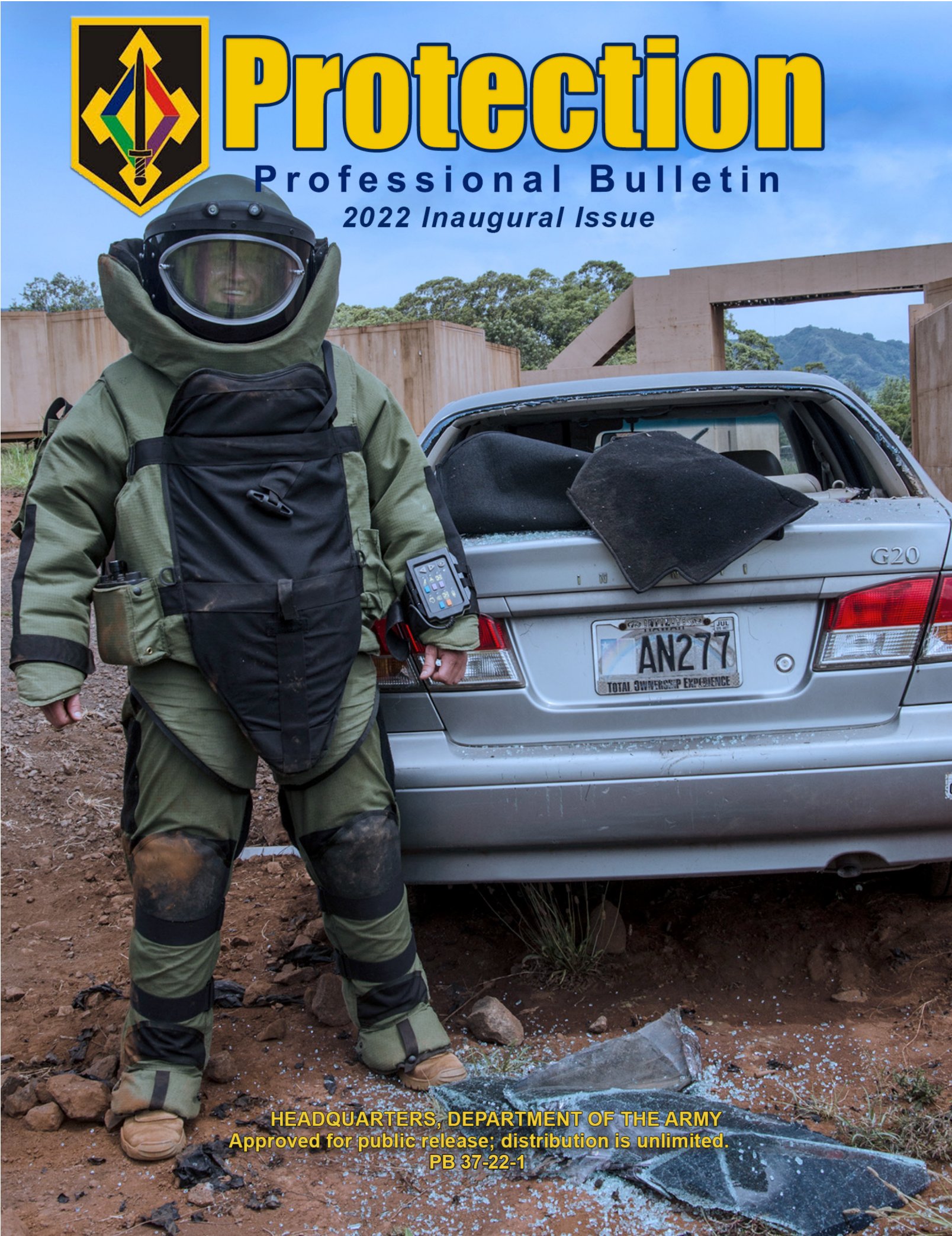
Protection

Professional Bulletin

2022 Inaugural Issue



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Front cover image: An Army National Guard explosive ordnance technician stands next to a car that contained a simulated improvised explosive device, which he was able to render safe by employing an explosive device that blew out the back window.

U.S. Army photograph by Sergeant Matthew Sissel

Protection is an official U.S. Army professional bulletin that contains information about the role of protection, the protection warfighting function, the Army Protection Program, and integration of protection capabilities to support the range of military operations. The objectives of *Protection* are to inform and motivate, increase knowledge, improve performance, and provide a forum for the exchange of ideas. The content does not necessarily reflect the official U.S. Army position and does not change or supersede any information in other U.S. Army publications. The U.S. Army Maneuver Support Center of Excellence reserves the right to edit material. Articles may be reprinted if credit is given to the Maneuver Support Center of Excellence and the authors.

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Protection

Professional Bulletin

PB 37-22-1, 2022 Inaugural Issue

Maneuver Support Center of Excellence and Fort Leonard Wood Commanding General

The Protection Warfighting Function (WFF)

Major General James E. Bonner

community of practice is an incredibly diverse and unique team of teams. We are excited that, with the debut of this first issue of the *Protection* professional bulletin, we now have an additional venue for Army protection professionals to share knowledge and experience across the force.

Our goal for *Protection* is to provide a variety of viewpoints and to challenge our collective critical thinking and assumptions. We will engage in professional dialog across various facets of the Protection WFF with every echelon of the protection enterprise, from policy level to unit level. Our thinking will mature and evolve over time. Some relevant questions to consider for discussion in future issues of *Protection* are—

- Is an additional skill identifier for protection needed?
- What elements of intelligence are best nested under the Protection WFF?
- What are the critical tasks for protection staffs/cells in divisions?
- How do we assess the effectiveness of protection?

This is a tremendous opportunity to shape our Army's protection capabilities, and we appreciate the diverse points of view from our family of protection proponents and stakeholders. We require fresh, contemporary thinking from the entire community.

As the proponent for the Protection WFF, the team at the Maneuver Support Center of Excellence, Fort Leonard Wood, Missouri, appreciates your contributions as members of the protection community of practice, your engagement across the community, and your efforts on projects and programs, including submissions to this professional bulletin.

Modernization of the Protection WFF

By Colonel Mandi L. Bohrer

Shortfalls in the ability to successfully perform the protection warfighting function (WFF) currently represent the most significant vulnerability of the U.S. Army.

Aspiring global powers, such as China and Russia, continue to invest in improved strategic fires and intelligence, surveillance, and reconnaissance capabilities, empowering those threat forces with potential overmatch in multiple domains. Adversarial cyber- and electronic-warfare capabilities, in concert with robust information operations, are capable of destroying assets and disrupting friendly activities with minimal exposure of the threat forces. If successful, these actions will generate a range of hazards and risks by reducing the effectiveness of friendly fires, sustainment, and aviation support. These hazards and risks will then prevent Army formations from enabling access to the close area, synchronizing fires, and synchronizing movement and maneuver.

Contemporary pacing threats[1] create adverse conditions that, in turn, result in complex challenges and vulnerabilities that U.S. military forces have not faced in the modern era. For the U.S. Army to fight and win in large-scale combat operations, the protection WFF must be modernized. Innovative modernization will involve integrated and synchronized changes across doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P). This article describes several vital adjustments that need to be implemented now in order for us to meet and defeat our adversaries.

Doctrine

The two primary doctrinal publications intended to advance doctrinal solutions for protection on the future battlefield are Field Manual (FM) 3-0, *Operations*,[2] and Army Doctrine Publication (ADP) 3-37, *Protection*.[3] As the capstone doctrine for Army operations, the forthcoming FM 3-0 revision will provide updated descriptions of the protection WFF in the context of the Army's vision of warfare, the range of military operations, the Army's focus on the operational concept of multi-domain operations, and the conduct of large-scale combat operations. In addition, the Army will update ADP 3-37 to describe the role of protection in complementing and reinforcing combined arms protected windows of opportunity to generate overmatch and deny the enemy freedom of action. The revised ADP 3-37 will expand the doctrinal description of protection to include the prevention and mitigation of enemy effects and the preservation of combat power, as well as the prolonging of effective operations. It will also describe how the Army simultaneously vertically and horizontally integrates multiple all-domain protection capabilities across the operational area. An emphasis on changing the mindset of protection as a WFF will be central to the updates of FM 3-0 and ADP 3-37.

Other than evolving to nest within multi-domain operations, perhaps the most essential role of the doctrine updates will be to help drive a difference in how commanders and staffs view the protection WFF. Some practitioners incorrectly (although understandably) equate the protection WFF to force protection or to actions performed by a specific branch, such as the Military Police or Engineer Branch. This misinterpretation of existing doctrine creates real-time problems within the fielded force and shortchanges the potential value of the protection WFF. Updates to FM 3-0 and ADP 3-37 will be profoundly important in changing the mindset from one that considers protection to be a passive afterthought in the rear area to one that views protection as an active, critical function that is at the forefront of planning and is fully integrated into all operations.

Organization

In an attempt to keep pace with the growing multidomain threat posed by ambitious adversarial powers, Army leaders are considering many organizational design changes; however, two are of particular relevance. First, the Army must better integrate protection planning into operations at echelon, as the small cells dedicated to providing information about protection WFF solutions in accordance with division and corps commander priorities are woefully inadequate in

capacity and capability. Divisions and corps need an improved organizational design that can better synchronize the larger planning, operational, targeting, and intelligence processes across echelons. This will require two broad changes: The cell staff should encompass enhanced expertise across the 16 protection tasks, and the cell must have physical linkages within the main command post—the hub of planning and operations. Training, educating, and providing a staff capable of planning, applying, and integrating protection effects across the full depth of the battlefield will have a monumental impact on the effectiveness of fighting. A second organizational design change—establishing protection brigades in the Active and Reserve Components—could further reinforce the ability of a division to integrate and apply protection. Creating a combined arms formation with survivability, ground security, air defense, information advantage, and threat detection capability would provide important benefits. It would maximize unity of command for disparate priority protection capabilities, thus preventing the division commander from investing finite attention toward the command and control of its numerous functional enablers. It would also increase readiness by providing a common assigned structure for the division, which would be ready for Day-0 operations. If the ability to provide protection is both a vulnerability and a priority, then the Army should move beyond approaching the assignment and employment of protection capabilities as a "pick-up game."

Materiel

Many significant materiel modernization efforts are necessary in order to enhance the protection WFF. Developing and procuring air defense artillery systems capable of protecting critical capabilities, assets, and activities from surface- and air-launched threats (including unmanned aircraft systems) are priorities for Army forces. Developing solutions to quickly "integrate sensors to shooters" is another. To protect against aspiring peer threats, programs such as the Terrestrial Layer System offer materiel solutions in intelligence, cyber, fires, and protection systems that are integrated to defeat accurate threat fires, thus preserving critical capabilities. With the speed and complexity of threat operations projected to increase exponentially, it will become progressively more challenging—if not impossible—to employ proactive protection WFF effects on the battlefield. However, efforts and endeavors are actively taking place across the Army. For example, the Maneuver Support–Capability Development Integration Directorate, U.S. Army Futures Command, Fort Leonard Wood, Missouri, continues to develop and refine the Protection Decision Support Tool, which is an artificial-intelligence-enabled solution to provide commanders and protection professionals with a means of quickly identifying and interdicting potential threats before they impact friendly operations. Several other material solutions, such as the Protection Mobile Response System, the Coded Visibility program, are also under development and worthy of attention and investment.

Training and Leadership and Education

Updating doctrine, changing organizational design, and investing in exquisite materiel solutions are pointless without appropriate training, leadership and education domain solutions in place. Two years ago, the U.S. Army Military Police School, Fort Leonard Wood, developed a pilot Protection Integration Course to train and educate protection professionals. By emphasizing "integration," the course aims to educate professionals on the means and methods of artfully integrating protection WFF tasks and systems based on commander priorities. The Maneuver Support Center of Excellence, Fort Leonard Wood, continues to refine the pilot course while pursuing authorization to expand and formalize the course in the Army Training Requirements and Resource System. To fully realize the potential value of the class to the Army, the attendee list should be expanded to include echelons-above-brigade personnel in G-3 and G-5 positions. Professional courses across the continuum of learning and throughout both components also require updates to further improve the Army's knowledge of protection effects and its ability to fully integrate them into operations.

Personnel, Facilities, and Policy

Personnel, facilities, and policy changes accompany the other DOTMLPF-P domain modernization options.

Army formations need skilled protection professionals in echelon protection cells and protection brigade formations. Additionally, updating key positions such as the protection coordinator, executive officer, S-3, and S-3 sergeant major with additional skill identifiers will lead to improving unit readiness and enhancing talent management. Personnel requirements could be examined to ensure the availability of a full career continuum for officer, warrant officer, and noncommissioned officer protection professionals.

Several of the previously discussed DOTMLPF-P solutions will drive a corresponding facilities solution. The Army will need to identify installations, facilities, and/or training areas where units will be able to safely train with advanced protection technologies without unintentionally impacting surrounding areas.

Defending the homeland and deterring strategic attacks against the United States are the top two priorities addressed in the *2022 National Defense Strategy*.[4] The Army should, therefore, also examine potential policy implications for more closely integrating the Army Protection Program and the protection WFF in the homeland.

Integration of Solutions

The Army must improve its ability to fully integrate the protection WFF in the operations process. However, organizational design changes are only part of the complex solution that is needed to address the complex challenges. Updated doctrinal publications on operations, planning, and functional capability will capture methods and means of integration, which will be further enabled in practice by materiel solutions such as the Protection Decision Support Tool. Training and education will provide protection professionals

(Continued on page 42)

You Are Not Alone:

How to Engage Your Protection Warfighting Function Community

By Colonel Barrett K. Parker (Retired)

The most frequent question we are asked as the Protection Division (Force Modernization Proponent), Fielded Force Integration Directorate (FFID), Maneuver Support Center of Excellence (MSCoE), Fort Leonard Wood, Missouri, is "How do I get 'plugged in'?" (or "How do I best engage the wider protection community of practice?"). The protection warfighting function boasts a vibrant community of practice, many opportunities for collaboration, and members with great willingness to share experiences and ideas. The answer to how to get "plugged in" varies widely based on the duties of the person asking the question.

One answer is obvious—and it's in your hands! The *Protection* professional bulletin, published annually by MSCoE, is **your** publication. The Writer's/Photo Guide and publication schedule is available at <https://home.army.mil/wood/index.php/contact/publications/ppb>. The e-mail address is <usarmy.leonardwood.mscoe.mbx.protectpb@army.mil>. We look forward to receiving your articles and/or photographs capturing your protection experiences and ideas, regardless of grade, unit, or component. Any subjects that address overarching protection issues and are not better shared in a branch-specific publication are appropriate. Share your thoughts, and perhaps improve our Army!

Protection Net, located on milSuite at <https://www.milsuite.mil/community/spaces/apf/protectionnet>, is the collaborative work forum for our community. Are you—

- A noncommissioned officer looking for protection-related standard operating procedures for your unit?
- A researcher trying to reach a large protection audience?
- An individual looking for unabridged community feedback on a unique protection solution?

If so, then Protection Net is the destination for you. More than 225 Protection Net members from across the Army are ready to field your questions, share their resources and references, or act as your sounding board. The Protection Net online library hosts dozens of hard-to-find Army, joint, and international references. Protection Net also includes several subboards (known as subspaces) for hosting in-depth branch and specialty-topic discussions, such as discussions on—

- Explosive ordnance disposal.
- Chemical, biological, radiological, and nuclear (CBRN) issues.
- Safety.
- Antiterrorism.
- Maneuver enhancement brigades (MEBs).

Protection Net is approved for controlled unclassified information, but participation does require opening an account on milSuite. Join today!

Screenshot of the Protection Net website

The Protection Integrator's Course (PIC) currently consists of a series of pilot courses now being conducted by the U.S. Army Military Police School (USAMPS), Fort Leonard Wood. The primary PIC target audience includes current and future unit protection chiefs and protection cell members in echelons-above-brigade headquarters Army-wide, as well as those serving in supporting activities. PIC is currently a 4-day, nonresident course in which each of the protection primary tasks is explored, student and faculty experiences

MSCoE PIC

Mission: Facilitate a Protection Integration Course at the Maneuver Support Center of Excellence to enhance the knowledge of the protection warfighting function and Army Protection Program across the operational force.

Purpose: To educate and advise senior leaders, planners, and staffs serving in protection roles about available protection assets and how to integrate them into the protection warfighting function and Army Protection Program.

End State: Senior leaders conducting protection activities gain insight and understanding concerning the full range of protection capabilities and assets to enable freedom of action by preserving combat power through the integration of protection capabilities.

DAY 0 (Instructors Only)

TIME	ACTIVITY
0900 0930	Instructor Introductions
0930 1000	Div/Corps Int. & Synch.
1000 1030	Scenario PE Overview

DAY 1

TIME	ACTIVITY
0815–0830	CMDT/RCSM In-Briefing
0830–0900	ADP 3-37
0915–1015	Insider-Threat Review
1030–1130	Prot. Plan. Indo-Pacific Theater
1300–1500	Establish Prot. Priorities
1515–1615	Prot. Plan. Less. Learn. ★
1630–1715	WFX Less. Learned

DAY 2

TIME	ACTIVITY
0900–1000	CUAS Overview
1015–1115	Integration of ENG
1215–1315	Integration of MED
1330–1430	Integration of Cyber
1445–1545	Integration of CBRN
1600–1700	Integration of MP

DAY 3

TIME	ACTIVITY
0900–1000	Integration of MEB
1015–1115	Integration of EOD
1115–1215	Integration of AMD
1330–1430	Integration of Intelligence
1415–1515	Integration of SOF
1515–1700	PE

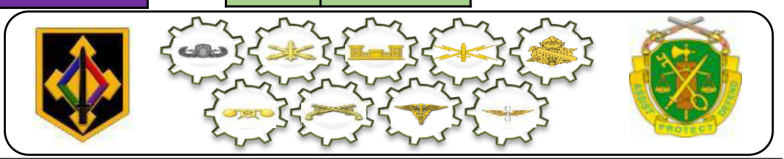
DAY 4

TIME	ACTIVITY
0900–1000	PE Solution
1000–1100	Closing Remarks

Builds cognitive foundation of protection doctrine and tasks

Enhances Knowledge of APP and PWFF Implementation

Integration Presentation Outline



"The protection warfighting function enables freedom of action by preserving combat power through the integration of protection capabilities throughout operational preparation, operations to shape, operations to prevent, large-scale ground combat operations, and operations to consolidate gains."(ADP 3-37, *Protection*, 11 December 2018.

As of 20210414 ★ Issue Order for PE *Victory Through Skill!* *Team of Teams!*

PIC Diagram

Legend:

AMD—air and missile defense
CMDT—commandant
CUAS—counter-unmanned arial system
CBRN—chemical, biological, radiological, and nuclear
DIV—division
ENG—engineer
EOD—explosive ordnance disposal
MED—medical
Learn.—learned
Less.—lessons
MP—military police
PE—practical exercise
PROT—Protection
RCSM—regimental command sergeant major
SOF—special operations forces
WFX—warfighting exercise

are shared, and an in-depth practical exercise is conducted. Soldiers from all branches—especially those normally associated with the protection warfighting function (CBRN, air defense artillery, engineer, cyber, medical, and military police)—are welcome to attend. To learn more about PIC, including future class dates, please contact the Command and Tactics Division (CATD), USAMPS, by e-mail at <usarmy.leonardwood.mp-schl.mbx.dotcatd@army.mil>.

MSCoE hosts the biannual Protection Warfighting Function Warfighter Forum. The target audience for the warfighter forum consists of protection cell chiefs and members of echelons above brigade and their supporting elements from all components across the globe. The forum topics generally include protection trends, new resources available to protection cells, the latest doctrine and organization redesigns, upcoming exercises, and other subjects of protection community interest. The last Protection Warfighting Function Warfighter Forum was held in August 2021. If you did not receive an invitation to the forum and you believe that you should have, please contact Mr. Barrett Parker by e-mail at <usarmy.leonardwood.mscoe.mbx.protection-fmp@army.mil>.

MSCoE Protection Operational Planning Team (OPT) meetings are the Protection Warfighting Function Warfighter Forum counterpart meetings for the generating forces. At quarterly meetings, the Protection OPT discusses doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) issues. Protection-related U.S. Army Training and Doctrine Command (TRADOC) schools, U.S. Army Futures Command, Department of the Army, and other organizations typically participate in the OPT meetings. Participation among our protection-focused TRADOC schools and related organizations has been outstanding over the past couple of years.

Several MEB community-specific engagement opportunities are available. The MEB Branch, Protection Division, FFID, MSCoE, hosts a common access card-enabled MEB professional resources SharePoint© site. This site contains a vast repository of resources, including unit standard operating procedures, lessons learned, MEB precommand course information and slides, a list of future conferences and events, table of organization and equipment documentation, and many other references. The MEB Branch also publishes a quarterly MEB newsletter that contains selected lessons learned and information about upcoming events and other MEB engagement opportunities. Finally, the MEB Branch hosts a quarterly MEB Warfighter Forum, which is held via Microsoft Teams© with a dial-in option. Typical MEB Warfighter Forum discussions include updates to MEB tasks and briefings on observations from recent operations and warfighter exercises from MEB members. If you would like to be added to the distribution list for the MEB newsletter or to the invitation list for the quarterly MEB Warfighter Forum, please contact the MEB Branch by e-mail at <usarmy.leonardwood.mscoe.mbx.protection-fmp@army.mil>.

For those working on protection issues in garrison and installation environments and other protection situations governed by Army Regulation (AR) 525-2, *The Army Protection Program*,[1] the Headquarters, U.S. Army Operations, Protection Division (DAMO-ODP) is responsible for the execution of the Army Protection Program (APP) governance cycle, which provides an enterprise approach to integrating, coordinating, synchronizing, and prioritizing APP initiatives and resources. It is a flexible mechanism that comprehensively addresses nonwarfighting protection policy issues; shapes program planning; supports the programming, budgeting, and execution process; ensures effective integration with Army warfighting responsibilities, and ensures a unified effort among all APP functions. The Headquarters, Department of the Army APP governance cycle consists of the three-star level APP Board of Directors, the APP General Officer Steering Committee, the colonel level APP Council of Colonels, the action officer level APP Working Group, and other associated working groups, as required. DAMO-ODP executes the APP governance cycle as necessary, but not less than biannually, to address protection topics that are important to the Army. The APP Working Group serves as the entry point into the APP governance cycle and is a subcommittee to the APP Council of Colonels. The working group reviews, resolves, and assigns responsibility for APP topics, issues, and/or tasks and assists the APP Council of Colonels in the development of key required outputs. Actions and decisions are made at the lowest level throughout the governance cycle. The APP entry point of contact in DAMO-ODP can be reached by e-mail at <usarmy.pentagon.hqda-dcs-g-3-5-7.list.aoc-g-34-spp-branch@army.mil>.

Finally, you are always welcome to contact the Force Modernization Proponent—Protection Division, FFID, MSCoE.

The vibrant protection warfighting function community of practice may be missing one thing—YOU! Plug in today!

Endnote:

[1]AR 525-2, *The Army Protection Program*, 8 December 2014.

Colonel Parker (Retired) is the chief of the Protection Division (Force Modernization Proponent), FFID, MSCoE. He holds a bachelor's degree in earth science from Pennsylvania State University, University Park; a master's degree in environmental management from Samford University, Homewood, Alabama; a master's degree in engineering management from Missouri University of Science and Technology at Rolla; and a master's degree in strategic studies from the U.S. Army War College, Carlisle, Pennsylvania. He retired as a colonel from the U.S. Army Reserve.

CHANGING MINDSETS:

THE NECESSITY OF CONSIDERING PROTECTION FIRST IN FUTURE CONFLICTS WITH PEERS

By Brigadier General Niave F. Knell

As the U.S. Army Futures Command, Austin, Texas, and the U.S. Army Training and Doctrine Command, Fort Eustis, Virginia, modernize the Army to fight and win with WayPoint and AimPoint forces in the multi-domain construct, leaders must also revamp their thinking. By the time the Army's fully modernized force is in place in 2035, China is anticipated to have developed the capabilities of a peer competitor. The freedom of action that the United States has enjoyed under the blanket of air superiority will no longer exist, leaving us with significant antiaccess and aerial denial, electronic warfare, and cyber threats. Commanders may be able to employ offensive capabilities only during windows of opportunity—afforded only once protection has been set as the foundation. Winning tomorrow's wars requires a change in mindset—one in which protection is at the forefront of decision making.

Current thinking, as outlined in a recent *Military Review* article entitled "Fire Support in Time and Space," follows an intelligence-drives-fires, fires-drives-maneuver philosophy.[1] With accurate intelligence, fixed-wing assets can destroy deep-area targets, such as an integrated fires command node or long-range fire assets like rockets. This initiates the kill chain depicted in Figure 1, with field artillery then able to move closer to the enemy and begin destroying enemy air defense assets. This affords freedom of maneuver for attack aviation ". . . within the enemy's battle zone . . . seek[ing] and destroy[ing] . . . enemy assets, prioritizing enemy maneuver forces capable of destroying friendly armored forces and remaining air defense threats."[2] Field artillery actions allow ground maneuver forces to attack and seize terrain, enabling rocket artillery to position farther forward. Once that happens, the process can begin again.

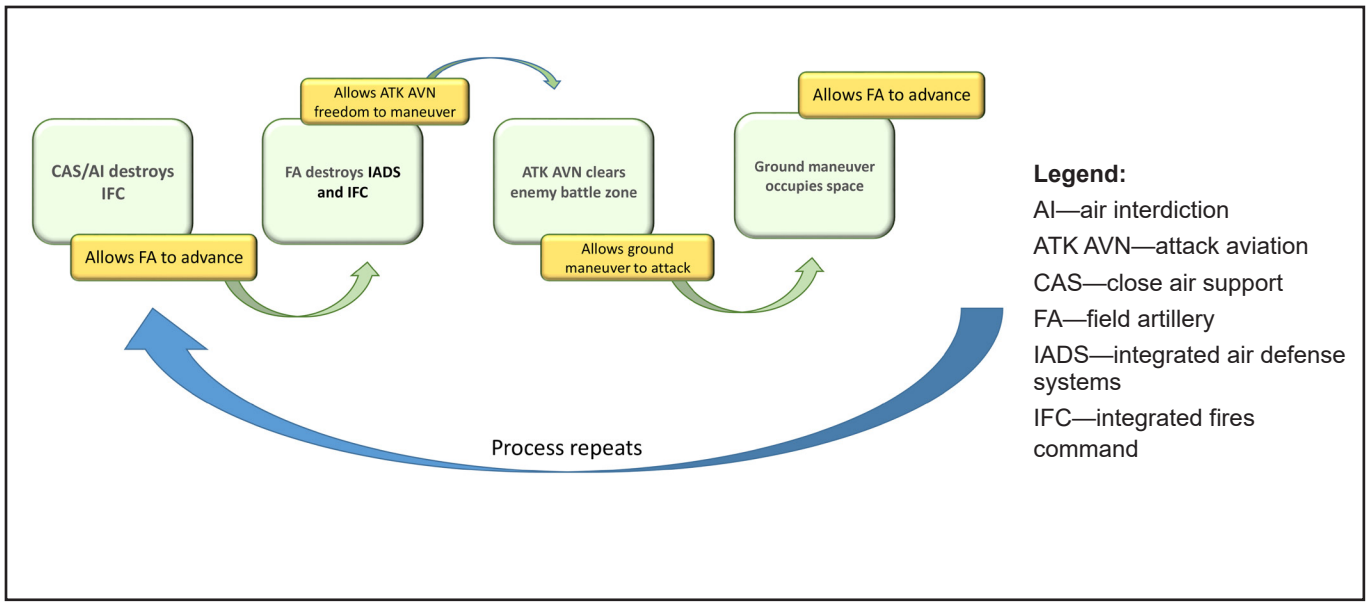


Figure 1. Kill chain to penetrate and disintegrate

Future thinking requires an acknowledgement that while Army forces are attempting to execute this kill chain, the enemy will simultaneously be pursuing the same process. Fixed-wing assets may be able to destroy only a certain percentage of long-range fire assets, meaning that the field artillery units would still require protection from long-range indirect fires in order to advance. However, those assets may not be available; they may be protecting a higher priority per the priority protection list. A peer threat could also employ electronic jamming to degrade the accuracy of friendly joint fires, or its terrain-shaping efforts could interfere with the ground maneuver attack. These actions would create kinks in the kill chain, requiring the anticipated and flexible application of protection.

To be prepared for the reality of contested maneuver in all domains, staffs need to integrate protection throughout the entire operations and intelligence process, starting at the beginning. Staff members should ask themselves, "What can we accomplish with protection, and when?" They should determine what is not protected and then develop courses of action that leverage those windows while mitigating risks. Additionally, the staff members will need to integrate protection into battle rhythm decision-making cycles, with protection assets allocated and/or shifted on the priority protection list during these cycles. The "clean" kill chain figure would then be modified; for example, it might look like that depicted in Figure 2.

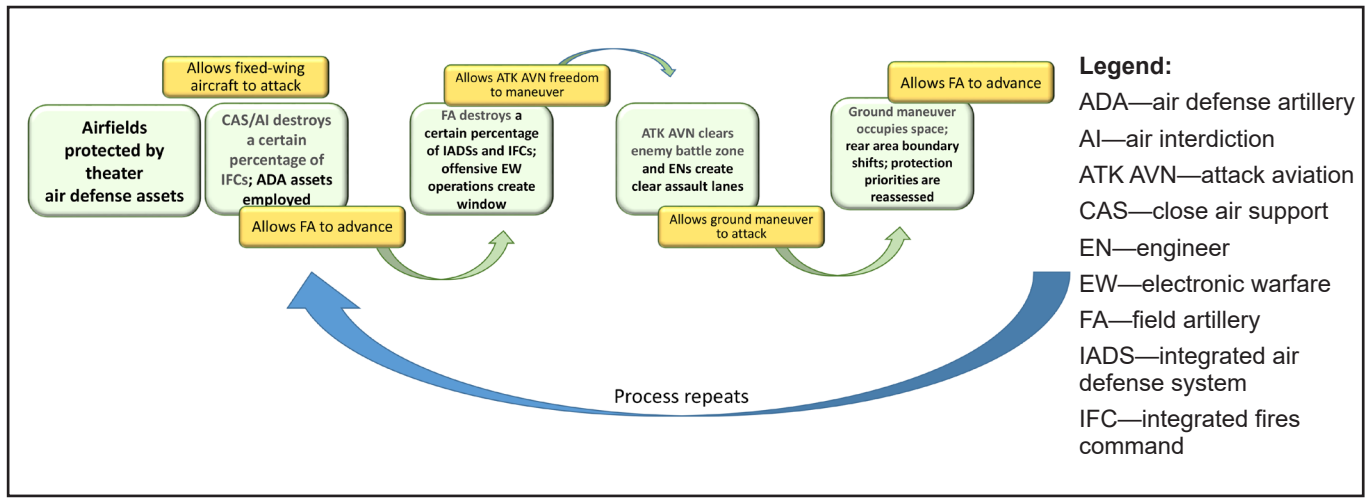


Figure 2. Modified kill chain

How can we begin to change the current mindset? The U.S. Army Training and Doctrine Command (TRADOC) drives change through leader development and training executed by Professional Military Education at all centers and schools throughout the Army. The Maneuver Support Center of Excellence, Fort Leonard Wood, Missouri, conducts a virtual Protection Integration Course for staff members in echelons-above-brigade combat teams through corps. And beginning in fiscal year 2024, Intermediate-Level Education students will be able to take a semester-long protection elective. Students from all branches—and not just those assigned to the protection cell—should take these courses to expand their understanding. Additionally, beginning in fiscal year 2022, military decision-making process exercises in Captain's Career Courses across all schools will be simultaneously conducted using the command post computing environment to allow branches that contribute directly to the protection warfighting function to appropriately influence course-of-action development as the scenario dictates. TRADOC also conducts warfighter exercises through the U.S. Army Combined Arms Center Training and Mission Command Training Program with pilots to improve unity of command and efforts in protection being piloted in fiscal years 2022 and 2023. The Mission Command Training Program operations groups were organized by warfighting function, so there is now a team focused entirely on protection; separate midterm and final after action reviews will be conducted. Finally, the Combined Arms Center *Total Army Analysis 25–29 Force Design Update*[3] addresses additional capability and capacity in the protection cells at the division and corps echelons to ensure capacity and expertise for protection integration in all command posts and bureaus, boards, centers, cells, and working group processes.

By considering protection first in future conflicts with peers, these and many follow-on efforts will result in modernized forces that have windows of opportunity to execute the standard kill chain. Commanders and staffs will be trained to plan for protection within the kill chain, with the ability to visualize and decide how to protect the process and keep it moving. Winning tomorrow's wars depends on it.

Endnotes:

[1]Timothy P. Lewin and Marc S. Melfi, "Fire Support in Time and Space," *Military Review*, May–June 2021, p. 61.

[2]Ibid, p. 59.

[3]*Total Army Analysis 25–29 Force Design Update*, U.S. Army Combined Arms Center, <https://www.comw.org/qdr/fulltext/08TAA.pdf>, accessed on 5 October 2021.

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DEMINING IN THE DMZ

By Colonel John P. Lloyd and Major Mark S. Born

Korean DMZ

At 10:00 a.m. on 27 July 1953 in Panmunjom, Korea, the Korean War Armistice Agreement was signed under the authority of the Commander in Chief, United Nations Command (UNC); the Supreme Commander of the Korean People's Army; and the commander of the Chinese People's Volunteers.[1] The first article of the Armistice Agreement created a military demarcation line and the Korean Demilitarized Zone (DMZ). Approximately 4 kilometers wide, the DMZ separates North and South Korea—from the Yellow Sea (on the west) to the Sea of Japan (on the east). The UNC retained administrative authority of the 2-kilometer strip of the DMZ south of the military demarcation line, and the Democratic People's Republic of Korea (DPRK) retained control of the 2-kilometer strip of the DMZ north of the military demarcation line. Although the armistice called for the retreat of all combat forces from the DMZ, continued skirmishes after 1953 served to transform the area into a fortified barrier running the width of the Korean peninsula.

Through manmade fortification, revegetation after massive bombing during the Korean War, and inclement weather that has reshaped the terrain, the DMZ has become a large obstacle belt, developed and modified for more than 67 years, creating significant safety hazards to demining. The area of the DMZ south of the military demarcation line comprises 100.3 million square meters and contains a significant number of landmines (estimated at more than 1 million) as well as a significant amount of unexploded ordnance. Beyond the sheer number of explosive devices present, three factors increase explosive-hazard risks in the DMZ—time, mine drift as (a result of weather), and a lack of detailed documentation on minefield locations.

Overview of the Panmunjom Declaration and the CMA

On 27 April 2018, an inter-Korean summit was conducted between President Moon Jae-in of the Republic of Korea (ROK) (representing South Korea) and Chairman Kim Jong Un of the DPRK (representing North Korea). The summit took place in the Joint Security Area (JSA) at the historic South Korean Panmunjom Peace House. The two leaders publically declared a plan for the establishment of a "peace regime" for the Korean peninsula; the historic meeting resulted in signing the Panmunjom Declaration for Peace, Prosperity, and Reunification of the Korean peninsula.[2]

The Panmunjom Declaration paved the way for a second summit between the leaders in Pyongyang, North Korea, in September 2018. There, delegates from the two governments signed the "Agreement on the Implementation of the Historic Panmunjom Declaration in the Military Domain," otherwise known as the Comprehensive Military Agreement (CMA), on 19 September 2018.[3] Among the provisions of

the agreement is a call for the transformation of the DMZ into a peace zone and the establishment of consultation on military assurance measures for—

- The mutual withdrawal of guard posts.
- JSA demilitarization.
- Inter-Korean joint remains recovery.

With the support of UNC, the ROK government has proceeded with its implementation of the CMA.

Vision

At the 74th Session of the United Nations (UN) General Assembly, on 18 October 2019, President Moon Jae-in proposed the idea of transforming the DMZ into an international peace zone to the UN and its member states. "The DMZ is the common heritage of humankind, and its value must be shared with the whole world," said President Moon.[4] His words generated a sense of urgency among the ROK peace supporters as well as the momentum necessary to begin the historic process of demining within the DMZ for the first time since 1953. He also created an opportunity for global support, stating, "Cooperation with the international community, including the UN Mine Action Service, will not only guarantee the transparency and stability of demining operations, but also instantly turn the DMZ into an area of international cooperation."[5]

Arrowhead Hill

The location that was agreed upon by a trilateral body comprised of ROK, UNC, and DPRK officials for the construction of a connecting road for conducting mine clearance was Arrowhead Hill, also known as Hill 281. Arrowhead Hill, located in Cheorwon Valley, was a site of considerable fighting between UNC forces (namely, the United States, France, and South Korea), China, and DPRK during the Korean War. It is estimated that the north side suffered 6,700 losses, while the south side lost 14,332. Over 9 days of fighting, it is estimated that the U.S. Air Force dropped 2,700 bombs, China fired 55,000 shells, and South Korea fired 185,000 shells. In 2019, ROK military engineers located 455 mines and 5,754 unexploded ordnance items at Arrowhead Hill.

Recovery Operations

On 1 October 2018, soldiers from the ROK and DPRK armies began clearing operations in both JSA and Arrowhead Hill, in accordance with the CMA. (According to ROK law, only the military is authorized to conduct demining operations.) In the JSA, both sides focused on clearing areas of potential mines and unexploded ordnance.

Although the CMA included a requirement for the verification of cleared areas, it did not specify the standard for clearance or who would conduct the verification. Due to the absence of agreed-upon demining standards between ROK and DPRK, comprehensive minefield documentation, mine action programs, and an organization that represented mine action within the international community, UN command engineers and U.S. Forces Korea, Camp Humphreys, South Korea, engineers agreed to support ROK mine action program development and to utilize the UN International Mine Action Standards (IMAS) as the foundation for mine action development.[6]

To achieve IMAS-compliant mine clearance, UNC enlisted the help of a U.S. Army Corps of Engineers quality control team from the Engineering Support Center, Huntsville, Alabama. The U.S. Army Corps of Engineers provided on-the-job training for ROK engineers, monitored ROK quality control operations, supplied external quality assurance measures, and provided certification for surface area clearance.

Clearance of the north side of the JSA, administered by the DPRK, was never verified to the same IMAS. Verification (or lack thereof) proved extremely critical, as two low-metallic box antipersonnel mines were detonated on the DPRK side of the JSA following the claimed clearance of mine hazards. Luckily, there were no injuries in those cases; however, these incidents, coupled with continued UNC insistence on clearance to the IMAS, served to highlight the lack of documentation on exact mine placement.

Upon completion of the first demining season in 2018,[7] UNC learned multiple critical lessons on mine actions in Korea. The first lesson learned regarded the value of published National Mine Action Standards, which are

Demining on Arrowhead Hill

Area clearance operations

standards that are developed by countries based on IMAS—but are more specific than IMAS. They also provide a cradle-to-grave process for demining, from planning to disposal to land turn-over. The next lesson learned focused on the development of an internationally recognized National Mine Action Authority[8] and a National Mine Action Center.[9] The creation of a National Mine Action Authority and National Mine Action Center established international legitimacy for countries' mine action policies, procedures, and coordination with international governmental and nongovernmental organizations. A final lesson learned was that the U.S. military does not execute demining operations unless they are deemed operationally essential—which can lead to gaps in demining knowledge and experience. As a learning organization, it became critical for the UNC to understand this limitation and seek subject matter experts from the field.

UN command engineers and U.S. Forces Korea engineers focused on developing opportunities to increase knowledge, learn from international governmental/nongovernmental agencies, and provide a mine action plan with support and oversight from subject matter experts in the mine action field. These actions support the achievement of a safe, transparent, and effective South Korean mine action program. Successful mine action initiatives have built a foundation to ensure that, in the future, the DMZ can indeed be transformed into a peace zone, as envisioned in the CMA and in President Moon's UN General Assembly speech.[10]

UN command engineer initiatives over the past year have included—

- Hosting a UNC demining workshop.
- Attending the National Directors of Mine Action Conference in Geneva, Switzerland.
- Visiting national mine action centers.
- Standing up a U.S./ROK/UNC demining steering committee.
- Visiting nongovernmental mine action organizations.
- Providing state engineers with mine action experience for the UNC staff.
- Enforcing standards for demining operations in the DMZ.

Even as a small engineer staff, UNC engineers were able to use available resources to help transform national policies and standards, which resulted in a successful 2019 Korean DMZ demining season.

Conclusion

For the past 67 years, the DMZ has been one of the most densely mine-laden and dangerous areas in the world. The CMA created an opportunity to facilitate change in the DMZ and ignited a spark that initiated the historic acts of strategically removing combat-related obstacles and recovering the remains of fallen heroes. These small steps led to immense results.

Peace is a process. UNC engineers and the Multinational Demining Committee continue to work across multiple lines of effort to socialize with countries affiliated with UNC, to send subject matter experts to observe and participate in demining efforts, and to continue working closely with ROK on creating mine action policies in accordance with international standards. These efforts include upgrades in the

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Protection Planning at Every Echelon

By Major Meghan L. Engleson and Major Stacey N. Wuchter

Protection is the overarching function under which the Army ensures preservation of the force and survivability of mission-related military and nonmilitary personnel and resources in order to ensure freedom of action throughout the whole of an operation.[1] Effective protection planning and prioritization will become increasingly important in events leading to future large-scale combat operations, and commanders and staffs at every echelon will need to place great emphasis on integrating protection planning across all domains and throughout the entirety of operations. Protection as a warfighting function is not limited to echelons above brigade. Commanders at every echelon must understand what to protect and how to protect it in order to best mitigate hostile actions and preserve gains while continuing to enable freedom of movement and momentum.

Theater Level Protection

According to Army Doctrine Publication (ADP) 3-37, *Protection*, "Protection support within a theater of operations during large-scale ground combat operations is executed throughout the operational framework . . . protection priorities are not the same at every echelon or in every area of operations."[2] Each echelon prioritizes protection requirements differently across domains, and lower levels should nest with higher ones. However, protection priorities are changeable and should be reassessed and allowed to evolve as transitions and changes occur throughout the area of operations and with regard to available resources, operational or mission focus, or the commander's priorities.

There is currently no formal protection cell at the theater level. However, protection considerations are to remain a priority for large-scale combat operations. Air defense artillery officers from the brigade level to the theater level must synchronize their efforts with their joint counterparts to utilize the most effective capabilities for maneuver forces. Civil considerations are also important in establishing clear communication and trust amongst joint and coalition forces, allowing them to work together efficiently. While challenging, the commander must select the appropriate Service with which to plan and synchronize the staff for protection activities, depending on the area of operations.

Protection Planning at Echelons Above Brigade

The Army Strategic Education Program–Commander Program provides general officers at the division, corps, and, army levels with a developmental course to enhance leadership capabilities and prepare the Army's highest leaders for the future warfight. Designed to complement both Army and joint general officer education, this program focuses on Army doctrine, systems, capabilities, and other activities that enhance overall readiness of its formations, while simultaneously preparing commanders to conduct unified land operations at echelons above brigade. During the Army Strategic Education Program–Commander Program, multiple vignettes are presented by the various centers of excellence. The Maneuver Support Center of Excellence (MSCoE), Fort Leonard Wood, Missouri, is responsible for the contribution of protection considerations and applicability for joint reception staging and onward integration (JRSOI), forward passage of lines, shaping operations, wet-gap crossing, transition to the defense, and consolidation of gains in an urban environment.

For JRSOI, protection focuses on maintaining force projection; building combat power; and protecting critical nodes, tactical assembly areas, and lines of communication. The rapid reconstitution of critical facilities and infrastructure is another consideration. All 16 protection tasks outlined in ADP 3-37 are key during JRSOI operations. Even before a Soldier arrives at the JRSOI location, force health protection sets the theater via Soldier readiness processing and environmental baseline surveys.

The protection focus for the forward passage of lines includes the transfer of obstacle control between responsible units (back to survivability), fratricide avoidance (which is at greatest risk during this operation), the construction and repair of passage of lines and assembly areas, and the engagement of the noncommitted enemy force while defeating enemy security and counter-unmanned aerial systems to prevent acquisition of the passing force. The forward passage of lines is one of the riskiest military operations, and commanders must plan avoidance measures along movement corridors to retain forward momentum and ensure that the tempo is not decreased. Engineers, which are task-organized with maneuver forces, conduct route clearance and improve ground lines of communication. Military police manage traffic and provide route security for uninterrupted freedom of movement. Chemical, biological, radiological, and nuclear (CBRN) assets conduct route and area reconnaissance in case of any potential CBRN attacks.

Protection consideration for shaping operations should include the commander's critical capabilities, assets, and activities and active and passive protection integration. Protection considerations for wet-gap crossing include locations for pre-positioned bridging, allocation of assets, and the

manner in which protection is to be provided to the support area during the wet-gap operation.

Protection considerations for wet-gap crossings and transitions to the defense include enabling brigade combat teams in the close fight while the division and corps continue with the deep fight. During this type of operation, the protection prioritization list is reprioritized, as assessed and designated by the commander. Heightened protection measures for command nodes are critical in the prevention of electronic warfare attacks, and CBRN attacks should be anticipated as the enemy force conducts a counterattack. During security operations, commanders may reposition the theater detention facility and reserve force for area security in the support area. Information collection plans are also refined, and rehearsals of deception plans are incorporated based on time- or event-based triggers.

Protection considerations for detainee operations at the corps and theater level during consolidation of gains is paramount. To put this in perspective, divisions and, potentially, corps will need to establish plans for detainee holding areas and the transport of detainees to theater detention facilities. Detainee movement will be at a much larger scale than what our formations are accustomed to planning for. Other considerations include the impact of displaced civilian populations and the utilization of information operations to influence movement away from mobility corridors. During consolidation of gains, the protection warfighting function focuses on area security support to maneuver units, route remediation and repair, countermobility in support of defense and survivability, critical infrastructure repair, restoration of the rule of law and resettlement of the population, and detainee operations.

Protection Planning for Brigade and Below

Echelons below division do not have designated protection cells, yet commanders and staffs must ensure that the force remains protected, integrating directives from higher echelons and ensuring that subordinate units are receiving the support they need to execute protection tasks at their level. Effective protection plans require continuous and integrated vertical, and sometimes horizontal, planning, as many of the protection tasks require coordination with sister units.

Following are four examples of protection planning considerations at the levels of brigade and below. The first two are obviously applicable to tactical-level missions. The second two are less obviously applicable, but serve as examples of tactical planning to support operational and strategic operations.

Conduct Survivability

Camouflage, cover, and deception planning must be conducted at all levels. Over the past 2 decades, our forces have lost some of the skills that they had gained from effectively camouflaging our personnel and equipment during past wars. In Iraq, colossal bases surrounded by concrete Alaska barriers and monitored by surveillance cameras on walls, buildings, and in the air became the norm. Our presence in Iraq was not concealed. In fact, enemies used aerostat blimps as targets for indirect fire because they were centrally located and anything fired at them was sure to hit *something* on the ground. Threats from indirect-fire attacks were somewhat mitigated by hardening buildings. However, in the LSCO fight, it is unlikely that units—especially maneuver units—will remain in place long enough to effectively harden buildings. Instead, units need to learn to employ camouflage on the move and to very quickly find or create cover when halted. Today's technology has made it easier than ever to collect information and identify high-payoff targets—both for us and our adversaries. Deception planning at the tactical level includes taking measures to ensure that our critical assets and equipment are not easily identifiable or easy to target or attack.

Provide Force Health Protection

A vast number of casualties in any conflict are not due to combat operations, but are the result of illness sweeping through units. Ensuring that the unit understands and follows preventive-medicine guidelines, developing field sanitation plans, and training field sanitation teams result in incredibly high returns on investment for our warfighters. These actions include planning for acclimatization periods for replacements during JRSOI, training to identify poisonous plants and venomous animals in the region, and constantly pushing to prevent Soldiers from adopting the stray animals they will likely encounter. The adoption of strays by individuals and units during conflict may seem innocuous, but it is a well-documented phenomenon that has had terrible consequences in the past.

Coordinate Air and Missile Defense (AMD) Support

Air and missile defense (AMD) support is a task that would be easy for a brigade staff to brush off since AMD assets are often reserved at the theater level. However, brigade staffs must understand two things:

- There may be AMD assets that could be potential targets within their areas of operations, and, there may be critical assets or infrastructure that require AMD protection within their area of operations.
- The staff at higher echelons cannot develop the protection prioritization list and the critical asset/defended asset list in a vacuum.

A brigade protection officer or operations officer must coordinate with the division protection cell to develop the protection prioritization list. Higher echelons may not have the "on ground" understanding that brigades, battalions, or companies have of their assigned areas of operations. Constantly communicating and reassessing the protection prioritization list and ensuring that information flows both up and down the chain support the coordination of AMD assets at the highest levels.

Conduct Detention Operations

Those who are not in a military police unit, are likely thinking their units do not need to plan for detention

operations. After all, detention operations is a military police function, right? Well, partially. The maneuver force must have a plan to hold detained persons until they can be handed over to the military police. This may mean that the maneuver force is responsible for operations at the detainee collection point and, potentially, at the detainee holding area.[3]

All echelons must have a thorough understanding of how to execute the care, custody, and control of detained persons in accordance with Army regulations and the Geneva Conventions.[4] Improper execution at the tactical level can have detrimental effects at the strategic level, negatively impacting joint and partner operations and perceptions throughout the world. Additionally, crime does not necessarily stop just because elements are moving against the enemy and commanders are responsible for stopping and controlling criminal actions (whether normal crimes or war crimes) as they occur or are brought to light.

Protection at the level of brigade and below is not focused solely on the tactical-level subtasks listed in ADP 3-37, although those are important in guiding planning. Brigades must include deliberate protection planning and support to the division protection cell in order to ensure that the plans remain comprehensive, integrated, layered, redundant, and enduring—the principles of protection. Brigades need clear guidance and a complete understanding of the vision and desired end state of division and corps level operations in order to understand their responsibilities in the scheme of protection. The Army Strategic Education Program–Commander Program provides division, corps, and Army commanders with the commanders and subject matter experts from the various centers of excellence and a forum for deliberate planning for some of the most dangerous operations our future Army will face.

Endnotes:

[1]ADP 3-37, *Protection*, 31 July 2019, p. iv.

[2]Ibid, p. 1-8.

[3]Ibid.

[4]"Geneva Conventions Relative to the Treatment of Prisoners of War," United Nations, 12 August 1949, <https://ihl-databases.icrc.org/applic/ihl/ihl.nsf/INTRO/375?OpenDocument>, accessed on 10 August 2021.

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latest mine and unexploded ordnance technological advances and creating partnership synergy with professionals in nongovernmental organizations. Lastly, and most importantly, UNC engineers contribute to reconciliation on the Korean peninsula through the removal of mines.

Endnotes:

[1]*Agreement Concerning a Military Armistice in Korea*, UN, 27 July 1953, <https://peacemaker.un.org/koreadprk-militaryarmistice53>, accessed on 3 August 2020.

[2]*Letter Dated 6 September 2018 From the Representatives of the Democratic People's Republic of Korea and the Republic of Korea to the United Nations Addressed to the Secretary-General*, UN, 6 September 2018, <https://digitallibrary.un.org/record/1640603?ln=en>, accessed on 3 August 2020.

[3]"Agreement on Implementation of the Historic Panmunjom Declaration in the Military Domain," National Committee on North Korea, 18 September 2018, <https://www.ncnk.org/sites/default/files/Agreement%20on%20the%20Implementation%20of%20the%20Historic%20Panmunjom%20Declaration%20in%20the%20Military%20Domain.pdf>, accessed on 3 August 2020.

[4]"Full Text of President Moon Jae-in's Speech at the 74th UN General Assembly Session," Yonhap News Agency, 25 September 2019, <https://en.yna.co.kr/view/AEN20190924010500315>, accessed on 3 August 2020.

[5]Ibid.

[6]International Mine Action Standards, IMAS Organization, 2001, <https://www.mineactionstandards.org/>, accessed on 3 August 2020.

[7]The demining season is determined by weather conditions that permit the activities necessary for removal of mines and unexploded ordnance. The length of the season depends on the location, but the season generally consists of warmer months with little precipitation, as lower temperatures can cause freezing and excess precipitation can cause unsafe conditions.

[8]"Full Text of President Moon Jae-in's Speech."

[9]"UN Officials Discuss Support for President Moon's Vision for DMZ Mine Removal," Yonhap News Agency, 17 February 2020, <https://en.yna.co.kr/view/AEN20200217003600325>, accessed on 3 August 2020.

[10]"Full Text of President Moon Jae-in's Speech."

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Paradigm Shift: Transforming the Protection WFF to Meet the New Peer Competitor in Multi-Domain Operations

By Major Joel D. Maxwell

During the waning days of the Afghanistan surge in 2011, the 101st Airborne Division protection chief for Regional Command East, Bagram Air Base, Afghanistan, coordinated a weekly huddle with seven brigade (force) protection officers. Each of the seven officers was assigned an additional duty as a brigade protection officer—five were assigned as brigade provost marshals; one was assigned as an infantry officer; and one was assigned as the brigade chemical, biological, radiological, and nuclear officer. A typical meeting flowed like a logistics synchronization rather than the coordination of a warfighting function (WFF) for operations. Some of the common questions and guidance from the protection chief included: "What is the status of your rapid aerostat initial-deployment systems towers systems?" "We will have a contractor out tomorrow to repair the camera on your persistent ground surveillance system blimp." And "Parts are currently on backorder for your entry control point sensors."

The protection chief also provided a checklist for conducting force protection assessments at each forward operating base and combat outpost, with a requirement to annually assess each location. Assessors found a platoon from a field artillery battery in charge of base defense at one forward operating base, an infantry platoon at another, and cooks at a third. Some locations had separate operations centers for base defense and battalion/company operations, and video feeds from various sensors were not always displayed in both operations centers. Higher-echelon operations centers located on a different forward operating base often could not see the video feeds from the base sensors in real time. Force protection equipment was sometimes found in storage, as the unit lacked the expertise to set up the commercial, off-the-shelf system and/or the personnel trained to properly monitor it. All of these conditions made it difficult for a commander to visualize risk and make decisions to preserve the force.

As the Army transitions from nearly 2 decades of fighting insurgencies in Afghanistan and Iraq, it must prepare for competition and armed conflict against a peer competitor that can and will challenge U.S. forces in all domains. Gone are the days of assured communications and air superiority. In such an environment, the Army can no longer afford a passive and reactive protection WFF detached from maneuver. The future protection WFF must be anticipatory, proactive, and synchronized with maneuver, preserving the commander's critical capabilities assets and activities, denying threat and enemy freedom of action, and enabling access to create windows of protection superiority (see Figure 1).

The Problem

The root problem visualized in the Army operating concept of multi-domain operations is stand-off. The adversary will create stand-off by separating the joint force in time, space, and function as the adversary converges multidomain effects. Even more problematic is how it creates political stand-off by fracturing friendly alliances and partnerships. These adversarial actions reduce the Army's ability to recognize, decide, and react to the true nature of a threat, which may result in an adversarial "win" without fighting—*a fait accompli*. The protection WFF must enable access in all domains in order to deter the adversary in competition and, if necessary, defeat it in armed conflict. Furthermore, protection must deny the adversary the ability to create stand-off in all domains throughout the competition continuum (competition, crisis, armed conflict, and return to competition) See Figure 2.

The Past

On 16 November 2020, Commanding General John M. Murray, U.S. Army Futures Command, remotely opened the Future Studies Program 2021 with a key question: Have we entered a paradigm shift in modern warfare where the defense is the dominant form of maneuver? From the beginning of human history, members of our species have killed one another while protecting their own warriors, loved ones, and communities of nations. The scope and scale of defensive structures have ranged from dirt walls in a village in Africa to the Great Wall of China (built to keep out the Mongol hordes) to the Civil War fortifications around Washington, D.C. (arguably the most fortified city on the planet at that time). As one side discovers new ways of killing, the other creates new forms of protection from the effects of the new weapons systems—helmets and shields (for arrows and spears), gas masks (for chemicals), and reactive armor (for shaped charges and kinetic energy). Even tactics evolve to incorporate protection; for example, the Greek phalanx was a tactical formation that maneuvered with the protection of interlocking shields as an integral part of its effectiveness.

Although protection has existed throughout human history, protection doctrine is relatively new. The first doctrinal mention of protection was as an element of combat

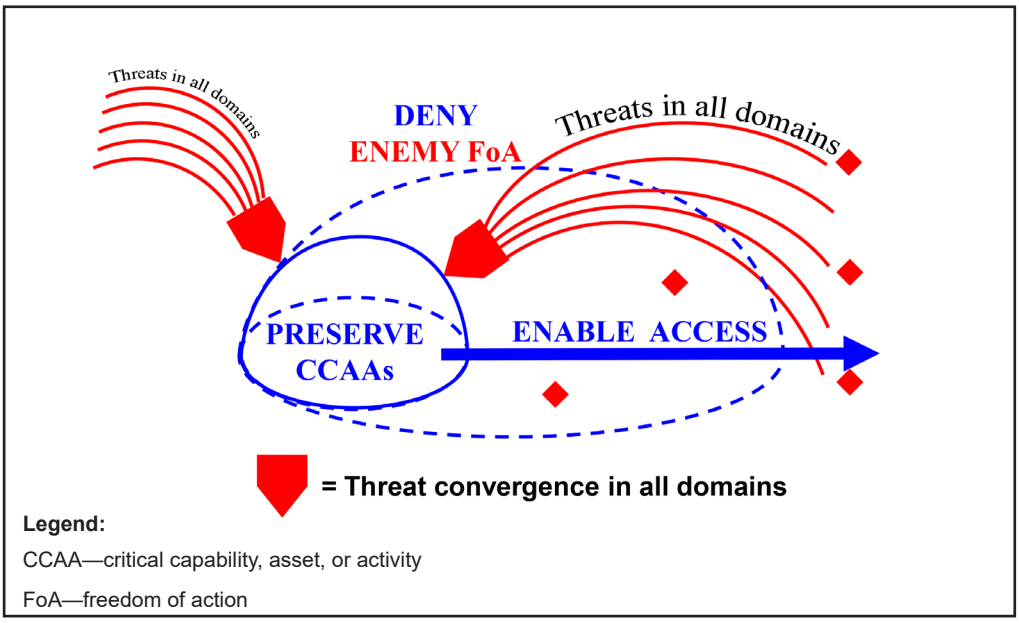

Figure 1. Future goals of the protection WFF

power in 1993, in now-obsolete Field Manual (FM) 100-5, *Operations*.[1] The original definition of protection consisted of four components (operational security, Soldier health, safety, and fratricide avoidance) and contained the verb "conserve."[2] Protection was still an element of combat power in 2001; and with subtle language changes, the four components were identical.[3] However, the verb in the definition changed from "conserve" to "preserve."[4] The first protection FM was released in 2009; it contained a similar definition (still with the verb "preserve"), although the four components were transformed into five principles: full-dimension, integrated, layered, redundant, and enduring.[5] The only recent change in current doctrine was in 2019, when "full-dimension" was changed to "comprehensive."[6]

The War on Terrorism defined protection by entry control points; HESCO® barriers; persistent ground surveillance system blimps; and even the technologically advanced counter rocket, artillery, and mortar systems, which are inherently passive and reactive. But the protection of the past is insufficient against future peer competitors. As the Army visualizes a future operating environment and peer competitor threat, the goals of the principles listed above are nearly impossible to achieve from an asset density and a cost perspective point of view. The Army cannot protect everything, everywhere; instead, it must create "windows" of protection. Protection must be proactive, anticipatory, and integrated with maneuver. The following statement from the original *Ranger Handbook* still rings true today: "Protected maneuver and fires generates combat power."[7]

Dynamic Change

A dramatic shift in modern warfare, spurred by multiple technological advances, has occurred over the past decade. U.S. adversaries now possess hypersonic weapons that are capable of striking at much greater distances, challenging current air defense systems. China and Russia have invested in their integrated air defense systems, seriously contesting air space control. Cyberspace is now more contested than ever, as adversaries continuously probe, seeking and discovering weaknesses to exploit.

The adversary can see and strike in the homeland; assured power projection is a thing of the past. The enemy's deep area is our rear area; the entire battlefield framework is now a contested space. These advances require a shift in how the Army executes the protection WFF. The Army must rethink how it conducts reception, staging, onward movement, and integration; they will be contested and must be protected. The Army must converge protection, creating the protected windows necessary to defeat stand-off with greater speed, at greater distances, and in all domains.

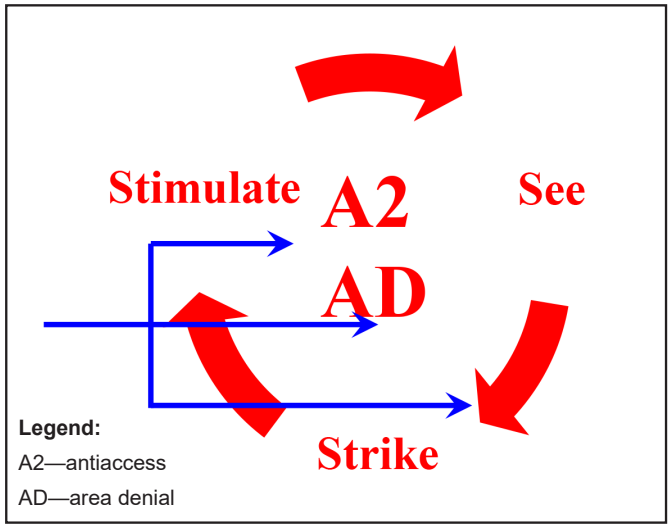

Figure 2. Denial of adversarial stand-off

The Future

Returning to General Murray's question, the primacy of the offense versus defense has historically shifted over time. Defense dominated during medieval times, as illustrated by castles, moats, and fortifications; costly sieges were the only defeat mechanism. With the era of cannons and gunpowder, the primacy of offense returned—until World War I, when machine guns and trench warfare put defense back in the forefront. Combined arms maneuver (*Blitzkrieg*) during World War II resulted in the return of offense to its former glory. With China and Russia investing in and proliferating

(Continued on page 20)

Protection and the Change in the Character of War

By Captain Matthew R. Bigelow

The nature of war is generally unchanging; it is violent, interactive, and political. If any of these elements are missing, there is no war. Only the character of war—through politics and society—changes. Prussian general Carl von Clausewitz called this the "Spirit of Age."[1] Technology influences cognitive and material shifts in the character of war across time and space. Due to the evolving impact of technology on the character of war, coupled with environmental and resource considerations, neither the offense nor the defense maintains a stranglehold on victory. The character of war is assessed through von Clausewitz's trinity: military, government, and people.[2]

Throughout history, there are examples in which advances in technology have shifted advantages in acquiring a decisive victory. History also illustrates that the side that does not possess the superior technology struggles in achieving its military objectives. Furthermore, war is not won only through decisive victory; the will of an actor may be broken due to exhaustion or attrition. Worthwhile case studies in which technology changed the character of war include the machine gun in World War I, the radio and tank in World War II, and Soviet-developed capabilities used by Arab nations during the Yom Kippur War. The world has recently witnessed a shift in the character of war through the use of loitering-munition technology and other unmanned aerial vehicles (UAVs), as demonstrated by the 2020 Nagorno-Karabakh conflict. Like the Russo-Japanese War, which was a precursor to World War I, or the Spanish Civil War, which preceded World War II, the recent Nagorno-Karabakh conflict provides a reflection point regarding what future war against a peer adversary might look like. This conflict must be further studied and analyzed from the protection war fighting function perspective. In addition, if necessary, the resulting information should drive protection-related changes or modernizations within the realms of doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P).

The technology of the machine gun changed the character of war during World War I. The machine gun increased overall lethality and mitigated against mass frontal assaults. In addition, it increased the effective range and reach against forces on the battlefield.[3] In order to achieve a decisive victory during the middle phase of the war (in 1916), the French and British attacked the Germans with mass at the Battle of the Somme. With their hardened trenches and defensive positions, the Germans used machine guns to prevent the British and French from achieving their objective of ending the stalemate and the war.[4] The technological advances of the machine gun shifted the strength of war from mass to machine and, thus, gave the Germans the advantage of increased lethality.

The character of war was also changed by radios and tanks during World War II. With speed and surprise, Germany launched an offensive against France through the Ardennes Forest in 1940. The Germans bypassed the French fortifications known as the Maginot Line. French defensive measures failed to stop the operation of the German tanks.[5] The use of radio communication in conjunction with tanks enhanced Germany's ability to conduct command and to increase its overall speed on the battlefield. Every tank was equipped with a radio; this was not possible for the French.[6] This strengthened Germany's offensive operations. The Germans' superiority and their investment in technology led to the French failure to meet the objective of defending along the border. Together, the radio and the tank changed the character of war at the dawn of World War II.

The modern 2020 Nagorno-Karabakh conflict between Azerbaijan and Armenia not only illustrates a potential shift in the character of war, but also shows what multi-domain operations—particularly with the use of loitering munitions and other UAVs for targeting, sensors, and deep-strike capabilities—could look like in a future multidimensional fight. The conflict was fast-paced, and it enhanced kill chains (processes of finding, fixing, and finishing a target) with the synchronization of machines and technology across multiple domains—particularly air, land, and space.[7] With UAVs, countries can build large air forces on tight budgets and use the technology for deep strikes and to enable maneuver. Whereas the United States is investing trillions of dollars in the F-35 fighter jet and other air domain capabilities, other nations are investing in cheaper intelligence and strike assets. Modernizing the air force with additional capabilities and capacity is precisely what Azerbaijan did over the past 2 decades—and what Armenia failed to do.

In September and November of 2020, Azerbaijan and Armenia fought over rough, mountainous terrain in the Caucasus Region. The conflict lasted 44 days and resulted in an Azerbaijan victory. Estimates of Armenian losses include more than 900 tanks, mobile platforms, air defense assets, and command and control nodes. Unfortunately, Armenia's relic Soviet era air defense and technology could not detect or defeat Azerbaijan's loitering munitions and other UAVs. With the help of strategic partners (particularly, Turkey and Israel), Azerbaijan's battlefield victory demonstrated its ability to effectively synchronize capabilities from multiple domains in a unified manner against Armenian forces.[8]

Thanks to changes in geopolitics—especially in Israel and Turkey—Azerbaijan invested heavily in loitering munitions and other UAVs prior to its fight against Armenia in 2020. A loitering munition is a specialized UAV equipped with a warhead that is designed to attack ground targets. Loitering munitions have the ability to "loiter" in the air for a period of time, sense or detect a target, and strike. In addition, they can function as "suicide drones." This technology improves precision, detection, and lethality on the battlefield. In addition, some models of loitering munitions have a "wave off" feature that allows operators to cancel an attack while in flight.[9]

During the short Nagorno-Karabakh conflict, Azerbaijan targeted Armenia's air defense capabilities first. Next, Azerbaijan shifted its attention to command and control nodes in the support area. There was a stalemate in maneuver between the two countries in the close area. It was the deep targeting and the strikes in Armenia's rear area that turned the tide of the conflict in Azerbaijan's favor. Azerbaijan capitalized on information operations by publishing videos of its UAV strikes on the Internet and social media. This contributed to Armenia's defeat by breaking its intangible will. Videos that are still available across the Internet to this day show strike after strike in Armenia's rear area. Armenia incorporated protection and active and passive security measures (camouflage, concealment, movement control, emission controls, hardening of positions, and observation posts) and fought to the best of its abilities. However, these measures failed to mitigate Azerbaijan's sensors and synchronized strikes.[10]

The Nagorno-Karabakh conflict should be studied and lessons learned should be incorporated across DOTMLPF-P in order to prepare for future conflicts. The Nagorno-Karabakh conflict is a modern-day version of the Yom Kippur War. When conflict erupted in the Middle East in 1973, the United States studied the use of Soviet Union capabilities and modernized across DOTMLPF-P. The Yom Kippur War forced the U.S. Army to change its doctrine and focus away from counterinsurgency to active defense and then to air/land battle (large-scale combat operations). New force structure and modernization involved the big five—the Abrams tank, the Bradley fighting vehicle, the Apache helicopter, the Black Hawk helicopter, and the Patriot air defense system. New combat training centers were built to replicate combat operations against the Soviet Union. The United States shifted focus to a three-dimensional future war with a peer adversary. Just as with the Yom Kippur War, the Nagorno-Karabakh conflict could shape changes across the U.S. Army—particularly in the areas of doctrine, capabilities, and force structure.[11]

Adversaries closely watched the Nagorno-Karabakh conflict and noted Azerbaijan's air superiority and sensor-shooter integration, particularly in the areas of kill chains and deep strikes in the rear area. This change in the character of war, and possibly a revolution in military affairs may, hinder America's air superiority in future conflicts. Armenia incorporated several means of protection in its rear area: dispersion, camouflage, trenches, and air missile defense. None of these measures were effective in stopping the Azerbaijan dominance.

The impact and utility of drone strikes demonstrated during the Nagorno-Karabakh conflict create an interesting problem—especially as we again shift our doctrine and focus away from counterinsurgency to large-scale combat operations and the convergence of domains. Lack of rear area security command and control, air space control, mobility, and survivability has been identified as a couple of gaps (Gaps 6 and 7 of 17 critical gaps) in need of rectifying if we are to win against a peer adversary.[12] It is imperative that land forces continue to invest in survivability and protection measures to counter UAVs and machines while on the glidepath to WayPoint 2028 and AimPoint 2035.[13]

The subject of counter-unmanned aerial systems is included in the current protection war fighting function discourse. However, the corresponding doctrine is limited and in need of updates to reflect the recent shift. The current protection doctrine offers little direction in countering loitering munitions or other UAVs, other than discussions on basic tactical tasks and coordination measures.[14] The U.S. Army Military Police School (USAMPS), Fort Leonard Wood, Missouri, is incorporating the lessons learned from the Nagorno-Karabakh conflict in to the annual course updates to specific Captain's Career Course classes—particularly into the blocks of instruction that cover protection and threat analysis—to bring awareness to the new shift in the character of war. In addition, a USAMPS Captain's Career Course instructor participated in a course designed to deepen overall understanding of loitering munitions, other UAVs, and countermeasures in order to incorporate that information throughout professional military education.

Capabilities, force structure updates, and countermeasures are in development. However, we can take action now to counter drones and loitering munitions and other UAVs at the tactical level. At the tactical level, smaller and more dispersed command and control nodes with limited signatures make it more challenging for sensors to find, fix, and kill. In addition, at the tactical level, it is paramount to practice operations security and camouflage techniques to reduce signatures. Dispersion, mobility, and limitations across the electromagnetic spectrum (to operate in a denied, degraded, and disrupted operational environment) may increase survivability. Large footprints or command and control nodes that maintain static positions and high signatures increase the risk of detection by sensors.

The character of war continuously changes through time. We have witnessed such shifts throughout history, and we are now seeing a change in the air domain—the use of UAVs, as demonstrated in the recent Nagorno-Karabakh conflict. There are lessons to be learned from this conflict, and efforts to change must be made—especially within the protection war fighting function and our shift to a multi- or joint domain fight. It is paramount that we continue to study this conflict and that we continue to evolve. Our adversaries certainly are.

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[10]Ibid.

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("Paradigm Shift: . . . ," continued from page 17)

antiaccess and area denial technology, is the future fight reliant upon the primacy of the defense? Is the Army capable of countering these defenses and protecting an advancing force?

By employing the *Army Futures Command Concept for Protection 2028*,[8] the Army is capable of defeating stand-off and protecting the force. The central idea of the concept is that "Army forces, as part of joint, interagency, intergovernmental and multinational teams, conduct protection activities in all domains, the electromagnetic spectrum, and information environment, to preserve commanders' critical capabilities, assets, and activities; deny threat and enemy freedom of action; and enable access to achieve protected windows of superiority."[9] The concept outlines how protection expands beyond passive actions, checklists, and the prevention of enemy activities in friendly areas and is more active across broader spaces. Commanders must be able to see adversaries and deny them anonymity, counter specific strengths, achieve positions of advantage, and expand and exploit gained areas. The future Army must do more than simply create a list of things to be protected and describe the assets that will be used to protect them; it must simultaneously deny the threat in all domains while opening protected windows of superiority that enable access for friendly forces. For the Army to succeed, the whole of government and other joint, interorganizational, and multinational partners must expand the protection capability, increase capacity in competition, and operate at scale in armed conflict. Protection must be proactive and anticipatory in all domains and must be integrated with maneuver.

Endnotes:

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Advising Foreign Security Force Engineers

By Major Jared S. Baldwin

In 2019, the 2d Security Force Assistance Brigade (SFAB), Fort Bragg, North Carolina, deployed to Afghanistan in support of Operation Resolute Support. Engineer Advisor Team 2511 was comprised of a post command team leader, a senior combat engineer sergeant, a combat engineer advisor, and a construction advisor. The team was assigned to the Train Advise Assist Command (TAAC)–Capital, Kabul, and later moved to TAAC–North, Mazar-i-Sharif. Team 2511 advised SFAB maneuver commanders, local Afghan National Defense personnel, and security forces in the areas of combat engineering and horizontal- and vertical-construction tasks. Team members learned some lessons that may benefit other engineer advisor teams on future advising missions.

Advising With NATO

An integral part of Operation Resolute Support mission success consisted of the contributions of the many North Atlantic Treaty organization (NATO) countries that had operational control over select TAACs. Team 2511 had the unique opportunity to work alongside Turkish and Macedonian engineers at TAAC–Capital and German engineers at TAAC–North. The team supported their advising efforts below the Afghan National Army (ANA) corps level.

Team 2511 spent roughly half of its time in TAAC–North in expeditionary deployment conditions on small bases, assisting maneuver advisor teams that were colocated with ANA units from the 209th and 217th Corps, based across northern Afghanistan. TAAC headquarters staff sections did not have the capacity to train and advise below the ANA corps level, leaving the TAAC–North senior engineer advisor to focus his efforts solely on the ANA corps engineer. The TAAC–North senior engineer advisor relied heavily upon information provided by the ANA corps engineer to assist in parallel planning and advising efforts. Unfortunately, the corps engineer was unable to validate personnel numbers or equipment readiness or confirm if operational information was reaching company level leadership. Through integration with the TAAC–North senior engineer, Team 2511 obtained information while also providing training to the engineer, route clearance, and explosive ordnance disposal (EOD) companies. By acting as the connective tissue, the team assisted in synchronizing engineer efforts across ANA echelons.

A key part of integrating with the TAAC senior engineer advisor was the ability to avoid mission failure. The team learned through the senior engineer advisor that the ANA corps commander wanted to conduct a clearance operation along a particular stretch of enemy-held Highway 1. The plan called for ANA maneuver elements to clear the route and then use ANA engineers to construct a few platoon size

Soldiers integrating with a maneuver advisor team in Kabul

A Soldier instructs ANA engineers on route clearance.

battle positions to secure and hold the terrain. After a few advising engagements, it was discovered that ANA engineers did not have the capability or resources to construct the battle positions. This was a setback to the clear, hold, and build concept. Team 2511 informed the TAAC–North senior engineer advisor of the shortfall and advised the ANA corps engineer to search elsewhere for the construction capability.

Advising Under Decentralized Conditions

The mission set sometimes does not allow for the task force, company, or team to be colocated on the same operating base. In such circumstances, the entity must exercise mission command to decentralize advising efforts across the operational area and accomplish the mission.

The initial mission of the Team 2511 higher headquarters was to advise the Afghan National Police units responsible for operating the Kabul City gates and the ANA *kandaks* (battalions) tasked to defend the capital of Kabul. The mission focused on enhancement of the Kabul City gates; force protection posture; and mobility, countermobility, and survivability training for the ANA. Kabul City gate personnel and ANA *kandaks* were advised by different maneuver advising teams. In order to provide the required engineer capability, Team 2511 separated, aligned, and integrated with the maneuver advising teams. Synchronization was key before and after separate missions to gain situational awareness of gate force protection construction progress and any training required by the ANA *kandaks*. As much as the team wished to operate as one, covering separate areas and advising at the point of need were mission-essential.

Advising Foreign Security Force Partners

Some ANA commanders see the SFAB advisor as someone who can accomplish what they could not or someone who will solve all of the unit issues based on preconceived notions or previous interactions with U.S. counterparts. During engagements, the advisor must be forthright, with the purpose centering firmly on the principles of training, advising, and assisting.

Team 2511 had the opportunity to meet numerous ANA maneuver and engineer commanders in Kabul and across TAAC–North. Most of the ANA commanders had little or no experience in working with U.S. advisors or had previously worked with U.S. advisors who provided their units with ample supplies and resources. Based on previous experiences, some ANA commanders expected Team 2511 to provide fuel, sandbags, and air support. In an attempt to manage expectations, the team began informing ANA commanders that support would be provided in the form of training on the equipment, advising the commander and staff on operations, and leveraging logistical support through the advisor network. Some commanders were disappointed; they wanted immediate material and operational support—not a commitment to follow through with supply requests or discuss training plans. As team members continued to travel across the country, they believed it best to lay out expectations in advance to set the tone for current and future engagements. Although the reactions were unchanged, this approach gave the team a chance to get ahead of the curve and focus on unit readiness and training. Over time, questions regarding sustainment led to questions regarding upcoming missions. These discussions inevitably led to opportunities for the team to share thoughts and appropriately advise the commanders about partner force plans. The ANA commanders grew to understand that the team, which was trained differently than previous advisors, was a team with which they could build rapport through training and honest advising rather than through dependency.

Managing Advising Expectations

Foreign security force counterparts may operate vastly differently than SFAB or other NATO advisors. The advisor must then shift from a doctrinal mindset to one that supports the ANA initiative—and that's okay.

The ANA mission was to construct a small, platoon size battle position to secure key terrain around Highway 1. During planning, the discussion focused on the battle position location, size, and layout and the bill of materials on hand. Referencing the map of the operational environment, the TAAC–North senior engineer advisor and Team 2511 identified key terrain that would be easily defendable and had clear fields of fire and suitable access routes for construction. After considering the proposed location, the ANA corps engineer insisted on using an alternate location that had a high ridgeline on one side, a river on the other side, and poor access roads for the construction of entrance/exit roads. The decision of the ANA corps engineer not to use the proposed location caused confusion and frustration among the team members. The senior engineer advisor and the team wanted the construction to succeed, giving the ANA soldiers tactical advantages over the enemy. After several discussions, the ANA corps engineer and the TAAC–North senior engineer managed to agree on a location that provided better fields of fire. As expected, ANA engineers encountered issues with bringing in heavy equipment to berm and fill the force protection bastions. They were forced to use less-capable and less-effective equipment, which resulted in a final product that was less than perfect by Team 2511 standards. However, the ANA took the initiative to plan, resource, and build the battle position with little help, which was the ultimate desired goal of advising.

Team 2511 was also required to manage expectations when it came to route clearance operations. The team met with an ANA EOD company and observed its route clearance tactics to establish a baseline and identify strengths and shortfalls. This particular unit demonstrated that it was very familiar with some of the U.S. Army reporting procedures, but it used nondoctrinal methods for detection. Team members explained and demonstrated some U.S. Army doctrinal methods for early detection in the hopes that the EOD unit would adopt them; however, the EOD commander was skeptical and reluctant to incorporate them. The team stressed how the doctrinal methods would be beneficial to the ANA during clearance operations. Team members informed the EOD commander that training his unit on early detection methods would have significant benefits during operations and that training on these tactics would continue during every engagement. Although the team would not be able to verify whether its efforts paid off, it had trained to standard and planted the seed with the EOD company. In the end, it was up to the brave ANA soldiers of the EOD company to clear the stretch of Highway 1. Success was up to them.

A Soldier inspects equipment before training.

Handling Technology Challenges

In an established forward environment, the reliability of the communications network to provide the ability to communicate between echelons is often taken for granted. The people of Afghanistan, including those in the ANA, have become accustomed to reliable mobile telephone and Internet networks that allow the real-time exchange of information at a moment's notice. However, due to technology, communication during deployment was difficult at times.

At TAAC–North, Team 2511 advised ANA units that were geographically separated from the team by a rotary wing flight of an hour or more. The team saw each unit for a period of 1 week once a month and called for visits in between to build rapport, gather information, and set training conditions. The operational area was so vast that the mission required the use of different mobile subscriber identity mobile cards for each location. A setback occurred in one area when the local mobile telephone tower was turned off, eliminating telephone and message communication with the ANA partners; it would be a few days before Team 2511 could get back to its location, and gathering information was essential to synchronizing efforts with TAAC. With the help of some NATO partners in the area, messages were able to be sent and received over secure platforms—without a break in advising—until the functionality of the cellular telephone tower was restored.

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Scaffolding the Future of Protection:
Protection Training and Education

By First Sergeant Michael A. Koren (Retired)

Let's go back a bit, if you will: back to the 1980s and Saturday morning television, to the golden age of cartoons; back to a time when our favorite animated characters graced the screens of countless touch-tune color cathode ray tube consoles across the country; and back to what was probably the most exciting hour of wildly inappropriate hyperactive combat at that time, an hour filled with clashes between two of the most iconic Looney Tunes© adversaries in the animation universe. I'm referring, of course, to a road runner and a coyote. Looking back at all of the pastings that the hapless coyote endured, I can't help but wonder: How many times would Wile E. Coyote have bested the Road Runner had he employed some form of protection? That's difficult to say; but if he had, the odds of an anvil landing on his head would probably have been significantly less than what he grew accustomed to.

Protecting oneself from an adversary's efforts and effects might have been a novel concept for the overly confident yet surprisingly ill-prepared coyote; but within the realm of military strategy, protection is nothing new. In the military, protection is not even a modern concept. With a couple of keystrokes and a click of an Acme mouse, Wile E. Coyote could now find a plethora of historical examples that he could use to shield his shenanigans and his scruffy pelt: King Leonidas's Spartan tactics,[1] General George Washington's war of posts,[2] General George S. Patton's phantom First U.S. Army Group,[3] and the list goes on and on. As a teacher, history is and always has been unequivocally invaluable; it is, perhaps, emphatically more so within the military context. We have always needed to look only in the chapters that are relevant to where we are in order to discern where it is that we must go.

The Evolution of Protection

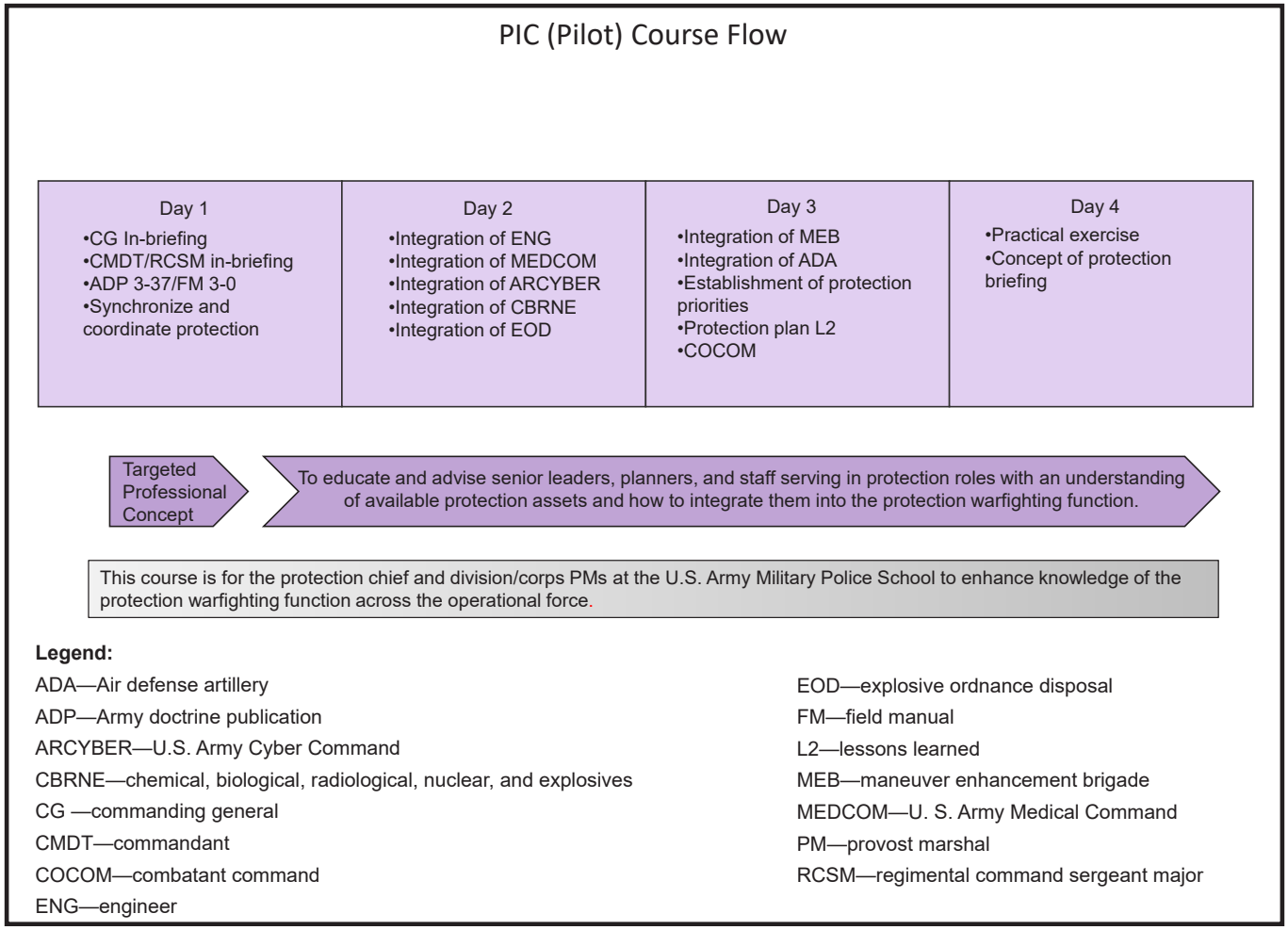
Evolution is natural, if not essential. Everything from athletic shoe aglets to window bolts for commercial airplanes goes through some form of evolution during its lifetime. The way in which the U.S. Army has and will continue to implement the security and protection domains is no different. The Army's evolution from a comparatively generic security posture to one that is centered on a philosophy of protection (force protection) didn't just consist of a change in tactics or procedures; rather, it was a paradigm shift. The catalyst for change? Beirut, October 1983. The red-hot embers of what would become the concept of protection were left scattered across the remaining rubble of the U.S.-occupied barracks.[4] A decade later came the proverbial "straw that broke the camel's back": On the heels of a calamitous campaign in Mogadishu, President William J. (Bill) Clinton's administration directed that commanders consider a newly created task, force protection, as their top priority.[5] The rest, as they say, is history.

Speaking of history, while elaborating on the more logical aspects of military strategy, ancient military strategist Chinese general Sun Tzu wrote that if one was far from the enemy, one should attempt to make the enemy believe that one was near.[6] At first, that statement might not seem to have much to do with protection. But in reality, it has more to do with protection than you might think. If you are studying that sentence, trying to make sense of it, well, you are likely not alone. And that is why, at least to some extent, the Army opted to implement a formal protection training and education program.

The Protection Integration Course

The Protection Integration Course (PIC) is an ongoing collaborative effort between the Fielded Forces Integration Directorate (FFID), the U.S. Army Military Police School (USAMPS), and the Maneuver Support Center of Excellence (MSCoE), Fort Leonard Wood, Missouri. At this point, the intended audience consists of those leaders who are currently serving as members of a protection cell at echelon. However, the hope is that the types of attendees will expand as the course matures.

The PIC exists as part of the doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P) solution that includes the broader protection gap analysis. Specific to training and education, however, the PIC addresses a long-standing gap associated with protection cell operations and functions by providing protection cell operations training to leaders assigned to the protection cell at echelons above brigade. The course develops leaders with the critical knowledge, skills, and abilities necessary to expertly discharge their duties and accurately advise commanders on all matters related to protection. In other words, it produces protection cell staff leaders that are *truly* capable of providing commanders with



PIC pilot course flow

information that yields options, preserves combat power, denies the enemy's ability to act freely, and enables friendly-force activities.[7]

Today, the PIC is a robust, 4-day, nonresident course that utilizes universal precommand course design. Some of you may recognize this design, better known colloquially as a gentlemen's course model (GCM). The GCM was selected, as it tends to create a unique classroom dynamic that leverages a cohort's collective experiences and funnels them into compact, yet effective, forum generators. It essentially uses students' experiential wisdom as discussion drivers. What is experiential wisdom? Well, it is exactly what it sounds like—practical knowledge pertaining to any given domain, (in this instance, protection). I don't mean to suggest that the entire course is predicated solely on the students' abilities to contribute via experience; that's certainly not the case.

Each lesson is based on one of the 16 tasks that make up the protection warfighting function. Lessons are briefing-centric and are delivered by subject matter experts who have experience as members of a protection cell. The amalgamation of student experience, lesson content, and subject matter expert experience serves as the foundation of this learning environment. That foundation and data from lessons learned are vital components not only for the course conduct, but also for its overall maturation. However, while punching our tickets in this way is appropriate for now, the GCM is not quite the ideal tramway for reaching the summit.

Sure, the modularity and flexibility of the GCM are impressive traits. They are, understandably, the stuff that training developers dream about. Nevertheless, the goal for the PIC is to achieve a metric-based terminal period of instruction. Although student discussions are necessary, even vital, they do not allow for the ability to measure to what extent a student grasps the lesson content and concept. In light of that small fact, the PIC format and content is fluid and the course is presently in pilot status until Fiscal Year 2024.[8]

The pilot status affords protection training developers the time and space required to observe, analyze, and codify modifications to the period of instruction between the allotted course iterations. So the more gateways the PIC traverses, the more distant from the GCM it becomes and the closer it moves toward a more conventional metric-based period of instruction. This process is all but transparent to the students; they do not see or sense any turbulence as they

(Continued on page 29)

POWER PROJECTION MISSION ASSURANCE IN THE HOMELAND

By Mr. Matthew K. McLaughlin

Since before the turn of the last century, the United States has realized the benefits of fighting its wars on the territories of other nations. With the exception of the raid on Pearl Harbor, geography has enabled the United States to prevent attacks with major military impact at relatively low cost. We have enjoyed a secure bastion from which to project national power in support of our national security and that of our allies. Even the 11 September 2001 attacks, although similar to the Pearl Harbor raid in that they targeted unaddressed vulnerabilities, caused no disabling damage to major military capabilities.

The United States can no longer count on the advantage of the homeland as a secure sanctuary from which to project power. An ever-more accessible world continually increases the vulnerability of domestic capabilities that support warfighting. Attempts by North Vietnamese and North Korean actors and their allies to leverage a free press and undermine American popular support for U.S. engagements in Southeast Asia are well-documented. Soviet leaders in the 1980s conducted extensive studies of American power projection capabilities and dependencies and developed plans to attack them with a range of options.[1] More recent documents, including the latest U.S. Army Training and Doctrine Command (TRADOC) operational environment publication, *The Operational Environment (2021–2030): Great Power Competition, Crisis, and Conflict,*[2] outline the likelihood of attacks on the United States to deter, degrade, disrupt, delay, or destroy U.S. forces before they can depart the homeland and highlight the need for improved intelligence, protection, and coordination capabilities to address the threats. Continually increasing access to, and dependence on, space, cyberspace, and global information and transportation networks promises to accelerate the growth of both threats and vulnerabilities into the foreseeable future. Due to these realities, it is imperative that Army professionals recognize protection in the homeland as a critical enabler of great power competition across the continuum of conflict.

TRADOC Pamphlet (Pam) 525-3-1, "The U.S. Army in Multi-Domain Operations 2028," referred to as the multi-domain operations concept,[3] describes a future operating environment that is substantially more complex and challenging than that of even the recent past. The concept outlines the need for the United States of the future to expand the competitive space, win in competition, deter escalation to armed conflict and, if necessary, win in armed conflict and return to competition on more favorable terms. This strategy depends heavily on the credible ability to synchronize the projection of military power from the homeland in all domains, the information environment, and the electromagnetic spectrum to decisive spaces across the multi-domain operations framework in response to aggression.[4]

The projection of military power from the homeland is key to the coordinated exercise of the diplomatic, informational, military, and economic instruments of national power to achieve national strategic goals. These elements of power, particularly the military element, are heavily dependent on public- and private-sector capabilities in the homeland. Military, public-sector, and private-sector capabilities comprise the power projection enterprise. This enterprise draws its effectiveness and resilience from the Service members, employees, and decision makers who make up the organizations. In short, it is the people of the United States who are the source of its strength, as it is the people of the United States whose interests are represented by U.S. strategic goals. This relationship is illustrated in Figure 1.

Adversaries challenge our multidomain power projection strategy by effective execution of antiaccess strategies against the homeland to create and maintain layered stand-off, denying friendly multidomain access from the homeland. They thereby intend to achieve strategic aims below the threshold of armed conflict before friendly power projection can be brought to bear. Unlike in forward areas, however, much of this activity is directed against the people who enable power projection, many of whom have no direct connection with the military. Adversaries conduct cyberspace and information activities to reduce resilience by attacking societal cohesion and confidence in the government during competition, escalating activities to more damaging measures as they progress along the competition continuum. Intelligence collection, the development of sympathetic populations into clandestine actors, and the resourcing of criminal elements provide means for adversaries to stymie friendly power projection.

None of this is new. Adversaries have always attempted to compromise home front support. Similarly, there has always been a need to protect the homeland power base from these actions. The difference with the emerging and future operating environment is the extent to which modern technology enables adversarial efforts. The interconnectedness of infrastructure and society enhances the potential reach and impact of adversarial efforts. Ready access to, and the rapid diffusion of, information via the Internet/social media amplify and accelerate interactions between people, governments, militaries, and threats, as observed with the Russo-Georgian war of 2008, the Arab Spring of 2010–2012, and the ongoing Russo-Ukrainian conflict. Artificial intelligence and deep fake technologies allow adversaries to dynamically distort perceptions of target populations while optimizing well-disguised cyberattacks against critical power projection targets. This emerging ability to execute optimized and coordinated attacks across the many military, public, and private components of the power projection enterprise requires

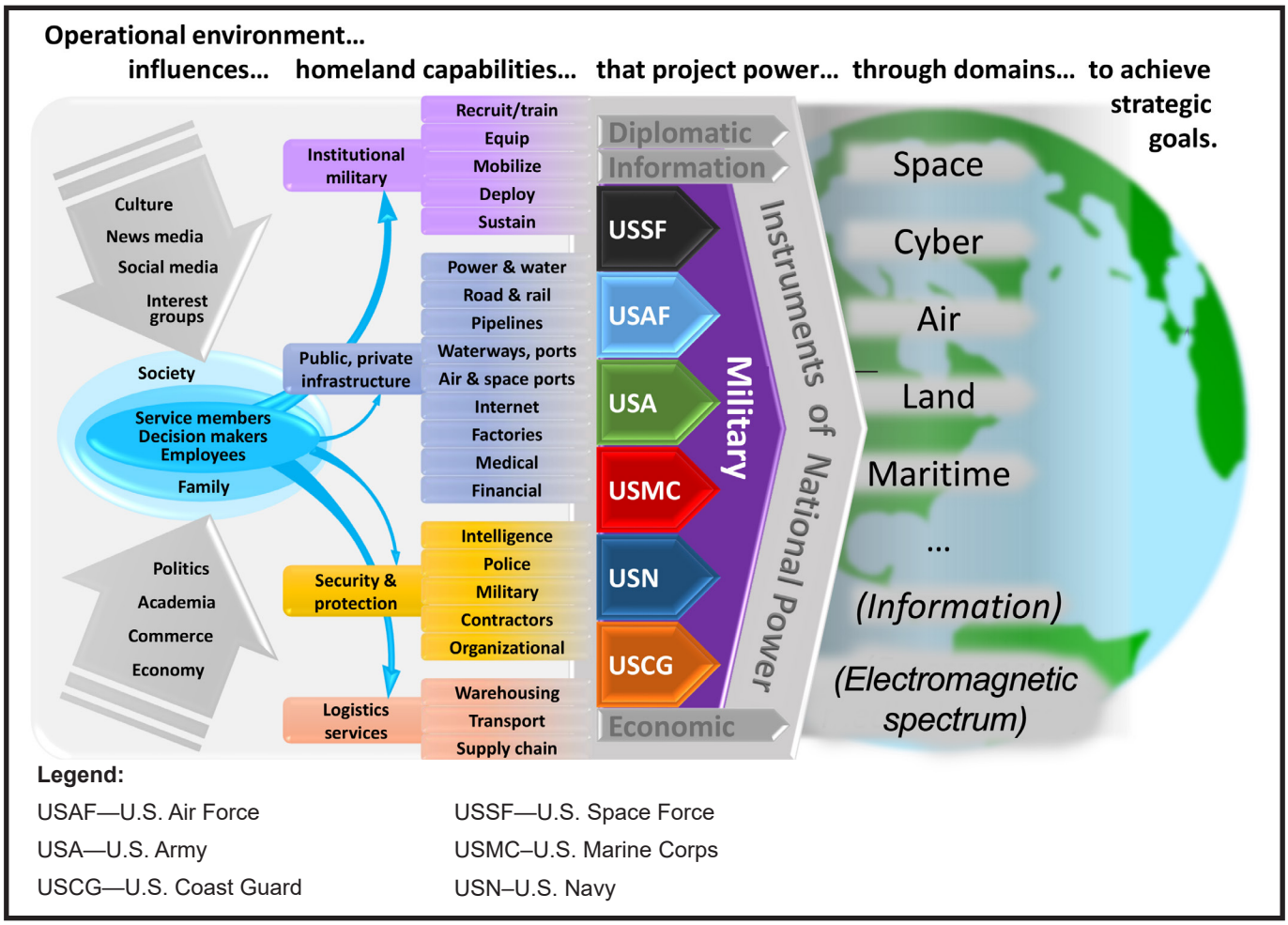


Figure 1. The power projection enterprise

a new approach to protection in the homeland. Power projection mission assurance must be a key factor in the development of future plans and capabilities.

U.S. Army Futures Command Pam 71-20-7, *Army Futures Command Concept for Protection 2028,* describes how the force will execute protection in the future operating environment.[5] The concept identifies three central components of the solution for the Army protection warfighting function:

- Preserve commanders' critical capabilities, assets, and activities.
- Deny threat and enemy freedom of action.
- Enable access to achieve protected windows of superiority.

This list recognizes that the operational Army requires more than the traditional solution of passive protection measures—the future force must proactively deny and defend against enemy action. This proactive approach comes naturally to warfighters in forward areas, where action and initiative are key to survival and success. The Army protection warfighting function is a robust toolbox that commanders can use to preserve and ensure the availability of operational capabilities in this environment.

However, the Army protection warfighting function doesn't address the operational and resiliency requirements of the domestic power projection enterprise, particularly in the public and private sectors—nor do other protection programs and capabilities. Army Regulation (AR) 525-2, *The Army Protection Program*, addresses the protection requirements of homeland installations, but it neither prioritizes support to combatant commanders nor addresses public- and private- sector enablers.[6] Homeland defense, homeland security, and defense support of civil authorities programs address the protection needs of the homeland as a whole, but without specific consideration for power projection requirements. Joint Publication (JP) 3-0, *Joint Operations,* discusses domestic installations and related capabilities under the joint protection function, but only in general terms.[7] Our allies also contribute protection capabilities; but again, without a focus on U.S. power projection. Figure 2, page 28, illustrates the various needs and solutions/programs for the protection mission space.[8]

While the Army protection warfighting function addresses the needs of operational forces, the resiliency and responsiveness requirements of power projection form the basis of argument for the application of its components across the power projection enterprise. The application of these components in support of power projection mission assurance requires a deliberate approach. The Army must integrate these components into its power projection capabilities, and it must team with its power projection partners in the public and private sectors to support the development of these characteristics in their supporting capabilities.

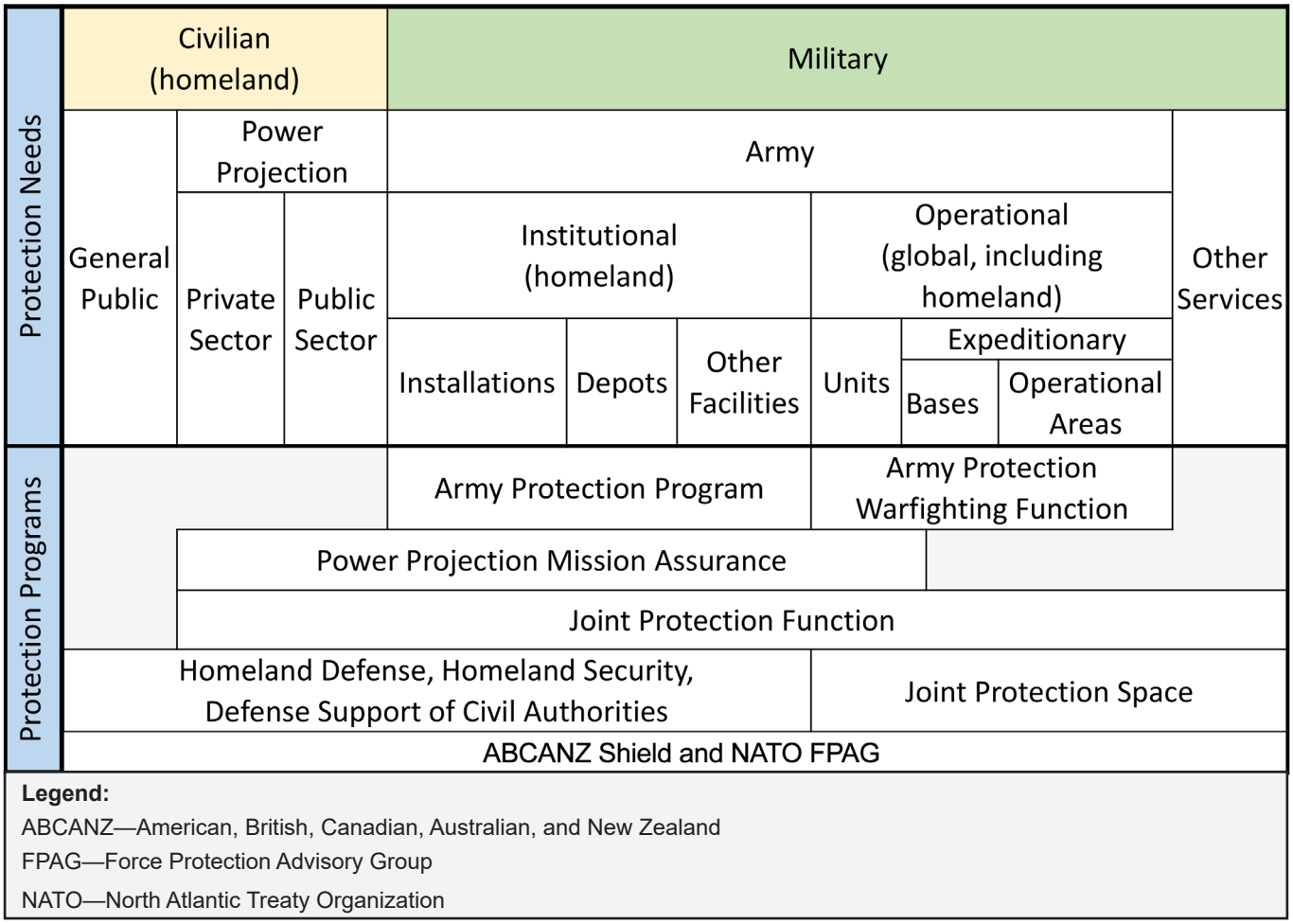


Figure 2. The protection mission space

The Army must be able to execute multidomain power projection against a near-peer threat by pushing ready-to-fight forces in concert with effects in multiple other domains. This must be accomplished from domestic facilities under various levels of multidomain attack. From a protection perspective, this requires the ability to deny the threat freedom of action against—and ensure preservation of—critical capabilities, assets, and activities across the power projection enterprise while enabling persistent access to all domains, the information environment, and the electromagnetic spectrum.

Installations must be "operationalized" to enable expeditionary maneuver from threatened installations, through contested lines of communication, to strategic distances in a matter of days, while protecting tenant organizations from enemy action. This requires the transformation of the installation enterprise culture from one with an administration- and management-based focus to one with an operational focus that makes it an integral partner in the warfight.

Power projection platforms require a significantly increased ability to preserve critical capabilities, assets, and activities, including tenant and transient units in the case of installations. They must also have built-in resilience and redundancy to enable persistent multidomain access in support of combatant commanders. They must provide protection against surveillance and reconnaissance as well as against attacks in all domains, the information environment, and the electromagnetic spectrum.

Installations, facilities, and infrastructure must be modernized and resourced to provide intelligent, robust, and secure power projection. These updates must emphasize the continuity of operation under conditions of attack or disaster and the ability to be rapidly restored to full operation following adverse events as well as the capacity for cost-effective incorporation of emerging advanced technologies.

The successful execution of multi-domain operations requires public- and private-sector enablers that possess mission assurance characteristics similar to those required by the Army. Similarly, the resilience of individuals and Families that is considered fundamental to expeditionary Soldiers is also required of enabler work forces, which are now subject to threat action. The Army must develop a deep and well-documented understanding of its dependencies on external partners, their limitations in supporting these dependencies, and the threats to which they may be subjected. The Army must then communicate these requirements to its partners in a straightforward and convincing manner and cooperate with them in developing security solutions and protection measures while supporting updates to contracting requirements and interagency policy. In many cases, the Army must develop ways to encourage and incentivize these enablers to invest in these capabilities, which are not inherently profitable to their daily activities.

Power projection mission assurance requires the full integration of the key ideas of the Army protection concept across the entire power projection enterprise. The Army

and its partners must preserve strategic projection capacity against robust oppositional action in the homeland and deny enemy freedom of action through the development and operation of multidomain resilient capabilities. This is fundamental to persistent access for multidomain strategic maneuver in support of mission commanders. Army power projection mission assurance will continue to heavily depend on the Army Protection Program and joint force protection capabilities, which must evolve to support the operationalization of the installation enterprise. The synchronization of these aspects of protection and the extension of the military protection mindset to the Army's public- and private-sector partners are critical to power projection. Army leaders must integrate these homeland considerations into their strategic calculus to provide the firm foundation required for victory in emerging and future operating environments.

Endnotes:

[1]Graham H. Turbiville Jr., "Prototypes for Targeting America: A Soviet Assessment," *Military Review*, January–February 2002.

[2]"The Operational Environment (2021–2030): Great Power Competition, Crisis, and Conflict," TRADOC, <https://oe.tradoc.army.mil/2021/10/04/the-operational-environment-2021-2030-great-power-competition-crisis-and-conflict-2/>, accessed on 12 October 2021.

[3]TRADOC Pam 525-3-1, *"The U.S. Army in Multi-Domain Operations," 2028*, 6 December 2018.

[4]The multi-domain operations concept defines strategic space as a conceptual geographic and temporal location where the full optimization of the employment of cross-domain capabilities generates a marked advantage over an enemy and greatly influences the outcome of an operation. The need to converge capabilities at a particular place and time to create or leverage a window of superiority highlights the requirement for dependable multidomain power projection capabilities.

[5]U.S. Army Futures Command Pam 71-20-7, *Army Futures Command Concept for Protection 2028*, 7 April 2021, <afc-pam-71-20-7-afc-protection-concept-vfinal-apr21.pdf >, accessed on 4 October 2021.

[6]AR 525-2, *The Army Protection Program*, 8 December 2014.

[7]JP 3-0, *Joint Operations*, 22 October 2018.

[8]The American, British, Canadian, Australian, and New Zealand Armies' Program Capability Group Shield and the North Atlantic Treaty Organization Force Protection Advisory Group contribute protection capabilities both at home and abroad, as shown in Figure 2.

Mr. McLaughlin recently retired as the chief of the Force Modernization for Homeland Defense/Civil Support Office, U.S. Army Maneuver Support Center of Excellence, Fort Leonard Wood, Missouri, where he managed the integration of homeland requirements into Army capabilities development. He is a retired U.S. Navy Reserve commander. He holds a master's degree in nuclear engineering from Missouri University of Science and Technology at Rolla.

("Scaffolding the Future . . . ," continued from page 25)

navigate the course (as should be the case). But that doesn't mean that the training developers aren't busy behind the scenes; they absolutely are!

The Protection Training Development Branch, Protection Division (Force Modernization Proponent), FFID, is hard at work, developing the tasks that will ultimately underpin the PIC terminal period of instruction. The overall goal of the branch is to generate 20 new Army tasks; so far, 11 new tasks have been generated. Each task is uniquely designed to address those gaps associated with the original DOTMLPF-P analysis and assessment. And in case you're wondering, task development is a long and technical process, often consuming upward of 100 hours per task to complete.

Finally, from our perspective here in the Protection Division, we are proud of the things that we have accomplished so far and are excited as we look forward to the things that we know are to yet to come. Each day, we see evidence of an ever-changing and more complicated operational environment and world. It is that evidence that propels our forward momentum. Perhaps most striking is the realization that protection training development capabilities are not only a pragmatic function of the protection domain; they are in fact, critical.

Endnotes:

[1]"Leonidas," *History.com*, 2019, <https://www.history.com/topics/ancient-history/leonidas>, accessed on 2 September 2021.

[2]Gregory J. Dehler, "Fabian Strategy," <https://www.mountvernon.org/library/digitalhistory/digital-encyclopedia/article/fabian-strategy/>, accessed on 2 September 2021.

[3]Brian J. Murphy, "Patton's Ghost Army," 2018, <http://www.americainwwii.com/articles/pattons-ghost-army/>, accessed on 2 September 2021.

[4]Michael P. Mahoney, *Striking a Balance: Force Protection and Military Presence*, Beirut, October 1983.

[5]Tim W. Quillin, *Force Protection in Support of Stability Operations*, 1999.

[6]Sun Tzu, *The Art of War,* 1521.

[7]U.S. Army Training and Doctrine Command (TRADOC) Pamphlet (Pam) 350-7-9, *Budgeting and Resourcing*, 12 October 2012.

[8]Pilot status is a term used to describe an Army course that is in a temporary status due to a change or adjustment.

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Competing Through C-IED Fusion in the Pacific: Developing Partners and Allies With Functional Area SFA

By Mr. Jeffrey S. King

Per its mission and end state, the Asia Pacific Counter Improvised Explosive Device Fusion Center (APCFC) actively engages and assists partners and allies in developing interoperability and capabilities to minimize and counter impacts from current and emerging improvised threats.

Beyond developing partner nation capability and capacity through security force assistance (SFA), APCFC completes the "security cooperation triad" by establishing, maintaining, and expanding numerous quality partner nation relationships and enabling partner nation access. APCFC influence extends across and outside the Indo-Pacific Command (INDOPACOM) area of responsibility (AOR).

As the INDOPACOM lead for enhancing partner nation counter improvised explosive device (C-IED) capacity, APCFC regularly conducts engagements with partners and allies through joint and five-eye country C-IED capacity (building a synchronized matrix across the AOR, and synchronizes partner nation engagement with the National Guard State Partnership Program. It also conducts expert academic exchanges with partners and allied nations and participates in regional security cooperation events.

APCFC partner nation engagement opens doors for broader U.S. Army Pacific Command engagement with 17 countries, with more than 25 percent of these engagements being joint and one-third of them interorganizational or multilateral.

Expanding beyond the Indo/Asian-Pacific, APCFC develops and maintains a standard training support package for partners and allies, based in part on best practices from global partners. Prime partners include the other Army service component commands, the C-IED Center of Excellence, and the North Atlantic Treaty Organization.

Specific SFA Tasks

Per Joint Publication (JP) 3-20, *Security Cooperation*,[1] SFA activities are conducted to organize, train, equip, rebuild/build, and advise foreign security forces from the ministerial/department to tactical levels. The Army considers "assist" to be part of the "advise and assist" activity. The APCFC directly supports several organize, train, equip, rebuild/build, and advise tasks, with prominent support for training foreign security forces.

APCFC provides counter improvised threats training, (training to counter improvised explosive devices [IEDs] and those who emplace, create, fund and support them through networks) to partner nation forces to directly prepare them to counter current and emerging threats with a standard training support package for partners and allies, supporting 14 specific exercises in 2017. This training integrated regional engagements and exercises that replicated the threat networks of the operational environment. Some training was extended to "assist" activities that help prepare for peacekeeping operations in support of stability. Training also included means of exploitation (such as fingerprint recovery and matching) to identify and address left-of-boom threats. APCFC can potentially coordinate with the Defense Forensic Science Center, Forest Park, Georgia, to integrate forensic exploitation laboratory analysis capabilities. The center advises at the operational level and extends efforts to build institutional capacity, collaborating with partners to develop institutionalized and enduring C-IED programs. The center internally supports its institutional capacity building through training C-IED master trainers, tailoring the curriculum to current and anticipated regional IED threats, fabricating training aids to match regional IEDs, and training opposing forces for exercises.

The APCFC irregular warfare IED trend analysis capability is used by the United States and partner nation military and civilian organizations to understand IED trends and activity in the AOR. APCFC collaborates with U.S. and partner nation militaries to—

- Identify threat actors and understand their latest tactics, techniques, and procedures.
- Support targeting efforts.
- Enhance force protection.
- Improve regional security activities.

Support to Joint and Whole-of-Government Competition

Joint Doctrine Note (JDN) 1-19, *Competition Continuum*,[2] calls for the Department of Defense to compete, in conjunction with all elements of national power for a whole-of-government effort, against the major U.S. adversaries for positions of advantage. APCFC recognizes the importance of relationships to stability and preparedness and promotes a whole-of-government unity-of-effort approach.

IED training aids

APCFC has many relationships and partnerships with other government agencies and joint, interagency, intergovernmental, and multinational (JIIM) partners, and those entities share information and synchronize efforts to counter emerging improvised threats across the region. These relationships and actions serve as an example of such a whole-of-government competitive approach that results in greater regional security and stability.

APCFC maintains partnerships with INDOPACOM service component commands, other Army organizations, the intergovernmental domain (local, state, and federal), nonprofit and commercial organizations, and multinational partners (five-eye countries, the Association of Southeast Asia Nations, and other host nations) across the APCFC functional areas. In addition to the National Guard State Partnership Program, the APCFC partners with other U.S. military services, the National Ground Intelligence Agency, and even more diverse partner organizations such as the United Nations Peacekeeping Organization.

The APCFC works with other geographic and functional combatant commands to standardize training and support rotational and predeployment C-IED training requirements. It also collaborates with JIMM organizations on identity intelligence and real-world trends. Additionally, it integrates with multinational forces in the AOR to share exploitation tactics, techniques, and procedures in exercises and exchanges.

The APCFC participates in and leads several significant collaboration forums made up of diverse partners across many functional areas. Forum functional areas extend to—

- C-IED and intelligence exchange.
- C-IED and exploitation synchronization.
- Identity activities (processing intelligence to capture and link identities to support law enforcement and military operational decision making).
- INDOPACOM.
- Five-eye countries.
- Global threat integration and mitigation programs.
- The Federal Bureau of Investigation.
- Asia-Pacific All-Partners Access Network (the unclassified information-sharing service for the Department of Defense).
- North Atlantic Treaty Organization.
- C-IED Center of Excellence.

The APCFC also conducts C-IED interoperability reviews (gap assessments) with partners and allies, and it contributes to multinational peacekeeping and stability exercises and operations. Through improvised threat engagements and outreach with JIIM partners, the APCFC demonstrates assured U.S. commitment to promoting security cooperation, interoperability, and regional stability.

The Way Ahead

APCFC inherently performs SFA and the other security cooperation activities and has multifunctional area influence across the whole-of-government and JIIM environments. APCFC is among the prime contributors to SFA and other security cooperation activities as well as related irregular warfare, security, and stability in the INDOPACOM AOR and throughout the world. APCFC activities also serve as good examples of institutional capacity building and the use of lessons learned to improve internal and external institutional capacity. It would also behoove the Joint Center for International Security Force Assistance; similar global and regional SFA organizations; and other security cooperation, irregular warfare, and stability units and organizations as well as the counter-explosive hazard and intelligence functional areas to process and disseminate associated APCFC best practices and lessons learned. Synergizing APCFC best practices and lessons learned across the region would improve JIIM SFA and related contributions and have positive effects, improve INDOPACOM AOR security and stability, and allow the benefits to be applied to other functional areas.

These APCFC best practices and lessons learned can also be applied globally. All geographical and functional combatant commands, global JIIM partners, SFA organizations, broader security cooperation-related practitioners, and counter-explosives hazards and intelligence functional areas can leverage and apply the lessons learned to other regions as well as to globally integrated operations, exercises and wargames.

Endnotes:

[1]JP 3-20, *Security Cooperation*, 23 May 2017.

[2]JDN 1-19, *Competition Continuum*, 3 June 2019.

Mr. King is a military analyst for the Joint Center for International SFA, Fort Leavenworth, Kansas. He holds a bachelor's degree in civil engineering from the University of Kansas, Lawrence, and a master's degree in public administration from Central Michigan University, Mount Pleasant.

Modernizing the Forgotten Warfighting Function: PROTECTION

By Colonel Michael T. Loftus

As famously stated, "The best offense is a great defense."[1] In September 2020, it seemed apparent from the conflict in the Nagorno-Karabakh region between Azerbaijan and Armenia that good offensive maneuvers require great defense.[2] In the opening days of that conflict, unmanned aerial systems on both sides ran out of armored vehicles to target. Both sides waged a battle for an edge in information and truth via Twitter© and other social media outlets—seeking to gain political and, likely, military advantage or deception. Stand-off and denial of observation became the norm for weeks, with indirect fires providing some degree of stand-off as the militaries struggled to meet their respective objectives. The conflict evolved into one of dueling defenses that sought to create some opening for offensive action. The way in which the Nagorno-Karabakh conflict unfolded was influenced by many factors beyond the capabilities of intelligence, surveillance, and reconnaissance to enable precision indirect fires, but it does further reinforce what potential future conflicts between the United States and peer adversaries may look like.[3] Current war games support the theme of the enemy being able to "see everything" and effectively target with lethal and nonlethal means.

The U.S. Army seeks to defeat this dual threat of enemy intelligence, surveillance, and reconnaissance and long-range precision fires, often referred to as antiaccess/area denial (A2/AD),[4] with evolutions of more technologically advanced solutions captured in the U.S. Army AimPoint Force Structure Initiative.[5] Perhaps implied, but not explicitly stated, in this endeavor is the need to modernize the Army's ability to protect itself across domains and echelons.[6] The Azeri-Armenian conflict certainly highlights the reason that the United States needs to defeat threat intelligence, surveillance, and reconnaissance and fires; they are lethal and constant, and they disrupt options for offensive action. The ability of the Army to preserve critical capabilities and enable freedom of action is just as important as its ability to defeat an adversary's defenses.

Army Doctrine Publication (ADP) 3-0, *Operations*, defines the protection warfighting function as ". . . the related tasks and systems that preserve the force so the commander can apply maximum combat power to accomplish the mission."[7] Protection is currently an economy-of-force effort. The critical capabilities and assets that enable freedom of action for maneuver forces are prioritized, and some form of protection is provided until the capabilities to provide that protection are exhausted. As available resources dwindle, remaining critical capabilities and assets receive localized protection. Additionally, protection capabilities reside in numerous functional branches. As conditions and priorities change, protection capabilities and tasks require constant synchronization. Protection cells at every echelon spend precious time integrating capabilities and tasks and ensuring unity of effort across echelons. From a mission command perspective, synchronizing protection takes place at the maneuver unit level—typically, with military police advisors. Individual units also conduct their own protection tasks such as enacting security measures, providing operational security, and seeking concealment. The Army has considered the problem of protecting its critical assets and invested in that protection for decades. Maneuver enhancement brigades currently provide some of the required capabilities and, when empowered, have a proven record of success. However, the Army must evolve beyond the current mindset of handling local and route security in land and air and deal with 21st Century threats. Put bluntly, the Army's concept and practice of protection are simplistic and antiquated.

Air, land, maritime, space, and cyber remain the domains of conflict. With the expansion of access to space, cyber, and electronic warfare systems, these domains will grow in importance relative to air, land, and maritime in the future. As highlighted by the Nagorno-Karabakh conflict, current protection expectations and approaches to "preserve" forces are no longer sufficient for success on the modern battlefield. Neither Azeri nor Armenian forces were capable of massing ground combat forces as their support areas faced near-continuous targeting. Protection must deny the enemy the ability to disrupt operations and provide the time and space necessary to position combat power. It serves as A2/AD for the sake of one's own offensive action. This approach drives the need to make changes to ensure that protection adds to the Army's ability to defeat emerging peer adversaries.

The first step in modernizing the protection warfighting function involves describing the required capabilities and visualizing protection at the division and corps levels. A rolling "A2/AD bubble" opens and closes, as needed, to allow combat power to consolidate or close on an enemy, similar to the shields of a vessel in a science fiction movie. Protection is truly about synchronizing multidomain active and passive capabilities to support a larger plan. Active measures, akin to spoiling attacks or deception plans, seek to "blind" or confuse an enemy. Jamming, the denial of access to spaces (land and air), physical and electronic obscuration, aggressive security operations, and preventative health are all forms of active protection. Passive measures include intelligence operations and analysis, the hardening of structures and networks, and operational/physical security measures. These equate to denying enemy access, which, in turn, enable the building of combat power. To be clear, a modernized protection concept does not just seek to deliver fires; it seeks to generate options to deliver effects on an enemy. Protection includes commanders' responsibilities to secure their

own forces; it does not replace them. Instead, it serves as a complementary function that denies enemy access and preserves capabilities that enable combined arms maneuver.

Determining how to transform the vision into reality during conflict is more important. Today, multiple staff sections or functional areas are responsible for executing these capabilities. There is no single subordinate commander or staff officer who is primarily responsible. Protection cell chiefs must use a broad commander's intent and coordinate through the orders process to ensure synchronicity and seize opportunities. The flaw with this system is that critical decisions may not reach commanders, thereby preventing them from acting in the expected hyperdynamic environment of the future.

One way to address some of these concerns is to leverage a protection coordinator (PCOORD) to directly synchronize these capabilities. A PCOORD leads the protection process to understand how an enemy may seek to strike the friendly force. Protection, which is a supporting function of the fires and operations processes, identifies the critical capabilities or activities necessary for maneuver. The capabilities and activities identified comprise what is known as the protection prioritization list.[8] Conceptually, just as the fire support coordinator leverages intelligence on the enemy to support offensive action, the PCOORD uses intelligence to build a resilient umbrella of protection to deny the enemy the ability to gain an advantage. The protection decision concept is a balance between risk to mission and capability to defend. But protection can be more than balancing risk and capability. A PCOORD can recommend active measures that can mitigate risk or deny access, leveraging the entire capacity of a formation. With assigned forces and relevant authorities, (unity of command and effort), the PCOORD can employ measures to deny the enemy access to friendly capabilities while simultaneously generating opportunities for maneuver, fires, intelligence, and command and control assets to exploit advantages.

To utilize an effective PCOORD, some organizational changes must occur. First, because the execution of A2/AD is complex, the operations and fires cells cannot manage all the details while simultaneously directing maneuver and fires; therefore, some elements currently linked to movement and maneuver control should be moved to a robust protection cell. Second, ad hoc teams that provide protection in vulnerable areas or sites must be codified into standing units that can train and operate together under one commander. Third, the best practices of the protection process must be modeled and included in doctrine within the context of multi-domain operations at tempo and at scale. Finally, technological solutions will enhance the execution of A2/AD and the Army's Project Convergence—and its spin-offs offer commanders and future PCOORDs with promises of the ability to visualize all-domain threats and opportunities.[9]

The PCOORD and organizational and doctrine shifts are necessary to improve and build upon the construct of maneuver enhancement brigades. The proposed changes will make the Army better and more competitive in the 21st Century. The recommendations acknowledge the complexity inherent in multi-domain operations and seek to offer focus and expertise in providing input for maneuver choices. The geometries of the future battlefield change how commanders visualize risk across domains. Rather than choosing where to expose themselves to risks, commanders must first decide where to place their own A2/AD assets to deny enemies that can see, and simultaneously strike, across all domains. The risk in the future isn't in how and when to maneuver; it is in what not to protect—and when.

Along with the rest of the Army force, the protection warfighting function must be modernized across organizations, doctrine, and technological lines. Opportunities for protection to evolve—not only as a concept but also as essential processes, systems, and capabilities—exist today. We must take advantage of the opportunity to shift approaches. A modernized approach to protecting friendly forces and information is the way to avoid battlefield stalemates such as those observed in Nagorno-Karabakh. The cost of not taking a modernized approach will be higher than the cost of investing in protecting ourselves now.

Endnotes:

[1]Jack Dempsey, *Good Reads.com*, <https://www.goodreads.com/author/quotes/155647.Jack_Dempsey>, accessed on 3 August 2021.

[2]"The Azerbaijan-Armenia Conflict Hints at the Future of War," *The Economist*, 10 October 2020, <https://www.economist.com/europe/2020/10/08/the-azerbaijan-armenia-conflict-hints-at-the-future-of-war>, accessed on 2 August 2021.

[3]"Intelligence, Surveillance, and Reconnaissance Design for Great Power Competition," *Congressional Research Service*, 4 June 2020, <https://fas.org/sgp/crs/intel/R46389.pdf>, accessed on 9 August 2021.

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[5]"The Army's AimPoint Force Structure Initiative," *Congressional Research Service*, 8 May 2020, <https://fas.org/sgp/crs/natsec/IF11542.pdf>, accessed on 9 August 2020.

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[7]ADP 3-0, *Operations*, 31 July 2019.

[8]ADP 3-37, *Protection*, 31 July 2019.

[9]Jed Judson, "Inside Project Convergence: How the U.S. Army is Preparing for War in the Next Decade," *Defense News*, <https://www.defensenews.com/smr/defense-news-conference/2020/09/10/army-conducting-digital-louisiana-maneuvers-in-arizona-desert/>, accessed on 2 August 2021.

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Realizing All-Domain Protection

By Lieutenant Colonel Willie Harris III and Ms. Wendetta N. Williams

With the publication of the aspirational U.S. Army Futures Command (AFC) Pamphlet (Pam) 71-20-7, *Army Futures Command Concept for Protection 2028*,[1] the Maneuver Support–Capabilities Development Integration Directorate (MS-CDID), AFC, Fort Leonard Wood, Missouri, was directed to lead a study to determine capability gaps and potential solutions for all-domain protection (ADP). Commanding General John M. Murray, AFC, Austin, Texas, assigned subordinate organizations to work on doctrine, organization, training, materiel, leadership and education, personnel, facilities, and policy (DOTMLPF-P)-integrated solutions for high-priority gaps in order to fully realize Army ADP. In collaboration with other capabilities develpment integration directorates (CDIDs) from the U.S. Army Training and Doctrine Command (TRADOC), MS-CDID will complete the ADP capabilities-based assessment (CBA) by 1st quarter, Fiscal Year (FY) 2024, and protection stakeholders will transform ADP from concept to capability.

The CBA process will begin with a functional area analysis (FAA) in FY 22, followed by a functional needs analysis (FNA)/gap analysis in 3d quarter, FY 22, and a functional solutions analysis in 3d quarter, FY 23. During the functional solutions analysis, AFC will assign organization and materiel gaps to CDIDs for solutions analysis. TRADOC will assign the remaining gaps across the other DOTMLPF-P domains to centers of excellence for resolution. The ADP CBA will result in a prioritized list of capability gaps and potential solutions to achieve ADP for multi-domain operations.

AFC Pam 71-20-7, the main source document for realizing ADP, describes how the Army preserves the force from threats in all domains, enabling commanders to apply maximum combat power and accomplish the mission. It discusses how the Army denies the adversaries freedom of action and enables friendly forces to access positions of advantage, considering the 44 required capabilities (19 of which have proponents outside of maneuver support) of the concept. Using this approved concept, the main objective of the ADP CBA involves identifying required capabilities and their associated operational characteristics and attributes, determining the capability gaps and associated operational risks, and assessing the viability of materiel and nonmateriel solutions. It is not feasible to address every protection-related required capability; therefore, to refine the list of required capabilities for the CBA, MS CDID will focus its efforts on the following question: How can the Army converge effects to identify, open, and exploit protected windows of superiority while maintaining persistent protection for select mission-essential nodes, thus realizing ADP for multi-domain operations?

Because ADP is woven with capability threads from all warfighting functions, contributions from across the Army modernization enterprise must be integrated into the CBA. MS-CDID will accomplish this integration with a series of learning activities that support the FAA and FNA and incorporate each stakeholder's protection-required capabilities, tasks, and gaps. The learning activities include corps and theater protection cell table top exercises, the protection brigade and corps protection cell assessment conducted during Joint Warfighting Assessment (JWA) 22, and the integration of the protection concept into the Future Studies Program. MS-CDID plans to execute two events for the FAA and three events for the FNA and to host events focused on the science and technology community.

Task Analysis Workshop 1, held in November 2021, introduced the protection community and other interested organizations to the ADP CBA. Stakeholder participation set the conditions for the entire CBA. Preparation and participation were critical in identifying protection capability requirements and tasks. MS-CDID will host a second workshop to focus on identifying the conditions and standards for the tasks. During the FNA phase of the study, the output of the FAA to determine capability gaps, shortfalls, and redundancies. Three workshops were conducted to identify the capability gaps and assess risks (expressed in terms of likelihood of occurrence and impact on operations) during the FNA. TRADOC and the Futures and Concept Center CDIDs will provide a detailed assessment of the full range of DOTMLPF-P solutions that may resolve the critical/high-priority capability gaps identified during the FNA. The ADP CBA will document the requirements (materiel and nonmateriel) that drive the Joint Capabilities Integrated Development System and the acquisition processes to deliver solutions that achieve ADP for multi-domain operations.

In conclusion, the ADP CBA is the mechanism that will be used to determine the capabilities necessary to ensure that multi-domain operations forces are protected. In order to effectively conduct the CBA, MS-CDID needs the support of all centers of excellence and multiple organizations at all echelons within the protection community, the science and technology community, and others in identifying the appropriate required capabilities, tasks, gaps, and solutions within each functional area. There is no better time than now to collaborate with the MS-CDID to accomplish this mission.

Endnote:

[1]AFC Pam 71-20-7, *Army Futures Command Concept for Protection 2028*, 7 April 2021, <afc-pam-71-20-7-afc-protection-concept-vfinal-apr21.pdf (army.mil)>, accessed on 9 September 2021.

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EOD in LSCO

By Colonel Shawn L. Kadlec

How long will it be until explosive ordnance disposal (EOD) units get here? No doubt, many of you have asked yourselves this question during multiple deployments to Iraq or Afghanistan. One of the many lessons learned from counterinsurgency and counter-improvised explosive device operations has been the need to embed EOD teams into maneuver and maneuver support operations. As the U.S. Army transitions its focus to large-scale combat operations (LSCO), we must adapt these lessons learned and apply them to our training and doctrine for LSCO. A recent wet-gap crossing exercise conducted by the 50th Multirole Bridge Company, Fort Leonard Wood, Missouri, and EOD teams from the 79th Ordnance Battalion (EOD), Fort Riley, Kansas, provides an example of how the lessons learned from Iraq and Afghanistan apply to LSCO missions. In conjunction with this training example, pending EOD doctrine updates will describe a spectrum of EOD operations in LSCO and explain the associated risk. Collectively, these two items provide a template to further assess training and doctrine updates required to better integrate EOD into maneuver and maneuver support operations during LSCO.

In August 2021, EOD teams from the 630th Ordnance Company (EOD) and the 774th Ordnance Company (EOD), both from the 79th Ordnance Battalion, enabled the 50th Multirole Bridge Company to construct and operate an improved ribbon bridge to cross a section of Milford Lake, Fort Riley. EOD teams identified and rendered-safe a variety of explosive threats and hazards that jeopardized the success of the training operation. While many of the threat scenarios included improvised weapons systems and munitions, the lessons learned and implications also apply to state-sponsored weapons systems and munitions. For example, the improvised rocket launcher aimed at the crossing site could just as easily be an abandoned Russian 9A52-4 Tornado multiple-rocket launcher. Similarly, the improvised explosive devices could easily be replaced with unexploded ordnance left behind after a friendly force artillery barrage designed to drive enemy forces off a beachhead. In all cases, the presence of embedded EOD teams significantly reduces the risk posed by these weapons systems and munitions.

Unfortunately, current EOD doctrine (or even other doctrine) does not adequately describe the role of EOD LSCO—and it does an even poorer job of describing EOD capabilities, limitations, and options for operations like wet-gap

crossings, minefield breaches, and other maneuver and maneuver support operations. To address this, the U.S. Army Training and Doctrine Command Proponent Office–EOD submitted an urgent revision for Army Techniques Publication (ATP) 4-32, *Explosive Ordnance Disposal (EOD) Operations,*[1] which serves as an initial revision for the incorporation of LSCO considerations. Of note, the urgent revision introduces "assault EOD" into the doctrinal vernacular.

The term "assault EOD" is a slowly emerging doctrinal concept that has been debated within the EOD community for almost 2 years. The term originated in the North Atlantic Treaty Organization publication entitled *Explosive Ordnance Disposal (EOD) Principles and Minimum Standards of Proficiency* and is defined as follows: "Assault EOD comprises all EOD actions conducted during support to either law enforcement or military forces involved in nonpermissive operations. The aim of assault EOD is to provide suitable supporting assets to maintain the momentum of an assaulting force, either in land or maritime environments."[2] The term as well as the need for the term are debatable. However, a debate is beyond the scope of this article.

(Continued on page 37)

THE CHARACTER of HARMS:

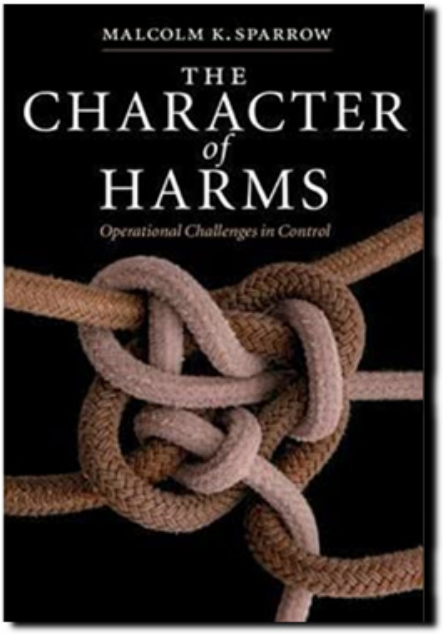
Operational Challenges in Control

Reviewed by Colonel Barrett K. Parker (Retired)

Professor Malcolm K. Sparrow's book entitled *The Character of Harms: Operational Challenges in Control* provides a framework and methodology with which to consider the protection discipline for multidisciplinary risk control programs in both the public and private sectors. The book, which has been republished every year since its inception in 2008, parallels Professor Sparrow's classes in the Harvard Kennedy School Senior Executive Fellows Program at Harvard University, Cambridge, Massachusetts.

Sparrow explains that, despite the subject and technical diversity found in risk control constructs like the U.S. Army's protection warfighting function, all of the tasks share the same fundamental nature. Following are some of these fundamental similarities:

- Task implementation must be effectively balanced by "reducing the harms" (controlling the hazard) with proportionality, predictability, fairness, and consistency.
- Tasks must generate measures of performance, effectiveness, and/or customer satisfaction. This includes the goal of showing clear causality, the link between organizational actions, and a corresponding reduction in the likelihood or impact of harms.
- Task practitioners must grapple with integrating three different types of work: functional work, processed-based work, and work organized around specific concentrations of risk.
- Protection tasks are often peripheral tasks in an environment dominated by the organization's core mission.
- Practitioners must deal with situations in which improper or unlawful risk taking is performance-enhancing.
- Task practitioners must acknowledge that some risks are catastrophic in nature but that the risky events have seldom or never happened (extremely high impact, low probability), requiring combined prevention and response contingency planning.



Based on these commonalities, a better idea of what tasks should be grouped into protection programs designed to collectively reduce harms and how best to manage an aggregated program can be obtained.

Sparrow also counters two common arguments against having a consolidated protection type program. The first argument is that the effectiveness of hazards control depends only on domain-specific knowledge; in other words, only technicians or specialists can contribute to protection and each commodity area is quite unlike anything else. The second argument is that controlling harms is no different than "constructing goods"; for example, law enforcement measures can be reduced if ethics programs can be implemented or chemical, biological, radiological, and nuclear defense efforts can be deemphasized if arms control treaties are strengthened or the number of enemy delivery systems

is reduced. (I have personally encountered both of these arguments since standing up the Protection Division, Fielded Force Integration Directorate, U.S. Maneuver Support Center of Excellence, Fort Leonard Wood, Missouri.)

Finally, Sparrow discusses the real value and benefits of an integrated, multidisciplined, harms reduction program like the Army protection warfighting function. These benefits include recognizing that some professions might have done a better job than others of learning the art and science of undoing harms and have developed more sophisticated tools and approaches within their domains. Lessons drawn from best practices within such professions can be applied more broadly. There is also value in recognizing that almost all vital operational decisions lie between low-level incident response (the realm of true specialists) and high, national-level policy decision making. Most protection programs and efforts can, therefore, be scoped between these two extremes.

This book covers many other topics that are helpful to the protection professional, regardless of branch or specialty, including a discussion about how some harms "have a brain behind them," while others are occupational or environmental hazards. The real value of *The Character of Harms*, however, is its focus on assisting protection practitioners in both the public and private sectors with successfully establishing or improving their overarching protection programs. The real-world vignettes and practical programmatic advice are what set this resource apart from the standard references of doctrinal Army Doctrine Publication (ADP) 3-37, *Protection*,[1] or conceptual U.S. Army Futures Command (AFC) Pamphlet (Pam), 71-20-7 *Army Futures Command Concept for Protection*.[2]

I highly recommend *The Character of Harms*. It is a straightforward and insightful book, which can be applied to Army protection warfighting function efforts at any echelon.

Endnotes:

[1]ADP 3-37, *Protection*, 31 July 2019.

[2]AFC Pam 71-20-7, *Army Futures Command Concept for Protection*, 7 April 2021.

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("EOD in LSCO," continued from page 35)

Terminology debates aside, the aim of the urgent revision is to establish a doctrinal foundation that defines and describes a spectrum of EOD capabilities, limitations, and risks associated with employing EOD units in support of maneuver and maneuver support units (the assault force) in nonpermissive environments. The intentionally broad definition of "assault force" potentially includes everything from a military police company conducting rear area security missions to a special operations force carrying out a raid on a high-value target. This broad spectrum of "assault forces," therefore, includes a wide array of maneuver support and protection forces to preserve and enable operations during LSCO.

Returning to the 50th Multirole Bridge Company example and the North Atlantic Treaty Organization definition of assault EOD—the embedded EOD teams maintained the momentum of an assaulting force in a nonpermissive environment. EOD teams reduced risk to friendly force operations through the positive identification of, and precision render-safe/unusable procedures taken against, adversary weapons systems and munitions. These precise actions ensured that abandoned weapons systems and munitions did not inadvertently delay or prevent the establishment of critical wet-gap crossing control measures or prevent the establishment of the crossing site through the accidental launching of rockets into friendly force staging areas, thereby destroying key terrain/facilities or releasing chemical agents. This exercise and pending EOD doctrine updates provide a great template for incorporating the lessons learned from counter-insurgency and counter-improvised explosive device operations and applying them to LSCO. It also provides a conceptualization for future doctrine updates, exercises, and experimentation at home station, combined training centers, and other venues.

The time is here to determine when, how, and why the spectrum of EOD capabilities is incorporated into maneuver and maneuver support operations in nonpermissive environments. Doing so will ensure that we capture the lessons learned from counter-insurgency and counter-improvised explosive devices while self-modernizing for the future battlefield. There won't be time to wait for EOD support in LSCO.

Endnotes:

[1]ATP 4-32, *Explosive Ordnance Disposal (EOD) Operations*, 30 September 2013.

[2]*Explosive Ordnance Disposal (EOD) Principles and Minimum Standards of Proficiency*, North Atlantic Treaty Organization, 7 February 2020.

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Multidomain Protection Operations in a Multicommand Environment

By Lieutenant Colonel Thomas A. Durso (Retired)

and Chief Master Sergeant Christopher C. Nelson (Retired)

The objectives of this article are to demonstrate the friction that we experience in the multidomain/joint protection environment and the challenges that we face in reducing risk when critical assets and/or critical capabilities are not the asset or mission owner's highest priority and to explain how this issue multiplies assumed risk as we move from competition to crisis and into conflict.

Protection in a multidomain, multicommand environment poses challenges for mitigating risk. Most protection professionals understand that criticality is equal to risk, or—

T x V x A$ = R
where:
T = threat
V = vulnerability
R = risk

and that—

R - MR = RR
where:
R = risk
MR = mitigated risk
RR = residual risk

and that, hopefully—

RR x P = AR
where:
RR = residual risk
P = probability
AR = acceptable risk

That seems easy enough. But now, layer the problem set in a multidomain, multicommand environment, where there are blurred lines of equity, responsibility, and ownership, further complicated by the tyranny of distance and multiple plans with multiple phases. Protecting critical assets becomes a science and an art of its own.

As a protection enterprise, we understand that the goal is protecting the capability in order to complete the assigned mission-essential task (MET). Unfortunately, commanders must weigh their METs and apply the principles of war when deciding on the importance of protection—particularly where economy of force, unity of command and, of course, security are concerned. So what happens when a commander is assigned responsibility for protection in the primary domain in another Service command and has little equity in the capability? Compared to the commander's other METs, protection weighs low in priority. If the commander doesn't own the real property or equipment or if the capability doesn't provide a service to the protecting commander, how does the protection enterprise apply protection principles to mitigate the risk?

Insert command authorities and the "art" of protection into the challenge. The ability to apply command authorities to influence the art of protection is, essentially, the ability to thread the seam and close the gap of vulnerabilities. Understanding the complexity of programming, planning, budgeting, and executing ownership across operational control, administrative control, and tactical control lines of authority can help equitably divide responsibilities to achieve a holistic protection capability. In a multidomain, multicommand environment consisting of geographically separated combatant commands, subunified commands, and service component commands, there may arguably be a roadblock that requires a "joint solution to a joint problem." In a fiscally constrained environment, truthful, no-holds-barred assessments and inspections are imperative in order for commanders to understand the assumption of risk and to determine where to apply resources. At many of these crossroads,

where an inter-Service support agreement is not amicable, command-assigned protection is reliant on the joint command to either cut an order or champion the solution. All of this occurs in the critical competition phase of warfighting.

Now that we have explored the challenges of protecting critical infrastructure and ensuring the availability of the capabilities necessary to achieve our METs in competition, how do we achieve the necessary protection effects? These effects must mitigate threats from all domains as we move into the crisis and conflict phases and only have command and control (C2) of primarily land-based capabilities. One of the most basic and enduring fundamentals of joint security operations planning is the establishment of clear, joint security-related C2 relationships. Joint security operations require assigning a single responsibility for protecting the joint force. But when an Army force is designated as the Joint Forces Land Component Command (JFLCC) and assigned as the joint security coordinator in a theater consisting of 90 percent water and hundreds of isolated land masses, this responsibility becomes an exercise in a "coalition of the willing." Coordinating and synchronizing multidomain, joint/combined protection operations in what is predominantly a horizontally aligned, service component-oriented C2 structure is almost a conundrum, with the underlying issue being achieving multidomain effects while not having operational control or tactical control of multidomain forces (save the multidomain task force, which most certainly will not be assigned a security type mission). The most important facets in achieving multidomain effects are possessing operational control of the intelligence, surveillance, and reconnaissance assets; C2 structure; and kinetic/nonkinetic effects necessary to be able to "visualize" the enemy and ourselves (common operating picture) in real time and having the cyber and space superiority to achieve the effects necessary to protect the force.

"We need to take a closer look at the joint concept of protection, what that means to all components, who resources it, and who controls those resources."

As we learned earlier, it is imperative to implement joint risk reduction alternatives in competition; it may be too late when a crisis strikes. If such alternatives are not implemented in crisis, then it will certainly be too late in conflict. Competition is still a rather static operating environment in the land, maritime, and air domains, often (although not ideal) "allowing" single-Service solutions to risk mitigation challenges. But as we move into crisis and potential conflict, the operating environment becomes much more dynamic and money becomes less of an obstacle to achieving joint protection effects than do command relationships; commanders' mission sets; and access, basing, and overflight allowances made by partner nations in theater. Access, basing, and overflight authorities from partner nations are not guaranteed. There is no organizational structure in the Pacific area of responsibility, and partners and adversaries alike vie for regional credibility and partnerships.

So how does the commander of the Theater Joint Force Land Component execute joint/combined protection responsibilities when appointed as the joint security coordinator but does not have operational control of joint multidomain capabilities? How does that commander ensure the security of critical air and sea lines of communication; cyber, space, and electromagnetic domains; and integrated air missile defense? Standardizing protection across the joint force would alleviate much of the burden and help synchronize resources and efforts. As previously alluded, each service component approaches protection differently, with the Army having the most robust approach. Prior to departing competition for crisis, we should all come to an agreement on what "right" looks like within our theater. The pain experienced in cross-component staff coordination in exercises is too much for some and subsequently ignored by others. The end result could be inadequate protection provided by a land force in a predominantly maritime/air domain.

We need to take a closer look at the joint concept of protection, what that means to all components, who resources it, and who controls those resources. How do protection planners synchronize the Army Protection Program with the joint protection warfighting function? The Army Protection Program should be considered a part of competition protection planning and preparation activities, as seven of the Army Protection Program nonwarfighting functional elements directly correlate to protection warfighting function primary tasks. In addressing the needs of multidomain protection operations, we may need to consider developing new protection organizations such as joint headquarters protection cells (or joint security offices) that have the ability to analyze the operating environment and enemy/threats and apply that analysis to account for the capabilities required to achieve multidomain protection efforts. Protection operations differ under multi-domain operations in that emphasis must be placed on cross-domain defense in depth by working with mission partners to identify and mitigate vulnerabilities along the seams between domains (air-land-water interfaces) and to gain awareness/improve coordination regarding overlapping domains (information, cyber, and space).

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Chief Master Sergeant Nelson (Retired) is the risk management program manager for the Mission Assurance Branch, G-34 Protection Division, U.S. Army Pacific. He holds an associate's degree in instructor of technology and military science from the Community College of the Air Force and a bachelor's degree in liberal studies from Excelsior College, Albany, New York.

Protection Doctrine Update

"Doctrine is indispensable to an army. Doctrine provides a military organization with a common philosophy, a common language, a common purpose, and a unity of effort."

—General George H. Decker,
U.S. Army Chief of Staff, 1960–1962

Number	Title	Proponent	Publication Date
ADP 3-37	*Protection*	MSCoE/USAMPS	31 July 2019
ATP 3-07.6	*Protection of Civilians*	Peacekeeping and Stability Operations Institute	29 October 2015
ATP 3-11.32	*Multi-Service Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Passive Defense*	MSCoE/USACBRNS	13 May 2016
ATP 3-11.36	*Multi-Service Tactics, Techniques, and Procedures for Chemical, Biological, Radiological, and Nuclear Planning*	MSCoE/USACBRNS	24 September 2018
ATP 3-13.3	*Operations Security for Division and Below*	CAC/CADD	16 July 2019
ATP 3-34.20	*Countering Explosive Hazards*	MSCoE/USAES	21 January 2016
ATP 3-37.2	*Antiterrorism*	MSCoE/USAMPS	19 July 2021
ATP 3-39.10	*Police Operations*	MSCoE/USAMPS	24 August 2021
ATP 3-39.30	*Security and Mobility Support*	MSCoE/USAMPS	21 May 2020
ATP 3-39.32	*Physical Security*	MSCoE/USAMPS	08 March 2022
ATP 3-50.3	*Multi-Service Tactics, Techniques, and Procedures for Survival, Evasion and Recovery*	U.S. Army Personnel Recovery Proponent	21 August 2019
ATP 3-50.20	*Survival, Evasion, Resistance, and Escape (SERE) Planning and Preparation*	U.S. Army Personnel Recovery Proponent	29 November 2017
ATP 3-50.21	*Survival*	U.S. Army Personnel Recovery Proponent	18 September 2018
ATP 3-50.22	*Evasion*	U.S. Army Personnel Recovery Proponent	28 November 2017

Number	Title	Proponent	Publication Date
ATP 3-57.10	*Civil Affairs Support to Populace and Resources Control*	USAJFKSWCS	6 August 2013
ATP 3-90.4	*Combined Arms Mobility*	MSCoE/USAES	8 March 2016
ATP 4-02.8	*Force Health Protection*	MEDCoE	9 March 2016
ATP 4-32.1	*Explosive Ordnance Disposal (EOD) Group and Battalion Headquarters Operations*	CASCOM	24 January 2017
ATP 4-32.2	*Multi-Service Tactics, Techniques, and Procedures for Explosive Ordnance*	ALSA/CADD	12 March 2020
ATP 4-32.3	*Explosive Ordnance Disposal (EOD) Company, Platoon, and Team Operations*	U.S. Army Ordnance School	1 February 2017
ATP 5-19	*Risk Management*	TRADOC Safety Office	9 November 2021
ATP 6-02.70	*Techniques for Spectrum Management*	CCoE	16 October 2019
FM 3-01	*Air Missile Defense Operations*	FCoE	22 December 2020
FM 3-11	*Chemical, Biological, Radiological, and Nuclear Operations*	MSCoE/USACBRNS	23 May 2019
FM 3-12	*Cyberspace and Electronic Warfare Operations*	CCoE	24 August 2021
FM 3-50	*Army Personnel Recovery*	U.S. Army Personnel Recovery Proponent	2 September 2014
FM 3-63	*Detainee Operations*	MSCoE	2 January 2020
FM 4-02	*Army Health System*	MEDCoE	17 November 2020
FM 6-02	*Signal Support to Operations*	CCoE	13 September 2019
All doctrine publications can be accessed at <https://armypubs.army.mil> The Protection Doctrine update can also be accessed online at <https://home.army.mil/wood/index.php/contact/publications/ppb>			

Legend:

ADP—Army doctrine publication
ALSA—Army air, land, sea application
ATP—Army techniques publication
ATTP—Army tactics, techniques, and procedures
CAC—U.S. Army Combined Arms Center
CADD—Combined Arms Doctrine Directorate
CASCOM—U.S. Army Combined Arms Support Command
CCoE—U.S. Army Cyber Center of Excellence
EOD—explosive ordnance disposal
FCoE—U.S. Army Fires Center of Excellence
FM—field manual
FY—fiscal year
MSCoE—U.S. Army Maneuver Support Center of Excellence
MEDCoE—U.S. Army Medical Command Center of Excellence
N/A—not applicable
Qtr—quarter
SERE—survival, evasion, resistance, and escape
TRADOC—U.S. Army Training and Doctrine Command
USACBRNS—U.S. Army Chemical, Biological, Radiological, and Nuclear School
USAMPS—U.S. Army Military Police School
USAES—U.S. Army Engineer School
USAJFKSWCS—U.S. Army John F. Kennedy Special Warfare Center and School

("Modernization of the Protection WFF," continued from page 3)

in cells and across formations with knowledge and skills—a critical consideration in ensuring applied and integrated all-domain effects. Personnel changes will allow for the development of professionals throughout their careers; the new additional skill identifier coding for personnel will assist with managing talent and providing the force with the best-qualified professionals. The combination of educational opportunities, branch expertise, and operational experience will build leaders who are well-prepared and best-qualified to lead protection cells and formations at the brigade, division, and corps levels. The combination of facility modernization and policy updates will allow Army units to regularly integrate aspects of information advantage, counter-unmanned aircraft systems, and other protection efforts across extended ranges. This will improve the quality of training, making it more realistic and increasing the Army's readiness to defeat complex threats.

Conclusion

There is no single solution to providing the protection WFF capability necessary for the Army. However, a cornerstone training and education solution will help propagate doctrinal knowledge, impart the best methods for applying materiel solutions, and provide protection professionals who can help organizations tackle complex challenges from threat forces. The Army must continue to develop critical solutions across and through DOTMLPF-P for the protection WFF. This work is not undertaken only by and at the Maneuver Support Center of Excellence. Modernizing protection is an Army solution that requires Army work. Investing in integrated protection WFF solutions across the Army proponents is absolutely necessary in order for the United States to prevail in competition, crisis, and conflict against any threat.

Endnotes:

[1]The term "pacing threats" refers to competitors that are making significant progress toward challenging U.S. defense strategy. (Brittany De Lea, "Biden Defense Chief Dubs China the 'Pacing Threat' Amid Ascending," *Military and Defense*, 19 January 2021.)

[2]FM 3-0, *Operations*, 6 October 2012 (currently under revision).

[3]ADP 3-37, *Protection*, 31 July 2019 (currently under revision).

[4]*2022 National Defense Strategy*, U.S. Department of Defense, submitted to Congress for review on 28 March 2022.

Colonel Bohrer is the director of the Fielded Force Integration Directorate, Maneuver Support Center of Excellence. She has held operational assignments as a military police officer, served as a small-group leader and as a battalion commander, authored organizational concepts, and developed protection and national security event plans and theater level operational plans—and she has been deployed to Iraq and Afghanistan multiple times. She is a graduate of the U.S. Army War College and the U.S. Army Combined Arms Center School of Advanced Military Studies. Colonel Bohrer is passionate about delivering protection WFF capabilities to the fielded force.

Photograph Guide

Photographs contribute a great deal to the visual appeal of an article. When submitting them with your article, please keep the following in mind:

- **Subject matter**—Action shots that show Soldiers who are training or performing their jobs are the best way to enhance an article. Static photographs of landscapes, structures, or distant machinery in action are less useful. Photographs of groups of people smiling at the camera or "grip and grin" shots add little to an article and are unlikely to be used.
- **Format**—Photographs saved in JPEG (or JPG) format and sent as attachments to an e-mail are best. Photographs and other graphics should not be embedded in a Microsoft® Word document or PowerPoint presentation. Graphics files are large, and e-mail systems frequently have limits to the size of messages that can be sent. For example, our system cannot accept messages larger than 20 megabytes (MB). One solution is to send separate e-mails with just one or two attachments each.
- **Size and resolution**—The ideal photograph or graphic for reproduction is 5x7 inches, but smaller sizes may be acceptable. If the photograph is a JPEG, it should be no smaller than 150 kilobytes (KB). When taking photographs, use the highest-resolution setting on your camera and save them at a resolution no lower than 200 dots per inch. Photographs appearing on the Internet usually have a resolution of only 72 dpi. Do not manipulate photographs by sharpening, resizing, retouching, or cropping the image. Using a graphics software program (such as Adobe® Photoshop) to increase the size and/or resolution of a small photograph will not increase the quality of the photograph so that it can be used in a publication. Do not compress photographs. We will do all postproduction work. We will not publish photographs that are pixilated or out of focus.
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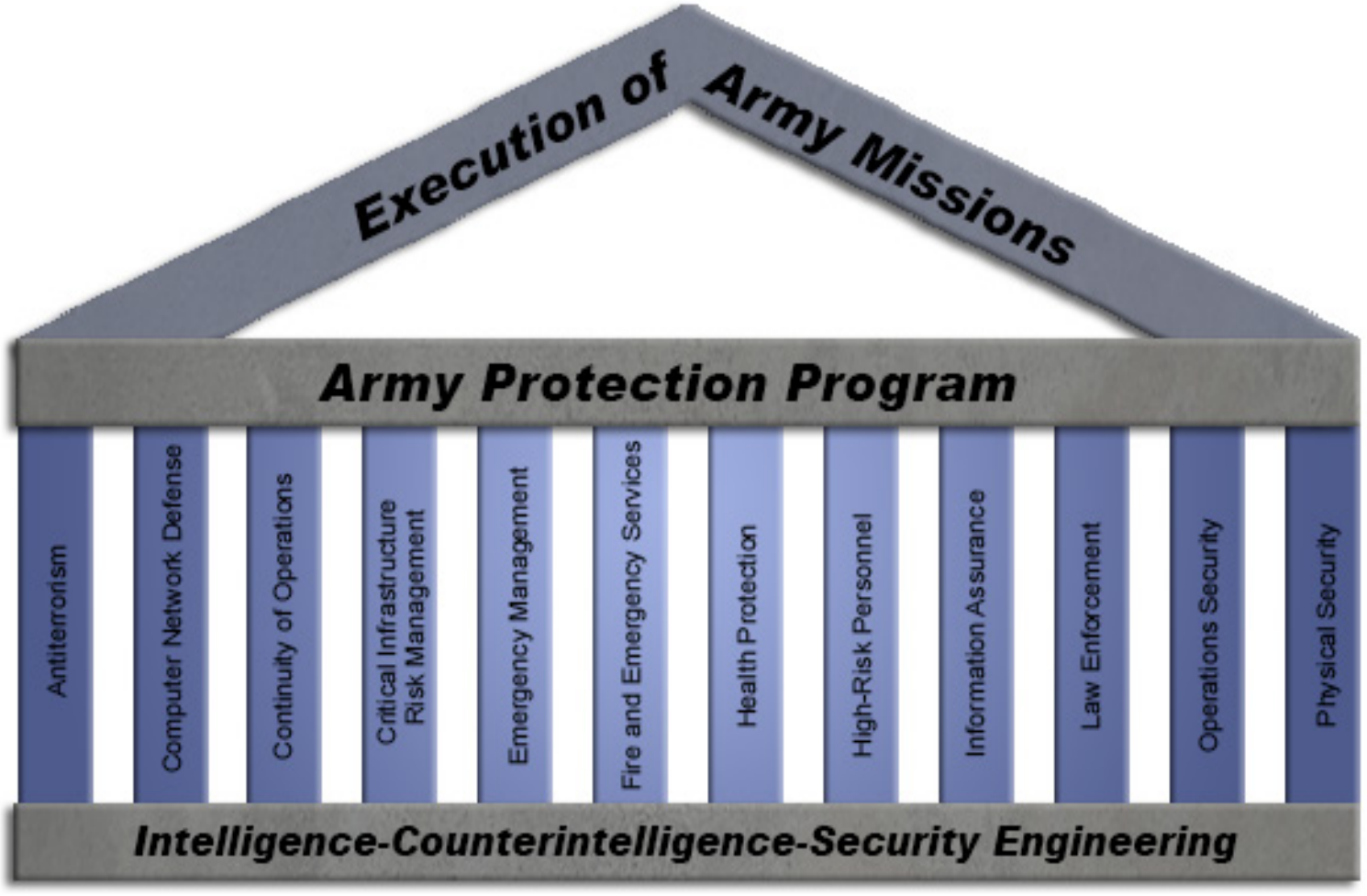
- **Email photographs**—Photographs can be emailed to: <usarmy.leonardwood.mscoe.mbx.protectpb@army.mil>.
- **Photographs of foreign nationals**—Due to security restrictions, photographs of foreign nationals cannot be published without digital editing (blurring faces) unless the photographs) are accompanied by a permission-to-release form signed by the subject(s).



Army Protection Program functional elements and enabling functions

Adapted from Army Doctrine Publication 3-37, *Protection*, 31 July 2019

Now standing silent vigil on the Delaware shore, this tower is one of the Army Coast Artillery Towers, which protected critical sections of the U.S. coastline from German submarines from 1941 to 1945.