE change
 - Jump TOC
 - Reposition retrans
 - Civilian considerations

Figure 3. RDSP considerations for hasty or counterattack.

employed at JMRC were that those rare instances produced highly maneuver-centric CoAs (and sometimes that is enough). But we can do better. And we can do so pretty easily if we recognize and take control of the emerging situation.

More than once, while conducting TF AARs at JMRC, we would discuss a particular tactical situation for which RDSP would have been appropriate. I would then offer the battalion's leadership about 10 minutes to gather onto a screen an image of the situation and to develop the FRAGO they wish they'd developed while in execution. The FRA-GO was invariably a better option than what they chose to execute during the mission, which was often choosing to "fight the plan."

It's easy to recognize after the fact that variance has occurred and that we missed an opportunity or failed to respond to a threat. It's harder to do so while we are in the fight. Therefore, it's important to train ourselves so that we recognize variance during operations and are able to respond appropriately.

First, recall that the first step is to compare the current situation to the order. We must habitually complete the order, including developing a detailed

synch matrix and detailed decision-support products. If we never fully develop the plan, how do we recognize variance from it? If we did not do the time/distance analysis to know that the time between planned Events A and B should be 60 minutes, how do we know we should be alarmed when we are currently 90 minutes into that time with no sign of Event B yet? If we did not develop the understanding that Events C, D and E must happen before Decisive Event F, how do we respond when we eventually realize that Event E cannot, and will not, happen and F will now fail?

Second, the battle captain that will be on duty during the mission should be in attendance at the combined-arms rehearsal. This is a free chance to see and hear the mission and begin to gain an understanding of it.

Third, the mission must be battle-tracked to completion. The battle staff should be sitting in the TOC, closely watching the synch matrix and decision-support products and crossing events off as they happen. As the staff does so, they are looking for variance and asking questions. The S-2 ops rep is sitting right next to the battle captain and is closely tracking enemy forces to compare what has been seen

and/or killed, vs. what they anticipated having killed. Unseen enemy forces always represent threats or opportunities. Other staff officers are doing similar analysis within their functions. Going back to our original example, picture Lancer 4 keying the net and insisting that Knight be first in the line to refuel.

Fourth, the whole team in the TOC – everybody regardless of rank or position – must be trained on recognizing variance in its many forms and taking action. In the example of the AT8 vs. the 88, the lesson for me was not to grab the hand mic from the RTO but to train us better.

Fifth, train the process of RDSP. Run through it in the classroom. Read the doctrine (or this article), take some prep time to build a vignette, and then have a brown-bag lunch with the team.

Sixth, during battalion or brigade training events, use the AAR to identify times when RDSP would have been appropriate. Stop the AAR and actually do the process for 10 to 15 minutes.

Seventh, train the process of RDSP again. Run through it in the field. Here is my technique, both during battalion command and refined during my time as a trainer at JMRC. The idea was to execute the actual mission you've been assigned and then conduct RDSP. At the same time I ended the exercise for the companies, I would inject a new situation on the battalion by way of additional reporting. This would stimulate RDSP with sufficient complexity to require an adjustment decision. While the companies then paused to consolidate, account for weapons, etc., the staff worked the process until they could transmit a FRAGO. There was no actual tactical movement required by the companies. Generally, the

companies would be finished and prepared for any administrative movements about the same time the battalion staff was finished with the FRAGO and prepared to resume control of the companies' next movements. Battalion and brigade executive officers should specifically find time to rehearse the RDSP with their TOC crews and build the necessary products.

Eighth, do it again.

RDSP is an essential but overlooked tool. If you inventoried the tank and found your impact wrench missing, you'd be a little bit concerned. You'd be even more concerned if you were about to break track. If you inventoried your staff's tool bag, would you find RDSP, or would it be missing?

So the question for you is, What now?

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Notes

¹ ADRP 5-0, *The Operations Process*, May 17, 2012.

² Ibid.

ACRONYM QUICK-SCAN

AAR – after-action review
ADRP – Army doctrinal reference publication
ADV Grd – advance guard
ATK AVN – attack aviation
AXP – ambulance exchange point
CAS – close air support
CBRN – chemical, biological, radiological and nuclear
CCIR – commander's critical-information requirement
CGSC – Command and General Staff College
CL – class
CoA – course of action
DFCM – direct fire-control measure
FAS – forward aid station
FO – forward observer
FPoL – forward passage of lines
FRAGO – fragmentary order
FSCM – fire-support coordination measure
FSO – fire-support officer
HPTL – high-payoff target list
HQ – headquarters
IC – information collection
ISR – intelligence, surveillance and reconnaissance
JCR – Joint Capabilities Release
JMRC – Joint Multinational Readiness Center
LoA – limit of advance
MAS – main aid station
MDMP – military decision-making process
MFP – mortar firing point
NAI – named area of interest
NFA – no-fire area
PACE – primary, alternate, contingency, emergency
RDSP – Rapid Decision-making Synchronization Process
RFL – restricted firing line
RPoL – rearward passage of lines
RTO – radio-telephone operator
TAC – tactical command post
TF – task force
TOC – tactical-operations center
TRP – target-reference point
TM – team
WfF – warfighting function

Training Management: Old is New

by COL Stuart S. Smith

Echoing the Greek lyrical poet and soldier Archilochus (c. 650 BCE): “We don’t rise to the level of our expectations; we fall to the level of our training.” With that in mind, commanders owe their Soldiers the focus and tools required to succeed, and training is the most critical means the Army provides to achieve readiness.

Within the Army Vision 2018 statement, U.S. Army Chief of Staff GEN Mark A. Milley and Secretary of the Army Mark T. Esper said their vision for the Army requires a transition from training that previously focused on emergent and counterinsurgency fights to training for high-intensity conflict against conventional and hybrid peer threats.

To achieve the proficiency in training and operations needed to win the fight described in the Army vision and doctrine, Armor Branch leaders must be well-versed and proficient in training management (TM). Training must be deliberately planned and focused on

both the individual and collective tasks that support the unit’s mission-essential tasks (MET) while being evaluated and assessed against established standards. To achieve and maintain the unique crew qualifications, collective maneuver and integration skills required on the modern, extremely complex battlefield, leaders must properly plan, resource and protect training opportunities to achieve the desired levels of readiness.

In response to Army leadership’s readiness requirements, the Training Management Division (TMD), under the direction of Department of the Army’s Operations and Training (G-3/5/7), responded to changes in guidance by continuing to improve TM doctrine, reporting requirements and associated tools that enable leaders to train their Soldiers for future conflicts.

New vision

The Army Vision 2018 directs leaders to focus training on high-intensity conflict and combined-arms maneuver with joint forces, allies and partners,

and to be prepared to conduct large-scale combat operations against conventional and hybrid peer threats. To achieve this goal, leaders must design and structure training events that force their units to “train as we would fight against an equally capable peer with a full array of threat capabilities” while training to and reporting against established objective standards found in the proponent-developed training and evaluation outlines (T&EO) associated with each collective task. This is important because “[a]s leaders, our responsibility is to properly plan, prepare, execute, evaluate and assess training to ensure our Soldiers and units are prepared for combat,” said LTG Joseph Anderson, deputy chief of staff, Army G-3/5/7. “Training readiness informs senior leaders and supports their decisions regarding the distribution of resources – including time, money and personnel.”

As early as 2011, Army leaders began the process of filling the void in TM knowledge created by years of mandated Army Force Generation

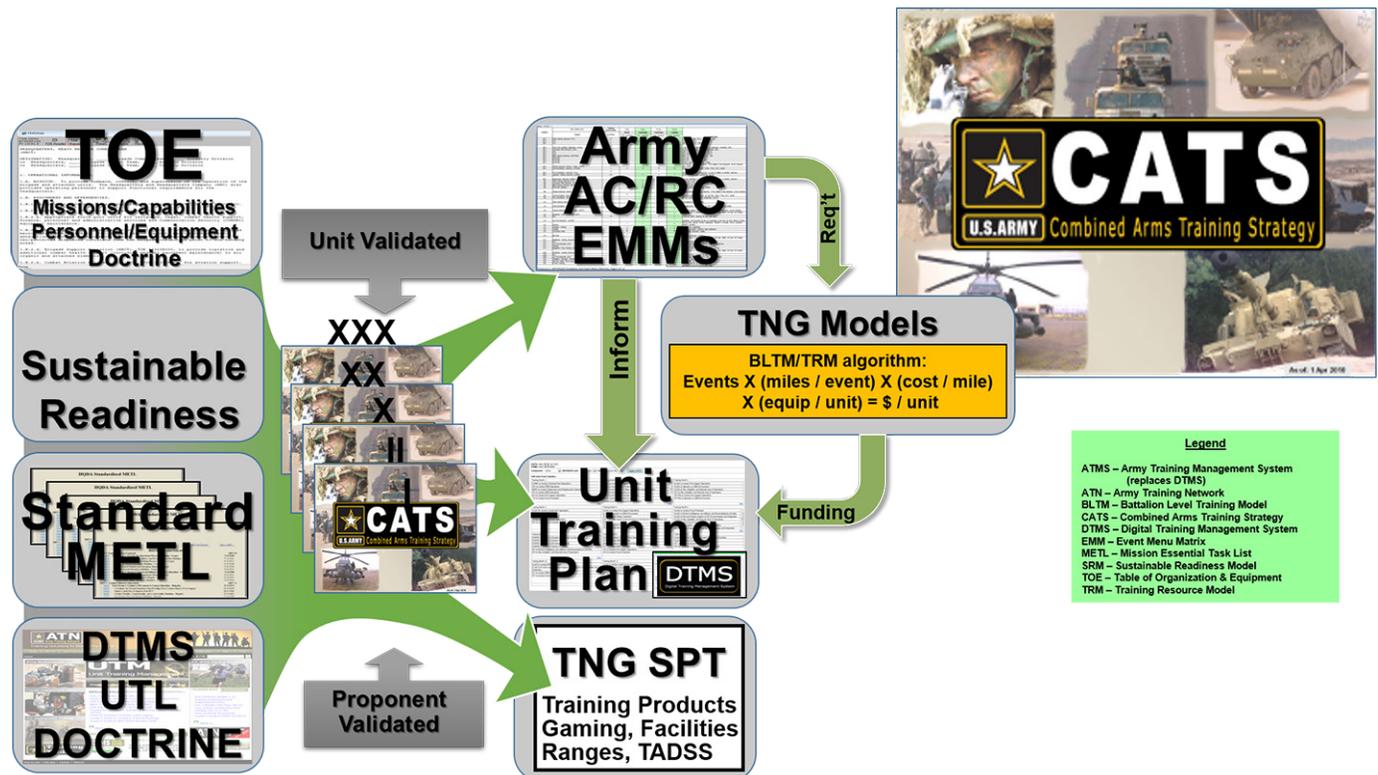


Figure 1. CATS model.

pre-deployment training. To educate new generations on how to conduct unit-developed TM at each echelon, the Army provided TM doctrine. The doctrine – found in Field Manual (FM) 7-0, **Training Units and Developing Leaders for Full-Spectrum Operations** – outlined and described principles, roles and functions, along with the “how to” for developing unit training products. Over the years, training doctrine was refined to reflect changes in guidance and policy. For example, the revised FM 7-0, **Train to Win in a Complex World**, published in 2016, and Army Doctrinal Publication (ADP) 7-0, **Training**, published in August 2018, are the capstone documents that describe how the Army trains to win by achieving training readiness and the capabilities that support Army and joint force commanders.

When not operating, training is the most important thing a unit can do. Therefore, the systems and processes that govern reporting have evolved to provide senior leaders the training-readiness information required to make informed resourcing decisions. The major changes to reporting are detailed in the standards for assessments in the training-and-evaluation matrix found in the T&EO for each task reported for readiness. These assessment tools provide leaders a means to provide Army leaders more objective readiness data.

The Leader’s Guide to Objective Assessment of Training Proficiency (OBT) (published in September 2017)¹ goes into great detail on the process, tools and systems required to perform objective reporting. Objective reporting does not change the process for planning, preparing and assessing training; it uses updated standards to better assess the readiness achieved. Moreover, assessments that accurately measure unit training and readiness will ensure Soldiers are the most capable and lethal on the battlefield. This impacts readiness, which is the foundation of the Army’s ability to fight and win America’s wars.

Assessments that accurately measure unit training and readiness will ensure Soldiers are the most capable and lethal on the battlefield. Readiness is the

foundation of the Army’s ability to fight and win America’s wars.

The Digital Training Management System (DTMS) and the Combined-Arms Training Strategies (CATS) have been significantly improved during the last several years. They provide leaders with tools needed to plan, prepare and manage training, while providing accurate, objective assessments. They are the Army’s current systems of record to assist in developing, managing and recording training for units and individuals.

DTMS is a powerful system, providing tools to give units the ability to plan and record all supporting training for units while providing leaders visibility of their units. Following are a few of the most recent updates. Following are a few of the most recent updates.

Dashboards

The most recent improvement to DTMS has been the Training and Readiness Dashboard, which provides brigade-and-below users the ability to directly access, review and manage most of their organization’s required reportable training data in a single location.

The dashboard was created in concert with the Secretary of the Army’s and Chief of Staff’s focus on prioritizing efforts for readiness through reducing requirements in brigade-and-below units, which was reflected in the Army’s significant reduction in the numbers of reportable items required within DTMS. The dashboard now reflects the following eight reportable items: MET assessments; collective live-fire proficiency; individual, crew-served and platform-weapons status (three items); Army Physical Fitness Test and height/weight data (two items); and mandatory training.

This new DTMS training dashboard is now the default login screen, where leaders can quickly view unit and subordinate readiness as well as individual and unit training data. The dashboard also allows leaders and their designated operators to immediately drill down and update training data for individuals or groups of Soldiers in their units. These provide users with easy access to reporting requirements outlined in Objective-T.

Finally, the training dashboard is directly linked to Army Unit Status Reporting and will eventually feed not only MET assessments but all reportable unit and individual training in the coming months. It serves as the one-stop-shop for all mandatory training-readiness data.

CATS

Another critical tool provided by TMD is CATS. Developed by the proponents for specific unit types, CATS supports leaders and units as they plan unit-training events by providing events linked to MET list and collective tasks. CATS provides commanders and operations (S-3) personnel an easy tool to plan training, and track and record unit proficiency, in one easy on-line tool. Recent improvements in CATS now offer a more user-friendly long-range planning tool and calendar.

“Many unit-training managers have reported that CATS is a great tool to facilitate planning training,” said Dan Huell, the Maneuver Center of Excellence’s collective-training manager.

Improvements continue

TMD, in partnership with proponents and U.S. Army Training and Doctrine Command centers of excellence, responded to changes in training and reporting policy. TMD will continue to improve the doctrine, reporting processes and tools to ensure the Army has an effective, efficient means to achieve and record training readiness.

If you have questions or want to learn more, see the **Leader’s Guide to Assessment of Training Proficiency**. It may be found on the **Leader’s Guide to Objective Assessment of Training Proficiency** via the Army Training Network (ATN) Webpage at https://atn.army.mil/dsp_template.aspx?dpID=376. The ATN Website (<https://atn.army.mil/>) contains many resources for Soldiers, from FM 7-0 to the CATS and DTMS tools.

TMD also has other necessary tools to ensure units are trained and ready. To reach a TMD expert, contact the help desk via telephone at toll-free (877) 241-0347, (913) 684-2700 or DSN 552-2700. Users may also email the TMD help desk for assistance at usarmy.

leavenworth.cac.mbx.dtmshd@mail.mil.

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military schools include the Defense and Strategic Studies Course (resident war college fellow) from the Australian Defense College; Command and General Staff College; Combined Arms and Services Staff School; and Aviation Officer's basic and advanced courses. COL Smith holds a bachelor's of science degree in sociology from Texas Tech University. His awards and decorations include the Bronze Star Medal, one oak-leaf cluster; Air Medal; Defense Meritorious Service Medal; and Meritorious Service Medal, fifth oak-leaf cluster. COL Smith's aircraft qualifications include OH-58D Kiowa Warrior, OH-58A/C Kiowa and UH-1 Huey.

Notes

¹ Headquarters, Department of the Army Exercise Order 002-16, Fragmentary Order 4, "Enable, Resource, Build, Assess and Sustain Training Readiness," Appendix 1 to Annex D, *The Leader's Guide to Objective Assessment of Training Proficiency (OBJ-T)*, September 2017.

ACRONYM QUICK-SCAN

ATN – Army Training Network
CAT-T – Combined Arms Center-Training
CATS – Combined-Arms Training Strategies
DTMS – Digital Training Management System
FM – field manual
LRT – Leader Readiness Tool
MET – mission-essential task
T&EO – training and evaluation outline
TM – training management
TMD – Training Management Directorate



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.

BOEHM, PETER M. 2LT
Unit: Company K, 15th New York Cavalry. Place and date of action: Dinwiddie Courthouse, VA, March 31, 1865. Entered service: Brooklyn, NY. Born: New York. Date of issue: Dec. 15, 1898. Citation: While acting as aide to GEN Custer, took a flag from the hands of color bearer, rode in front of a line that was being driven back and, under heavy fire, rallied the men, reformed the line and repulsed the charge.

BONEBRAKE, HENRY G. LT
Unit: Company G, 17th Pennsylvania Cavalry. Place and date of action: Five Forks, VA, April 1, 1865. Born: Waynesboro, PA. Date of issue: May 3, 1865. Citation: As one of the first of Devin's Division to enter the works, he fought in a hand-to-hand struggle with a Confederate to capture his flag by superior physical strength.

BOON, HUGH P. CPT
Unit: Company B, 1st West Virginia Cavalry. Place and date of action: Sailors Creek, VA, April 6, 1865. Born: July 28, 1831, Washington, PA. Date of issue: May 3, 1865. Citation: Capture of flag.

BOOK REVIEWS

Allied Armor in Normandy by Yves Buffetaut; Havertown, PA: Casemate Publishers; 2018; 128 pages with photographs, illustrations and bibliography; \$24.95.

The Waffen SS in Normandy: June 1944, the Caen Sector by Yves Buffetaut; Havertown, PA: Casemate Publishers; 2018; 128 pages with photographs, map, illustrations and bibliography; \$24.95.

Allied Armor in Normandy and ***The Waffen SS in Normandy: June 1944, the Caen Sector*** are the latest entries in the Casemate Illustrated series on battles and campaigns of World War II. Written by French author and historian Yves Buffetaut, these works address the employment of both Allied and German armored forces from the initial June invasion of Normandy to the breakout from the beachhead in late August 1944. Buffetaut describes the structure of each national armor entry in succinct detail. His writing is supplemented by a series of illustrations on the organization of each armored force.

Armored forces within the Normandy area reflected the diverse composition of the Allied nations arrayed against Germany. Within the British sector were armored forces manned and led by Polish and Canadian commanders. At the same time, 2nd French Armored Division fought in the American segment of the beachhead.

On the other side, German force structure was reflective of a single nationality but contained an assortment of equipment; having conquered all of Western Europe, the Germans had the booty of a dozen armies available to augment their basic equipment. Equipping and repairing this once-bountiful harvest of military equipment grew ever more difficult as the war progressed. Waffen panzer units contained several modified French tank chassis along with an assortment of artillery and anti-tank weapons. There were at least three types of tanks.

These included the Tiger, Panther and Mark IV panzers. This variety of equipment required constant satisfaction of unique logistical and mechanical needs.

Buffetaut's description of the various force structures is accurately reflected in a series of colored illustrations. While British forces included several armored divisions, the bulk of the force structure consisted of armored brigades. These compact brigades ably supported offensive and defensive operations. The Americans employed three types of armored forces within their confined area. Prior to 1942, the U.S. Army armored divisions contained about 18,000 men in two armored regiments and one infantry regiment. Combat experience during the North African campaign of 1942, however, led to a restructuring of the divisional structure.

The author refers to these new formations as "light armored divisions." The revised formation of a 15,000-man force contained three battalions of armor, infantry and artillery employed under the leadership of three combat commands. The Americans also used a number of independent tank battalions, but their actions are generally not part of this narrative. Regardless of commanding headquarters, all American armored units reflected the same battalion organizational structure.

The Waffen SS units placed in Normandy operated primarily against the British and Commonwealth forces in the Caen sector. Here the Germans operated under a complicated command arrangement that failed to satisfy the need for offensive mass required to repel the Normandy landings.

Field Marshal Erwin Rommel commanded Army Group B; his responsibilities included the beaches at Normandy. Having experienced the devastating attacks of Allied aircraft on his armored formations during the desert battles of 1942, Rommel appreciated that daylight movement of his armored forces would be seriously impeded by the Allies' air armada. Therefore he

wanted these formations to be located close to the potential landing sites. The commander of Panzer Group West, GEN Geyr von Schweppenburg, wanted his armored units held in reserve behind the frontlines, ready to crush any Allied breakthrough. Their heated disagreement was brought to Adolph Hitler for resolution. As happened so often before, Hitler imposed a solution that satisfied none of the contending parties: despite the arguments, Hitler decreed that he would command the panzers, and they would only be committed with his personal permission. As Buffetaut ably describes, this remedy allowed the Allies to establish and expand the beachhead, as the panzers were not committed to the battles for several days after the landing.

Throughout the book, thumbnail sketches of Allied and German commanders are presented. On the Allied side, these include such well-known personalities as GEN Dwight D. Eisenhower, Field Marshal Bernard L. Montgomery and LTG George S. Patton Jr., as well as less well-known armored leaders. This latter group consists of American LTG Courtney Hodges, British LTG Miles Dempsey and MG Percy Hobart, Canadian LTG Henry Crerar and French MG Philippe Leclerc.

Hobart commanded the British 79th Armored Division, a unique unit containing a number of specialized armored vehicles. Illustrations of these vehicles provide an interesting insight into the array of highly modified Sherman and Churchill tanks used to clear mines, lay bridges and assault enemy fortifications. One of the more interesting sections of the book deals with the employment of the duplex-drive Sherman tank. These vehicles were designed to leave a given landing craft and move toward the beach using a flotation curtain and a propeller-driven propulsion system. Once on the beach, the flotation cover would be lowered, and the tank would support the assaulting infantry forces. The successes and failures of this particular vehicle are described in exacting terms by the author.

The profiles of the German commanders include that of Rommel and several other less-well-known but prominent panzer commanders. This group includes Schweppenburg, GENs Sepp Dietrich and Kurt Meyer, and panzer ace CPT Michael Wittmann. As with the Allied vehicle array, this volume is profusely illustrated with photos and colored plates of German armored vehicles. While the German armored offensive was often lacking in decisive employment, the same cannot be said of their defensive efforts. Armored formations aggressively moved against the Allies in support of various blocking operations. A superb example of their success is provided by the detailed review of Wittmann's impressive engagement of Canadian armor encountered around the French village of Villers Bocage.

Several major Allied operations were conducted to not only preclude a German counterattack into the Normandy beach area but, more importantly, to break out of the narrow hedgerow Normandy countryside and conduct exploitation, then pursuit, operations across France and into Germany. These include the British-led Operations Goodwood and Epsom, as well as the American-conceived and -executed Operation Cobra. Both volumes address each operation in a concise and well-balanced manner.

Unfortunately, despite a vast amount of supporting organizational diagrams and vehicle illustrations, these works contain only one map of the Normandy area. A list of recommended readings, however, is provided for those seeking to enhance their understanding of the Normandy campaign.

These worthwhile works will secure the interest of maneuver commanders seeking to enhance their appreciation of the contribution of World War II American and Allied forces to battlefield success in Normandy. The many illustrations of Allied and German tactical and support vehicles are impressive. Maneuver commanders should also appreciate the shortfalls the Germans experienced due to a complicated forces employment that precluded the massing of panzer forces, the lack of rehearsals in support of repelling the invaders and the devastating effect

naval gunfire and aircraft had on the Germans' movement into the beachhead area.

These two works provide a glimpse into the battles fought in Normandy from June to August 1944. They should encourage further study and discussion by combined-arms leaders. As reference material, these works augment more detailed works on the Normandy campaign. However, these books should appeal to those seeking a better understanding of the contribution of Allied and German armored forces in Normandy.

RETIRE COL D.J. JUDGE

Traumatic Defeat: POWs, MIAs and National Mythmaking by Patrick Gallagher, University Press of Kansas, 2018; 200 pages, \$29.95 (hard cover).

Like most children of the 1970s, I woke up early Saturday mornings to watch classic Looney Tunes cartoons. A common trope of the inevitable chase scene was Bugs Bunny holding a sign reading, "Is this trip really necessary?" I found myself reflecting on that phrase again while reading ***Traumatic Defeat*** as I remain uncertain on the purpose and historical accuracy of this book.

Author Patrick Gallagher's premise is straightforward: e.g., a comparative study of German and American national reactions to prisoners of war (POWs) and missing-in-action (MIA) soldiers in World War II and Vietnam leading to the so-called "secret-camp myth." For the uninitiated, the secret-camp myth posits that Soviet Russia and Communist Vietnam held untold numbers of POWs after hostilities as bargaining chips or simply because their governments were evil in nature. According to Gallagher, Germany and America used the secret-camp myth as a means of drawing the public eye away from their defeat and wartime atrocities.

The second half of the book contrasts how quickly Germany moved past the secret-camp myth, whereas it continues to draw believers in the United States today, as evident from movies like ***Rambo First: Blood Part II*** or the display of POW/MIA flags at your local Veterans of Foreign Wars hall.

I found several problems with ***Traumatic Defeat***'s narrative and intent. From my perspective, the book plays rather loose with history. The fact that the Soviet Union held German POWs until at least 1956, routinely provided conflicting POW numbers and frequently withheld communication from the men's families seems to validate the secret-camp myth. More egregiously, the introduction claims that "America's war in Southeast Asia included routine atrocity and massacre, despite a sort of collective amnesia that has since confined memories of such behavior to only well-publicized events like My Lai" but fails to cite factual evidence to support Gallagher's claim.

The same point is made in the book's conclusion – again without evidence. Let me be clear: U.S. Soldiers committed a repugnant war crime at My Lai. However, such broad unsubstantiated statements besmirch the reputation of the more than 2.7 million U.S. men and women who honorably served in Vietnam. Most concerning, however, is the argument that America used the POW/MIA issue to minimize national guilt over a war "it started." There is scant mention of Russian-backed North Vietnam aggression toward its southern neighbor and none at all of the Soviet Union seizing Eastern Europe, leading to President Dwight Eisenhower's domino theory explaining Communist aggression in Indochina.

My reading further points to a critical misunderstanding in the book's thesis on why the POW/MIA question still garners attention in the United States. Namely, America holds a long-standing promise of accounting for our fallen through formal organizations such as the Department of Defense POW/MIA Accounting Agency or powerful symbols like the Tomb of the Unknown Soldier at Arlington National Cemetery. Every U.S. Soldier learns of this promise in basic training through the Soldier's Creed, which reads, "I will never leave behind a fallen comrade." That phrase, more than any poorly constructed guilt argument, explains why the POW/MIA issue continues to resonate in America long after the end of the Vietnam War.

LTC CHRIS HEATHERLY

Vitebsk: The Fight and Destruction of the Third Panzer Army by Otto Heidkämper, translated by Linden Lyons, Casemate Publishers, 2017 (part of the Association of the United States Army's reprint of the *Die Wehrmacht im Kampf* series); 256 pages, hardcover \$18.99, Kindle edition \$15.89.

From May 1943 to June 1944, Otto Heidkämper was the chief of staff for Third Panzer Army as it fought an increasingly desperate battle as part of Army Group Center in modern-day Belarus. **Vitebsk: The Fight and Destruction of the Third Panzer Army** is his operational-level memoir of the collapse of Army Group Center due to failings in leadership, logistics and operational maneuver. The German army was designed around an offensive war of movement, and the attritional campaign it found itself in by 1943-44 played to Soviet strengths rather than German ones.

Heidkämper's memoir covers a time when Third Panzer Army, along with much of the rest of the German armed forces on the Eastern Front, saw their tactical and operational superiority fade as the Soviet Union's Red Army progressed and gained the upper hand. Placed on the seam between Army Group North and Army Group Center, and originally holding a quiet area of the front, Third Panzer Army saw its reserves and front-line divisions shifted to other areas to counter Soviet advances. Also, it suffered the expected attrition of defensive fighting and skirmishing as well as weather-related casualties. As Winter 1943-1944 approached, these losses became increasingly dire as a Soviet offensive in the direction of Vitebsk, a crucial rail and road junction supporting Army Group Center, was in the offing.

The book focuses largely on the winter battles around the city of Vitebsk, where German actions were moderately successful in stemming Soviet advances and maintaining a relatively stable frontline in spite of the odds against them. Operations against partisans, divisional transfers and logistics problems also help paint the picture of the odds against Third Panzer Army. Disappointingly, the destruction of Third Panzer Army during Operation Bagration in Summer 1944 is rather quickly covered, despite the ferocity of the combat and its significant impact on the course of the war.

Vitebsk was originally published in West Germany in the 1950s as part of a book series on World War II from the German perspective. Heidkämper's writing is almost divorced from the combat itself. Absent, aside from occasional mentions of specific acts of valor, are the individual German soldiers fighting in an increasingly hopeless campaign. This is, after all, the view of an Army Group chief of staff and not a company-grade combatant. The factual voice, almost that of a narrator instead of a participant, gives the book a near-sterile feel. Nevertheless, the operational focus and voice of a general-staff officer is needed when looking to thoroughly understand operations on the Eastern Front.

Also, readers will find the all-too-familiar and usual "blame Hitler" and "blame higher" for the Army's shortcomings throughout the book. While Heidkämper and his superior, COL-GEN Georg-Hans Reinhardt, did repeatedly raise concerns about significant operational shortcomings in the German planning process, the tone taken in **Vitebsk** is one of somewhat hapless generals who were forced to accept dictates without any recourse. For those familiar with *Auftragstaktik* and the German army's concept of

independence in commanders, this continual laying of blame elsewhere is difficult to process. (For more on the concept of *Auftragstaktik* in the Wehrmacht at this time in the war, see Robert Citino's **The Wehrmacht's Last Stand: The German Campaigns of 1944-45** (Lawrence, KS: University of Kansas Press, 2017)). Also absent is any of the discussion of the atrocities committed by Third Panzer Army against civilian populations or Soviet prisoners, though the editor has included Heidkämper's 1946 statement on anti-partisan operations for the Nuremberg trials.

Vitebsk provides an operational-level view of a positional defensive fight against a numerical superior enemy. As such, it contains a variety of potential lessons for readers looking at large-scale combat operations. This said, it is one perspective and was written without the assistance of many of the archives now available, especially the Red Army's. For those interested in a deeper understanding of the Soviet side of battle, see Richard Harrison's translation of the Soviet General Staff studies on the campaign (**Operation Bagration, 23 June-29 August 1944: The Rout Of The German Forces In Belorussia** (Solihull, UK: Helion, 2017)). For those looking to place **Vitebsk** in context, see David Glantz and Jonathan House's masterpiece **When Titans Clashed: How the Red Army Stopped Hitler** (Lawrence, KS: University of Kansas Press, 2015) or Citino's **The Wehrmacht's Last Stand**.

MAJ T.G. HECK
U.S. Marine Corps Reserve

ACRONYM QUICK-SCAN

MIA – missing in action
POW – prisoner of war

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38TH CAVALRY REGIMENT



The colors, green and yellow, are those of armor. The spear, black on gold, represents cavalry descent. The five fleurs-de-lis are the traditional symbols of European battle honors and represent the unit's World War II campaigns. The indented diagonal band represents a path between hostile lines, symbolizing the primary functions of a reconnaissance unit. The distinctive unit insignia was originally approved for 38th Reconnaissance Battalion Aug. 24, 1951. It was redesignated for 38th Cavalry Regiment, with the description and symbolism updated July 24, 2008.



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