Protection

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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.

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Protection

Professional Bulletin

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Maneuver Support Center of Excellence and Fort Leonard Wood Commanding General

Major General Christopher G. Beck

Team, I am very proud of the work that we have accomplished together this past year to develop, educate, and drive change for Protection capabilities! Although there has been much progress, a few things have not changed:

- Our shared purpose is to enable the U.S. Army to fight and win our Nation's wars with a lethal and cohesive force.
- Protection capabilities include equities across the Army; everyone has a role.
- Protection must include capabilities to deny the enemy freedom of action; enable access to friendly forces; and preserve our critical capabilities, assets, and activities.

I want to personally thank you for all that you are doing toward these ends and highlight a few of your incredible Army-wide efforts from fiscal year (FY) 2024:

- Through institutional updates to training, leader education, and doctrine, our shared understanding of what Protection is (and isn't) continues to improve. This common and more robust understanding—along with continued engagements with divisions, corps, Army Service component commands, centers of excellence, and senior Army leaders—has facilitated valuable Protection-related learning and outcomes in Mission Command Training Program warfighter exercises and training center rotations. Our aim remains to enable operational success.
- Pilots of the Protection Integrator Course have successfully transitioned to registration on the Army Training Requirements and Resources System for FY 25. Our goal is to educate Soldiers who are currently assigned to, are expecting to be assigned to, or will be working closely with Protection cells. In addition, the U.S. Army Combined Arms Center, Fort Leavenworth, Kansas, now offers a Protection elective at the Command and General Staff College. Instructors for the Command and General Staff College elective and the Protection Integrator Course are doing a phenomenal job of following the standards while flexibly updating the instruction based on student needs and lessons from the field. I am asking my team to expand our educational efforts in FY 25 by working with the Combined Arms Center to better integrate Protection across Army professional military education.
- General Gary M. Brito, Commanding General of the U.S. Army Training and Doctrine Command (TRADOC), has chartered a Protection TRADOC Proponent Office here at Fort Leonard Wood, Missouri. The director, Colonel Joesph E. Elsner, and his team are precious and responsive resources for anyone across the Army who has input or challenges relating to the Protection warfighting function. We look forward to growing this critical capability.
- With the help of other centers of excellence, the Capability Development Integration Directorate, U.S. Army Maneuver Support Center of Excellence (MSCoE), Fort Leonard Wood, completed the last phase of a 3-year capabilities-based assessment of the Army Protection functional concept, resulting in the identification of gaps and the development of solutions, which centers of excellence and the science and technology community will continue to build upon. Based on needs identified during this year's experimentation as well as Army senior leader guidance, our MSCoE Fielded Force Integration Directorate has begun to develop and will begin staffing organizational solutions related to the support area.

Lastly, thank you to everyone who contributed to the very successful inaugural Protection Senior Leader Forum and to those who attended, including more than 250 guests, 250 resident professional military education students, and international partners. Army senior leaders provided context and focus for the Protection warfighting function, including theater-specific considerations. Division and corps leaders provided priorities and planning guidance for Protection. Centers of excellence leaders discussed modernization priorities and gaps related to Protection. And U.S. Army Futures Command and Army laboratory leaders discussed how the science and technology community innovates and supports Protection capabilities development. The MSCoE team executed a live demonstration of Protection in an Army wet-gap crossing operation. A few of the many important

points covered during the forum include—

- Operationalizing Protection is the responsibility of the commander.
- Protection planning at division and corps levels spans the depth and breadth of the battlefield and all planning horizons. It must be time-informed, activity-driven, and continually prioritized.
- In current and future fights, our Army must be able to protect our forces and sustain, fire, maneuver, or converge.
- Our Army must be able to articulate what capabilities we can deliver, what we cannot deliver, or what we are at risk of not being able to deliver in 2040, which increases risks to the mission and force.

I appreciate your planning for, and participation in, the next Protection Senior Leader Forum, which is scheduled for May 2025.

As we develop and synchronize the Protection capabilities our Army needs to fight and win, this great Protection community of practice offers tremendous opportunity for progress. We have strong momentum, and I ask that each of you continue to collaborate through our warfighter forums, working groups, training and education courses, experimentation, and professional discourse, including leveraging the Harding Project to write about Protection.

I look forward to another year of moving forward together. Thank you for all you do!

Victory Starts Here! Victory Through Skill!

Maneuver Support and Protection Integration Experiment 2024

By Colonel Kenneth J. Frey and Mr. David L. Nobles

The U.S. Army Futures Command (AFC), Fort Eustis, Virginia, is the Army organization responsible for modernization efforts for the entire force. AFC includes the Futures and Concepts Center (FCC); and within the FCC, modernization for all regiments is managed by a capabilities development integration directorate, which supports a center of excellence. In the AFC world, life starts with ideas that drive scientific and technological endeavors, which then require experimentation in order to develop requirements. So, concepts, science and technology, experimentation, and requirements—always executed in that order—are the core AFC competencies.

Concepts

The Directorate of Concepts, FCC, evaluates the possible future operational environment and associated threats, including current and emerging violent extremist organizations, and arms military analysts and technologists with technology expected to be widely available in the future. The future world is incorporated into Army concepts, which include concept-required capabilities—short descriptions of capabilities needed to win future wars. Based on the Army concepts (and concept-required capabilities), we ask, "Given the current force structure and capabilities, can the U.S. Army accomplish the mission in the future?" If the answer to that question is "no," then there is a "gap." A thorough review of each gap is conducted during a capabilities-based assessment, but that is not the focus of this article.

Science and Technology

Gaps with a likely materiel solution are referred to the government science and technology community—primarily to the U.S. Army Combat Capabilities Development Command, Chemical Biological Center, Aberdeen Proving Ground, Maryland, and the U.S. Army Corps of Engineers Engineer Research and Development Center (ERDC), Vicksburg, Mississippi. Through the U.S. Army Combat Capabilities Development Command and ERDC, individual capabilities development integration directorates can collaborate with industry. Science and technology and/or industry efforts ultimately yield deliverable weapons or systems needed to fill the gaps—either partially or entirely. The technologies under consideration must participate—preferably, with a Soldier—in a "show me the money" event to demonstrate what they can and cannot do. Soldiers who participate represent the future warfighter who will be expected to use the new technology on the battlefield. These demonstrations are performed in the context of an experiment.

Experimentation

AFC does not carry out exercises; instead, it conducts experiments. Through experiments, AFC can test the unknown, accept failure, perform rework, and then test again. AFC experiments as much as necessary because that approach helps reach the final, functioning, Soldier-acceptable solution most quickly, and that is the ultimate goal. If AFC delivers a solution that Soldiers dislike, cannot understand, or cannot successfully use, then AFC has failed in its mission. Experimentation can take on various forms, including simulation, independent system operation, Soldier interaction (in a limited field environment), and participation in a combat training center rotation. Experimentation helps determine the capabilities that Soldiers and AFC need and provides for documentation of the requirements.

A chemical, biological, radiological, and nuclear (CBRN) Soldier uses a Robotics for Engineer Operations system to conduct mission planning for CBRN reconnaissance at standoff.

The Maneuver Support Battle Laboratory, Fort Leonard Wood, Missouri, conducts an annual Maneuver Support and Protection Integration Experiment (MSPIX) at Fort Leonard Wood. MSPIX is one of four FCC-funded, Army-focused warfighter experiments. The main focus of MSPIX is on addressing protection-based capability gaps. Soldiers have the opportunity to use prototype technologies, capabilities, and systems developed by government laboratories and private industry in an operationally relevant environment. In return, technology developers receive Soldier feedback and insight into Army priorities.

MSPIX 24, the eighth annual MSPIX event, was held 6–23 May 2024. With the assistance of 24 Soldiers provided by III Armored Corps, Fort Cavazos, Texas, and tasked units including the 1st Armored Division, Fort Bliss, Texas;

Soldiers operate an Airborne Ground Mines Detection System to identify surface-laid and partially buried mines.

the 89th Military Police Brigade, Fort Cavazos; and the 36th Engineer Brigade, Fort Cavazos—along with equipment support provided by the 36th Engineer Brigade and the 5th Engineer Battalion, Fort Leonard Wood—the Maneuver Support Battle Laboratory evaluated the potential use of emerging technologies to address existing protection capability gaps and to provide input for capability development documents. MSPIX 24 exposed Soldiers to 13 different technologies; following is a description of each of the technologies assessed:

- Defense Simulation Analytical Service®, developed by IBM©, is a decision support tool designed to assist protection cells at division and higher echelons. The tool enables the automation of many functions currently performed manually by protection cells at the division and corps levels. It has two very useful features: It uses a large language model to power a "staff assistant" function that can quickly find and summarize technical, doctrinal, and operational documents, and it includes a risk assessment feature that could be extremely helpful to protection cells at higher echelons. Soldiers found it easy to learn about the tool and to intuitively operate it. This technology is being further developed, and more Soldiers will soon experiment with it at division level exercises.
- Warfighter Integrated System for Distinct Domain Operational Missions (WISDDOM)®, developed by Collins Aerospace©, a subsidiary of Raytheon Technologies©, is a decision support tool designed to assist protection cells at division and higher echelons. WISDDOM automates a common methodology of assessing risk for critical assets. It uses the Criticality, Accessibility, Recoverability, Vulnerability, Effect, and Recognizability (CARVER) assessment to develop recommended priority protection lists for the most valuable assets of a division. The Soldiers who used this system found it easy to learn and intuitively operate.
- McQ Inc.© demonstrated unattended surveillance and detection capabilities with its Ranger® and rScene® technologies. The McQ Ranger is a small, lightweight ground sensor puck with seismic, acoustic, and magnetic sensors. The McQ rScene is a small, low-power micro radar sensor. Together, these sensors are combined in a rapidly deployable kit that teams of Soldiers can use for tactical surveillance. Despite the muddy MSPIX 24 field conditions, which limited the seismic range, vehicles and personnel were successfully detected using the sensor kit.
- Scylla® demonstrated its artificial intelligence program that connects to existing camera hardware and provides autonomous visual detection capability. The Scylla artificial intelligence program features a simple user-friendly interface and includes a range of algorithms that allow for facial recognition, weapon detection, slip/fall/fight behavior recognition, and intruder detection. A team of Soldiers was trained to activate and calibrate the software; the Soldiers then conducted fixed-site standoff scenarios with high- and low-resolution cameras. The software successfully detected personnel, weapons, and the stipulated behaviors.
- Gantz-Mountain Intelligence Automation System, Inc.© demonstrated autonomous personnel and vehicle detection using its ground-based MT-5-R surveillance package. The MT-5-R kit fits in a standard pelican case and consists of durable, lightweight cameras capable of automatic detection with built-in day sight and forward-looking infrared sensors. A team of Soldiers deployed the kit to conduct tactical surveillance; the team was able to clearly detect people and vehicles at standoff ranges.
- Autodyne LLC© showcased its flight software control program, which enables a single operator to set mission parameters and input drone taskers using a tablet interface, while the software controls multiple small, unmanned aircraft systems. Each Soldier was trained to conduct multiple flights of four drones, and each successfully carried out tactical surveillance and fixed-site standoff missions.
- The Argos® detector, developed by Alakai Defense Systems©, uses an ultraviolet laser to perform Raman spectroscopic sampling on solids and liquids at standoff ranges. The handheld device is powered by a battery and requires manual operation. To target a sample, a visible red laser is pointed at the sample and then activated. The observed target spectrum is compared to a library of Raman spectroscopy data stored within the unit to identify potential hazards. During the MSPIX 24 exercise, the unit was mounted on an articulating arm of a robot, where it was remotely activated. The Alakai team demonstrated the capability to control the robot, activate the Argos unit to collect the sample data, transmit that data through a radio interconnection, and display the data on standard military interfaces.
- Teledyne FLIR© showcased standoff chemical and radiation detection capabilities by using a drone equipped with standard detection systems. Soldiers were trained on programming the drone for fully autonomous operation and detection of live and simulated chemical and radiation targets using tablets equipped with common military software and integrated plugins for drone control and chemical, biological, radiological, and nuclear detection. Threats were successfully detected at altitudes free of terrain obstacles and at ranges that ensured Soldier safety. Soldiers were satisfied with the autonomous operation and the capability to identify and map chemical and radiation threats in an operational area.
- The U.S. Army Combat Capabilities Development Command provided the Multiutility Tactical Transport®, an 8 x 8 wheeled autonomous decontamination system, for

A Soldier installs an MT-5-R camera for standoff surveillance.

the MSPIX event. The decontamination system is controlled by robotic system control software for autonomous operations, which is displayed through a common machine interface. The platform includes a robotic arm for directing movement and positioning sprayer nozzles. Targeting is achieved through the use of a special camera that indicates the presence of contamination through an interface with the onboard processor. The decontamination applicator consists of fluid tanks for washing and decontamination, fluid controls and a compressor, and associated electronic controls. The experiment demonstrated autonomous operation of the Multiutility Tactical Transport through waypoint routing as well as effective teleoperation, both from the interface control station and handheld controllers on the vehicle itself.

- The Airborne Ground Mines Detection System®, developed by Sierra Lobo Inc©, is an aerial surveillance and detection system designed to provide overhead day/night imagery for the real-time detection of explosive hazards such as landmines, submunitions, bombs, and improvised explosive devices. The system sensor is platform-agnostic and can be mounted to any unmanned aircraft system capable of carrying a payload. The Airborne Ground Mines Detection System demonstrated the ability to detect surface-laid, partially buried, and flush-buried mines as well as other potential explosive hazards from an aerial platform. Soldiers quickly learned to program flight plans and operate the system to execute autonomous scans of a minefield.
- The Robotics for Engineer Operations system, developed by the Construction Engineering Research Laboratory, ERDC, Champaign, Illinois, successfully demonstrated the ability to remotely proof a lane through an obstacle and conduct site characterization and mapping. During the demonstration, Soldiers used a commercial bulldozer and a commercial command station to remotely proof a 100-meter lane through a simulated obstacle. Although no actual mines or obstacles were present, the Soldiers showed that they could remotely operate the bulldozer using the herring bone method required to proof a lane. Remote site characterization and mapping were performed using the Badger® and mobile command station. The Badger, equipped with light detection and ranging (LiDAR) equipment, multispectral cameras, an automated cone penetrometer, and military radios mounted on a common robotic platform, successfully developed site characteristics that could support reconnaissance, breaching, and/or construction efforts and mapped the site.
- Mobile camouflage systems from Leonardo DRS©, Ametrine©, and Fibrotex© were installed on multiple vehicles to assess the ease of their installation and removal, their effectiveness in disrupting sensor detection, and their impact on vehicle drivability. Soldiers found the mobile camouflage kits easy to install and remove. Thermal/infrared scopes and multispectral sensors from satellites were used to test the ability of the systems to disrupt sensor detection.
- Matting for Improved Soil Trafficability, developed by the Environmental Laboratory, ERDC, Vicksburg, is a system that provides road surfaces that allow vehicles to traverse areas with soft or wet soil conditions. The Army faces a significant challenge when approaching and crossing gaps—especially wet gaps—due to unstable soil conditions near the gaps. The roadway consists of a system of interconnected fiber mats that can be anchored over unstable ground, providing a stable surface for vehicles approaching and crossing the gaps. The technology is easy to use, and minimal training is required for mastery. Matting for Improved Soil Trafficability kits can be customized for specific locations and soil conditions.

Requirements

The evaluation of emerging prototype systems is a crucial part of the capability development process. Through experimentation, capability developers gain insights into the latest advancements in technology and learn how the new technologies could address capability gaps. This assists in more accurately defining key system attributes and performance parameters, leading to refined requirements and improved capability development documents. Moreover, military participants provide valuable feedback to science and technology developers, ensuring that the new systems are both relevant and operationally effective.

Conclusion

Army-focused warfighter experimentation events play a vital role in Army modernization by providing a platform for learning about military problems and potential solutions in a multidomain operations-relevant environment.

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SURVIVABILITY: THE FOUNDATION OF PROTECTION

By Mr. Douglas M. Loggins

Survivability has often been described as "blade time," which refers to the time required for an engineer digging asset to dig a fighting or protective position. This concept originated with survivability doctrine, first introduced in Field Manual (FM) 5-103, *Survivability*, in 1985.[1] This manual evolved from FM 5-15, *Field Fortifications*, which focused on engineering and provided details for constructing entrenchments, emplacements, and shelters; it also outlined the principles of terrain appreciation as they apply to field fortifications and explained how to combine individual field fortifications into a unified system through the organization of the ground.[2] As outlined in Army Techniques Publication (ATP) 3-37.34, *Survivability Operations*, survivability doctrine is still primarily intended for engineer staffs and officers at the brigade echelon and below, almost 40 years after its inception.[3]

Hull defilade position for an M1 tank.

Survivability serves as the foundation of the protection warfighting function, which refers to "the related tasks, systems, and methods that prevent or mitigate detection, threat effects, and hazards to preserve combat power and enable freedom of action."[4] Therefore, survivability applies to all military personnel—not just engineer formations and their staffs. All Soldiers and units carry out survivability operations within the limits of their capabilities. It all begins with individual Soldiers and units conducting tactical-level operations.

Soldiers can significantly enhance their survivability by being proficient at critical Soldier common tasks and field craft—for example, applying personal camouflage; reducing personal electromagnetic signatures; reacting to contact; protecting against chemical, biological, radiological, and nuclear (CBRN) injury/contamination; and performing self-aid/first aid. All Soldiers must understand the threat, the operational environment, and all forms of contact and consider the possibility of being under constant observation.

Survivability is also related to the ability of a unit to avoid enemy detection, defeat enemy detection capabilities, and withstand enemy effects. Units can enhance their survivability by deploying local security measures, adjusting movement and maneuver formations, taking evasive actions, maneuvering to gain positional advantages, deploying decoys, dispersing forces, and carrying out military deception operations. Tactical units should incorporate procedures for the use of camouflage, cover, concealment, and electromagnetic emissions control—including noise and light discipline. And the dispersal of formations improves survivability by making it harder for enemy forces to identify valuable targets. Additionally, the application of CBRN defense measures improves survivability in CBRN environments.

For improved survivability, unit leaders must analyze the mission and fully comprehend the situation, problem, and objectives. This will guide the planning process. If the current survivability measures are unable to prevent detection or mitigate the impact of threats and hazards, then leaders should coordinate with higher headquarters to acquire the necessary protection resources, thereby ensuring survivability and mission success. Common survivability enablers include—

- Engineers, who construct fighting positions, protective positions, and hardening facilities and employ protective obstacles.
- Obscuration, which results from natural (rain, fog) or artificial causes or occurs as a by-product (smoke, dust).
- Electromagnetic protection, which includes the employment of countermeasures, the mitigation of signatures, and electromagnetic hardening.
- CBRN operations, which include the employment of capabilities that assess, protect against, and mitigate the entire range of CBRN incidents to enable freedom of action.
- Tactical deception, which refers to friendly activity that causes enemy commanders to take action or cause inaction detrimental to their objectives.

(Continued on page 9)

PROTECTIVE FIRES

By Captain Michael E. McCallister

Is an artillery strike on an enemy munitions storage site in order to degrade enemy capabilities considered a fires warfighting function (WFF) or a protection WFF? Doctrinally, employing artillery against a target is undeniably a fires WFF. However, a thorough analysis of maneuver and fires tasks demonstrates that they fall more within the realm of the protection WFF than not.

The core concepts of protection are[1]—

- Preserving critical capabilities, assets, and activities (CCAA).
- Denying threat and enemy freedom of action.
- Enabling windows of persistent access.

Associating an offensive mindset with the protection WFF requires an examination of how actions and effects on the battlefield are considered in modern conflict. It demands that protection be purposefully integrated into the maneuver fight, fires plans, and all aspects of operational planning. This may necessitate additional terms, actions, and considerations (such as "protective fires") to reframe our tactical, operational, and strategic thinking.

According to Army Doctrine Publication (ADP) 3-0, *Operations*, "A [WFF] is a group of tasks and systems united by a common purpose that commanders use to accomplish missions and training objectives."[2] The key word in this definition is "purpose"; WFFs are doctrinally defined by their purpose. But, in practice, when grouping tasks into WFFs, the tasks are sorted based on who or what takes the action—a process that is critically incorrect.

The fires WFF consists of "the related tasks and systems that create and converge effects in all domains against the adversary or enemy to enable operations across the range of military operations"[3]; the broad purpose to "enable operations across the range of military operations" is narrowed through the method of "create and converge effects." The protection WFF consists of "the related tasks, systems, and methods that prevent or mitigate detection, threat effects, and hazards to preserve combat power and enable freedom of action"[4]; the broad purpose to "preserve combat power and enable freedom of action" is narrowed through the method of "prevent or mitigate detection, threat effects, and hazards."

These definitions lead to a comparison of enabling operations by creating and converging effects (fires WFF) and preserving combat power and enabling freedom of action by preventing or mitigating detection, threat effects, and hazards (protection WFF). Returning to the example at the outset, firing artillery at an enemy munitions storage site to degrade enemy capabilities falls within the purpose of the second definition, making it a protection task/action—even though it involves firing of artillery. We mistake effects for actions.

Some tactical tasks are more directly protective in nature; these include—

- **Block**—a tactical-mission task that denies the enemy access to an area or an avenue of approach. A block is also "an obstacle effect that integrates fire planning and obstacle effort to stop an attacker along a specific avenue of approach or prevent the attacking force from passing through an engagement area."[5]
- **Guard**—a security operation that protects the main body by fighting to gain time while preventing enemy ground observation of, and direct fire against, the main body.[6]

The entire problem set of modern conflict must take the core protection concepts (preserving CCAA, denying the enemy, and enabling access) into account. It isn't easy to see the protective requirements connecting operations within offense or defense. Offensive fires are defined as "surface-to-surface indirect fires intended to preempt enemy actions in support of the maneuver commander's concept of operations,"[7] whereas defensive fires are defined as "surface-to-surface indirect fires intended to disrupt discovered enemy preparations for an attack."[8] But neither of these definitions covers the example provided; the definition of offensive fires is too broad, and defensive fires involve reactions to impending enemy attacks. The definition of offensive fires, which includes all preemptive actions in support of the commander's concept of operations, is a catch-all definition that needs to allow for detailed planning. Fires could be divided into three categories—offensive, defensive, and protective. Under this scheme, offensive fires would be defined as surface-to-surface indirect fires intended to preempt enemy actions in support of the commander's scheme of maneuver and protective fires would be defined as surface-to-surface indirect fires intended to degrade, neutralize, or destroy enemy capabilities, assets, or activities. Protective fires would bridge the gap between offensive fires supporting a scheme of maneuver and defensive fires disrupting planned enemy attacks.

Protection integration is not merely an academic exercise; the radical rethinking and reorganization of WFF responsibilities and tasks would force commanders to recognize protection as a critical consideration for all aspects of an operation. As emphasized in U.S. Army Futures Command (AFC) Pamphlet (Pam) 71-20-7, *Army Futures Command Concept for Protection 2028*, "Passive measures are insufficient to preserve CCAA and prevent threats in all domains, the electromagnetic spectrum, and the information environment, including obstacles and hazards, from degrading mission accomplishment and applying more combat power at suboptimal times and places. The protection [WFF] serves a role in targeting, all-domain command and control, and the operations process. Active protection processes should help characterize the threat and nominate protective denial or defensive measures, thereby expanding the preservation of CCAA throughout all domains, the electromagnetic spectrum, and the information environment. Denying enemy freedom of action is the active approach preventing the enemy's ability to see, understand, and strike friendly force CCAA."[9] The pam directly addresses taking active measures against enemy threats and provides the impetus for the fires WFF to be divided into offensive, defensive, and protective fires, as previously discussed.[10] The concept of future protection should also drive units—especially the division (as the unit of action)—to integrate protection participation in targeting and other vital processes.

To efficiently preserve our own CCAA, we must recognize enemy CCAA and deny their availability and/or effectiveness. We must recognize that tasks and actions traditionally considered fires or maneuver WFFs are actually protection WFFs and that protection must be actively considered in the analysis, selection, and execution of these tasks. Degrading, defeating, neutralizing, or destroying enemy CCAA results in the denial of threat and enemy action and enables windows of persistent access across domains.

Endnotes:

[1]AFC Pam 71-20-7, *Army Futures Command Concept for Protection 2028*, 7 April 2021.

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

[3]Ibid.

[4]FM 3-0, *Operations*, 12 October 2022.

[5]FM 3-90, *Tactics*, 1 May 2023.

[6]ADP 3-90, *Offense and Defense*, 31 July 2019.

[7]FM 3-09, *Fire Support and Field Artillery Operations*, 12 August 2024.

[8]Ibid.

[9]AFC Pam 71-20-7.

[10]Ibid.

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("Survivability: The Foundation of Protection," continued from page 7)

A Soldier takes aim from his man-made fighting position.

- Operations security, which is a capability used to identify and control critical information, indicate friendly force actions attendant to military operations, and incorporate countermeasures to reduce the risk of adversarial exploitation of vulnerabilities.
- Force health protection, which encompasses measures that promote, improve, or conserve the behavioral and physical well-being of Soldiers. These measures comprise preventive and treatment aspects of medical functions and include combat and operational stress control, medical services, dental services, operational public health and laboratory services, and veterinary services.

The importance of survivability has extended beyond blade time and the role of the engineer staff officer. And protection can take different forms at different echelons. In order for protection to be comprehensive, integrated, layered, redundant, and enduring, Soldiers must be trained in critical common tasks; units must employ proper tactics, techniques, and procedures; and leaders must understand the survivability capabilities of their organizations. Leaders must also coordinate for survivability support to prevent and mitigate the impacts of threats and hazards in order to achieve mission success.

Endnotes:

[1]FM 5-103, *Survivability*, 10 June 1985, now obsolete.

[2]FM 5-15, *Field Fortifications*, 27 June 1972, now obsolete.

[3]ATP 3-37.34, *Survivability Operations,* 16 April 2018.

[4]FM 3-0, *Operations*, 1 October 2022.

Mr. Loggins is the Chief, Doctrine Division, Fielded Force Integration Directorate, Maneuver Support Center of Excellence, Fort Leonard Wood, Missouri. He retired from the U.S. Army after serving 23 years. He holds a bachelor's degree from Columbia College, Missouri.

The Inaugural Protection and Maneuver Support Senior Leader Forum

By Colonel Barrett K. Parker (Retired) and First Sergeant Michael A. Koren (Retired)

The inaugural Protection and Maneuver Support Senior Leader Forum, held 23–25 July 2024 at Fort Leonard Wood, Missouri, was a grandly lauded endeavor that inspired some of the most notable Army luminaries to travel—many for the first time—to one of the premier hunting, camping, and fishing areas of the Midwest to discuss recent evolutions and the future of the protection domain. Visitors to Fort Leonard Wood enjoyed the warm, sunny weather while they engaged in superb dialogue and observed well-planned and well-orchestrated demonstrations related to the most complex Army warfighting function.

The forum kicked off with several keynote speakers. Each speaker addressed the unique Army perspective on how protection must be synchronized in support of the Army of 2030 while the Army postures for 2040. The Chief of Staff of the Army, Sergeant Major of the Army, Commanding General of the U.S. Army Training and Doctrine Command, and Commanding General of the U.S. Army Combined Arms Center served as the esteemed members of the Army's senior leader panel, held with standing room only in Lincoln Hall at the Ike Skelton Complex. While the panel members discussed a wide variety of diverse topics, two underlying themes emerged: The protection warfighting function is an integral part of the Army's future fight, and protection must be on the minds of leaders at all echelons and components.

The first day of the forum culminated with Colonel Joseph E. Elsner, Training and Doctrine Command Proponent Office (TPO)–Protection, comprehensively describing the event setting for the next day—a threat-informed, wet-gap crossing modified to fit the terrain at Training Area 250, where a live demonstration of the combined protection effects of chemical, biological, radiological, and nuclear; engineer; military police; explosive ordnance; fires; cyber; electronic warfare; air defense; and space and missile defense assets would be conducted. The results of protection warfighting function actions, activities, and tasks on a 2030 battlefield ensure that protected maneuver can be brought into focus for the Army.

After opening remarks on the second day, large, white buses transported anxious observer-passengers to a location about a kilometer away from the actual wet-gap crossing site. Over the next 3 hours, participants received a series of briefings, discussed displays, and attended presentations that demonstrated how various and diverse protection equities would be arrayed in support of a wet-gap crossing—but in a significantly compressed space. At the conclusion of these activities, participants had the opportunity to view a waterborne demonstration, in which an M-1135 Nuclear, Biological, and Chemical Reconnaissance Vehicle was rafted to the far shore.

The afternoon session of the second day of the forum consisted of a roundtable discussion on protection integration, which was chaired by division and corps commanders. Again, despite the wide variety of presenter experiences, there were two overarching themes: The protection warfighting function is an integral part of the Army's future fight, and leaders must be cognizant of protection capabilities at their echelons and components. The roundtable chairs held deliberate discussions and made strong points with regard to ensuring that allies and partners understand how the Army incorporates protection into operations.

During the afternoons of the first 2 days of the forum, the Protection and Maneuver Support Industry Exposition was held at Nutter Field House. Hosted by the Engineer, Military Police, and Chemical Corps Regimental Associations, the exposition consisted of vendor displays from a wide variety of industry partners; the displays filled the field house to capacity and occupied most of the sprawling parking lot.

The final half-day of the forum was focused on modernization and U.S. Army Maneuver Support Center of Excellence (MSCoE) and science and technology initiatives.

What are the expectations for the future? In coordination with the other centers of excellence, MSCoE will continue to drive change and enhance understanding of the protection warfighting function throughout the next year. MSCoE will also continue to conduct annual protection senior leader forums to inform and better prepare leaders across the operational forces, centers of excellence, and partner nations to increase shared understanding relative to the protection enterprise. Planning for next year's forum has already started, and MSCoE is excited to share what it comes up with next!

Colonel Parker (Retired) is the deputy chief of TPO–Protection, Fielded Force Integration Directorate (FFID), MSCoE, Fort Leonard Wood. 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, 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.

First Sergeant Koren (Retired) is the chief of the Training Development and Integration Branch, TPO–Protection, FFID, MSCoE. He holds a bachelor's degree in history from Drury University, Springfield, Missouri; a master's degree in homeland security from George Washington University, Washington, D.C.; and a doctorate of education from the University of Southern California, Los Angeles. He served 21 years as a military police Soldier and retired from the U.S. Army as a first sergeant.

Aligning Protection in the Operations Process

By Colonel Joan E. Sommers

In this age of great power competition and rapidly evolving multidomain threats, protection should be integrated into all operations. Protection serves as a combat multiplier in rear and forward areas. Commanders who master the protection warfighting function have the critical battlefield advantage.

Warfare is constantly evolving. While offense remains the desirable focus of operations, technological advancements and the growing presence of constant surveillance, autonomous systems, and long-range fires demand that protection be strategically reevaluated. The emerging generation of warfare must be appreciably focused on protecting units and ensuring their resiliency so that they can preserve themselves and withstand enemy attack. As defense is reinforced, tactics necessitate the reevaluation of traditional offensive strategies. It is now a critical time to innovate defense mechanisms, dispersed tactical formations, and multidomain protection methods that can be adapted to the challenges posed by modern technological advancements.

As demonstrated in Ukraine, the modern battlefield is characterized by pervasive surveillance and precise long-range engagements that render the traditional massing of forces both risky and strategically undesirable. Contemporary warfighting demands a paradigm shift in maneuver and protection strategies. Whereas logistics and foraging once shaped Army movements, forces must now disperse, converge for offensive actions, and quickly redisperse to avoid counterfire. Such a maneuver strategy highlights the need to embed robust protection measures to effectively safeguard combat power. This article advocates for the crucial integration of protection measures throughout military operations to secure mission success.

Prioritizing the Principles of Protection

The protection warfighting function is defined as "the related tasks and systems that preserve the force so the commander can apply maximum combat power to accomplish the mission."[1] Peer adversaries may be able to rapidly detect and destroy Army forces with space-based capabilities, unmanned systems, and massed and precision fires, so units must prioritize protection throughout all operations.[2] Commanders must visualize how protection impacts operations while developing and integrating protection plans; in this sense, protection drives the characteristics of offensive and defensive operations. It can no longer be tucked away in Annex E of the base order. Protection planning is so critical to future fights that it should be prominently addressed in the first paragraph (Friendly Forces) of the order. Protection may be so pivotal to future battlefield successes that the Army creates a sixth paragraph (Protection) that shapes staff planning and commander decision points.

One possible change to the battle rhythm would involve merging the protection working group into the targeting decision board. Protection working groups are useful for synchronizing protection efforts but may lack the right personnel and timing to effectively impact maneuver decisions. The protection cell and the protection working group are typically undermanned and are relatively low priorities, so outputs are often inadequate for integration into operations and targeting decisions. Protection working groups can also become overly focused on force protection and lag behind the tempo of the battlefield so that outputs may not synchronize with commanders' decision points. As with operations orders, protection considerations must be prominently addressed in the targeting cycle. Another option might be to develop a multidomain decision board in place of the targeting decision board to synchronize multidomain assets and protection. The multidomain decision board could replace other meetings or be added to the pre-existing battle rhythm. Unfortunately, division/corps battle rhythms already leave little time for commanders to make decisions so white space is already at a premium. Regardless of the battle rhythm meetings, the goal is for the right people to be planning and synchronizing the protection warfighting function before targeting decisions are presented to commanders.

Shaping Operations With Protection

Just as intelligence has historically driven operations, protection must increasingly shape operational planning. The closest the Army has come to applying protection as a combat multiplier is through the suppression of enemy air defenses in air operations—a one-dimensional approach. The limit of the operational reach of a unit is its culmination point; operational reach balances the natural tension between endurance, momentum, and protection.[3] In an increasingly complex era of warfare, protection becomes the most significant contributor to operational reach in combat operations. Beyond traditional hardening and concealment, protection of the force involves safeguarding communications, conducting cyberspace operations, and managing the electromagnetic spectrum. Protection starts at the individual Soldier level and continues all the way through to operational formations. Commanders must adopt a comprehensive view of protection that includes both physical and electronic dimensions to ensure that protective measures are adapted and integrated into offensive and defensive

operations. Commanders must understand, visualize, describe, and direct the protection of assets and capabilities alongside massing effects and conducting sustainment operations.

During offensive operations, commanders must employ cyberspace capabilities with electromagnetic radiation; however, these systems emit observable signatures and are susceptible to enemy attack. Protecting Army electromagnetic capabilities may require that Soldiers turn off equipment to limit emissions and reduce the effectiveness of enemy target acquisition systems. Strict requirements for protection slow operational tempo and the targeting process. On the other hand, turning on equipment and radiating strong electromagnetic signatures at multiple locations could deceive the enemy and impede its ability to target the location of the most valuable Army assets. These scenarios offer commanders a protection decision that can be used in conjunction with ongoing maneuver operations. In essence, commanders must balance dispersion with convergence and emission with target acquisition. The key is to balance protection with tempo so the Army can enable maneuver success.

Reconceptualizing Protection in Maneuver

As armament technology has advanced, body armor has progressed from leather, to wood, to metal, to Kevlar®. Yet, no level or numbers of layers of body armor will stop next-generation technologies from penetration. Current and potential future technologies are forcing commanders to understand that protection doesn't just consist of a Kevlar vest. Future operations dictate the need for protection throughout the duration of operations and depth of the battlespace—not just in the rear area.

Application of the protection warfighting function must be made a higher priority for commanders at echelon. Staffs—not just protection cells—should be prepared to synonymously assess and reassess protection alongside operations and targeting functions during current and future planning. Commanders can secure mission success by reconceptualizing protection measures throughout military operations. Protection must be viewed differently—not only for current threats but also for emerging threats that are yet unknown.

Endnotes:

[1]Army Doctrine Publication (ADP) 3-0, *Operations*, 31 July 2019.

[2]ADP 3-37, *Protection*, 10 January 2024.

[3]ADP 3-0.

Colonel Sommers is a military intelligence officer assigned as the Chief, Commander's Initiatives Group, First Army, Rock Island Arsenal, Illinois. She holds a master's degree in strategic intelligence from National Intelligence University.

NEXT WAR
REIMAGINING HOW WE FIGHT

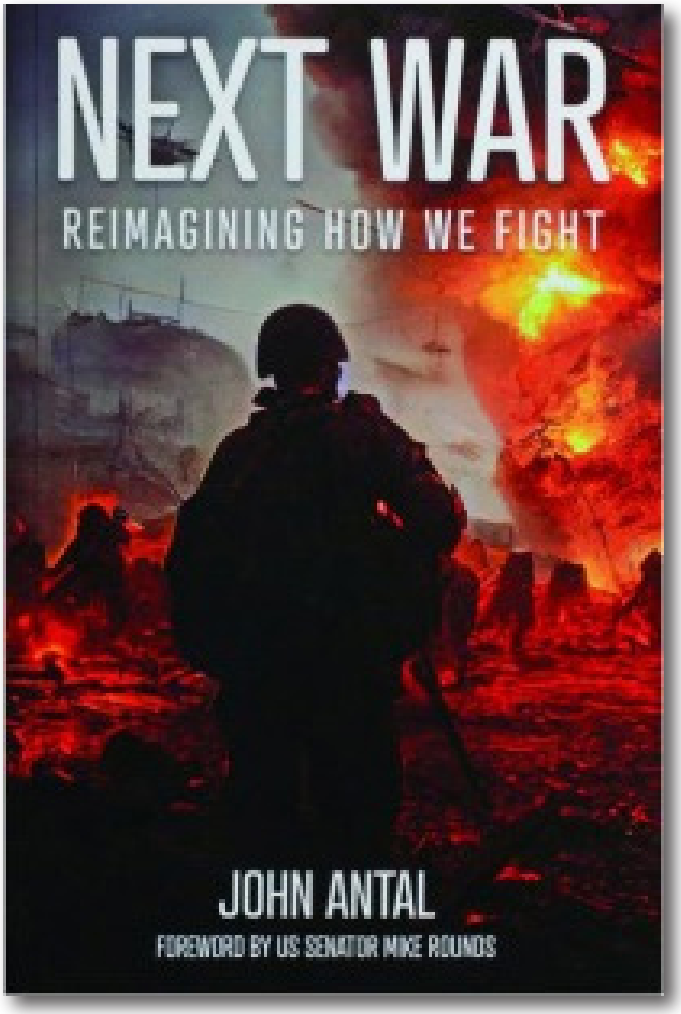
By John Antal, 28 September 2023
ISBN 978-1-63624-335-1

Reviewed by Colonel Barrett K. Parker (Retired)

Current and anticipated conflicts are nothing like previous ones. How wars are waged is being transformed before our very eyes, with massive implications for tomorrow's Army. *Next War: Reimagining How We Fight*, written by Colonel John F. Antal (Retired), examines the following top disruptors, which are changing our current methods of war:

- Transparent battlespace.
- First-strike advantage.
- Artificial intelligence and the tempo of war.
- Top attack.
- Full autonomy.
- Super swarm.
- Kill web.
- Visualization of the battlespace.
- Decision dominance.

These disruptors are examined through the lens of speculative but—based on current events and ongoing conflicts—plausible near-future conflicts. Comprehensive discussions follow individual vignettes.



Colonel Antal explores and explains technologies and capabilities that currently have a major impact, such as Starlink© satellites and hybrid robotics, in detail. He also discusses the unique limitations and opportunities associated with urban conflicts, which are seemingly becoming the norm.

Next War is essential reading for all protection professionals and planners. We must reimagine how we fight and how we protect today in order to prevail in future wars.

Colonel Parker (Retired) is the deputy chief of the U.S. Army Training and Doctrine Command Proponent Office–Protection, Fielded Force Integration Directorate, Maneuver Support Center of Excellence. 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, Home-wood, 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 Col-lege, Carlisle, Pennsylvania. He retired as a colonel from the U.S. Army Reserve.

2025 Protection Warfighting Function Professional Media List

This list is an important reference for the professional development of all protection leaders in the Army. Continuous self-development is one of the ways that we can maintain and improve our skills, challenge and refine our beliefs, and reach our full potential in an ever-changing world. These resources will improve our understanding of the protection warfighting function and its role in the diverse myriad of Army missions. These resources are intended to complement our professional military education and serve as a means of continuing education between professional military education courses. Suggestions and recommendations are welcome and can be sent to <FFIDProtectionMSCOE@army.mil>.

Protection

Breaking Doctrine Podcast, Episode 66: "Protection in Operations," Lieutenant Colonel Nathaniel A. Rice, Combined Arms Doctrine Directorate, U.S. Army Combined Arms Center, Fort Leavenworth, Kansas, 1 October 2024, <https://www.youtube.com/watch?v=6QVucyA8jEE&list=PL0TzP7-LyFol1J5SgIWdzfOFWR_iUa84Y&index=1>. This podcast, which features Major General Christopher G. Beck, Commanding General of the Maneuver Support Center of Excellence, Fort Leonard Wood, Missouri, and Colonel Richard D. Creed (Retired), Director, Combined Arms Doctrine Directorate, discusses the evolution of protection and the urgency of the protection warfighting function in large-scale combat operations. It emphasizes the importance of protection to every Soldier on today's battlefield.

Doctrine Digest, "Take 10: ADP 3-37 Protection," Lieutenant Colonel Nathaniel A. Rice, Combined Arms Doctrine Directorate, U.S. Army Combined Arms Center, Fort Leavenworth, Kansas, 1 October 2024, <https://youtu.be/Mh9AlM7BzFs?si=wCHyF98EZL7mXHhC>. As a result of the recent update to Army Doctrine Publication (ADP) 3-37, *Protection*, this episode of *Doctrine Digest* reintroduces the critical protection warfighting function. Lieutenant Colonel Rice describes protection and the associated tasks, explains how to determine risk and vulnerability, and presents best practices for the military decision-making process.

"Protection of Critical Infrastructure in Support of the Deployment of U.S. Forces During Multidomain Operations," Mark O'Brian, Homeland Defense & Security Information Analysis Center, 20 June 2024, <https://hdiac.org/articles/protection-of-critical-infrastructure-in-support-of-the-deployment-of-u-s-forces-during-multidomain-operations/>. This article contains a strategic-level discussion of critical infrastructure protection as our Nation transitions to war, which is valuable in establishing a common framework for critical discussions and future planning.

Homeland Defense and the Future Warfighting Challenges Arising From the People's Republic of China Activities in the Western Hemisphere, Homeland Defense & Security Information Analysis Center, 11 January 2024, <https://hdiac.org/webinars/homeland-defense-and-future-warfighting-challenges-arising-from-the-peoples-republic-of-china-activities-in-the-western-hemisphere/>. This podcast discusses the range of U.S. vulnerabilities stemming from the growing activities of the People's Republic of China; Chinese companies, military, and security agencies; and other agents in the Western Hemisphere in peacetime and in the context of a possible future military conflict with the People's Republic of China and will be of interest to strategic and operational protection planners.

AUSA 2023: Homeland Defense Seminar: The Future of Homeland Defense—Setting the Theater for Multi-Domain Operations, Army Multimedia and Visual Information Division, 10 October 2023, <https://www.dvidshub.net/video/899919/ausa-2023-homeland-defense-seminar-future-homeland-defense-setting-theater-multi-domain-operations>. Major General James E. Bonner chairs a high-level panel discussing power projection from the homeland, with an emphasis on protection. Protection-focused opening remarks are

delivered by General Glen D. VanHerck, commander of the U.S. Northern Command and the North American Aerospace Defense Command.

Next War: Reimagining How We Fight, John Antal, Casemate, 28 September 2023, ISBN 978-1-63624-335-1. This book examines the nine disruptors that are changing current methods of war through the lens of fictional but—based on current events and ongoing conflicts—plausible near-future conflicts. It is essential reading for protection professionals and planners.

Protection (Strategic Landpower IRP PT 3), Jennifer Hunt et al., U.S. Army War College, Carlisle, Pennsylvania, 23 June 2023, <https://warroom.armywarcollege.edu/podcasts/23slirp-3/>. This podcast explores the potential role of the National Guard in strengthening cybersecurity defenses as a result of the rising prevalence of cyber threats. It also addresses the complexities of air and missile defense, which necessitate advanced technologies, strategic planning, and international cooperation. It concludes by highlighting the role of solid defense mechanisms in deterring potential aggressors, thereby preserving peace.

United States Bomb Data Center (USBDC) Explosives Incident Report (EIR): 2022, U.S. Bomb Data Center, Huntsville, Alabama, 2023, <https://www.atf.gov/file/181946/download>. This short booklet reviews the 18,088 explosive-related incidents that occurred in the United States in 2023 and discusses bombing data for the last 5 years.

Nuclear Weapons Effects Simulation, Luis Palacios, Defense Threat Reduction Agency, 9 November 2022, <https://www.dvidshub.net/video/863746/nuclear-weapons-effect-simulation>. This is a Research and Development Nuclear Technologies Department, Defense Threat Reduction Agency-developed visualization video of the simulated effects of a 10-kiloton nuclear detonation against military units at various distances from ground zero. The video is intended only as a simulation to better aid warfighters in understanding what types of effects to expect after a low-yield nuclear detonation.

7 Seconds to Die: A Military Analysis of the Second Nagorno-Karabakh War, John Antal, Casemate, 2022, ISBN 978-1-63624-123-4. The Nagorno-Karabakh War was the first war in history to be won primarily by robotic systems, and its impact on the protection warfighting function cannot be overstated.

Critical Infrastructure Protection: Assessing the Risk in the Post Pandemic, Homeland Defense & Security Information Analysis Center, 15 September 2021, <https://hdiac.org/webinars/critical-infrastructure-protection-assessing-the-risk-in-the-post-pandemic/>. This webinar examines how the COVID-19 pandemic has posed new challenges for critical infrastructure protection, including the identification of decision makers and organizational responses to incidents. Many institutions are facing emerging threats and hazards as they return to regular operations, and this session reviews traditional and emerging risks and discusses the steps needed to safely manage the overall change in risk paradigm.

"The Maneuver Enhancement Brigade is the Support Area Command Post," *Military Review Online Exclusive,* Colonel Patrick E. Proctor et al., U.S. Army, October 2018, <https://www.armyupress.army.mil/Portals/7/Army-Press-Online-Journal/documents/Proctor-Barber.pdf>. The authors of this article underscore the significance of cybersecurity in modern defense architectures, asserting that as warfare increasingly shifts to the digital realm, robust cyberdefense measures are integral to ensuring national security. They advocate for continual innovation and upgrades of cybersecurity systems to counter evolving digital threats, effectively reinforcing defense mechanisms.

Extreme Ownership: How U.S. Navy SEALs Lead and Win, Jocko Willink and Leif Babin, St. Martin's Press, 20 October 2015, ISBN 978-1-25006-705-0. Detailing the mindset and principles that enable sea, air, and land (SEAL) units to accomplish the most difficult missions in combat, this book explains how to apply them to any team, family, or organization. Each chapter focuses on a specific topic, such as cover and movement, decentralized command, and leading up the chain, explaining what they are, why they are important, and how to implement them in any leadership environment.

The Black Swan: The Impact of the Highly Improbable (2d edition), Nassim Nicholas Taleb, Random House, 2010, ISBN 978-0-81297381-5. This update of the 2007 classic discusses risk, future planning, and the role of an almost infinite number of highly unlikely and unforeseen events—"a must read" for the protection planner.

The Character of Harms: Operational Challenges in Control, Malcolm K. Sparrow, Cambridge University Press, 2008, ISBN 978-0521872102. This book is dedicated to the science and art of creating coherent, overarching protection programs for federal, state, and local governments and organizations faced with dozens of unrelated and sometimes highly technical protection, risk reduction, response, and safety responsibilities and efforts.

History

The Bay of Pigs, Howard Jones, Oxford University Press, 2008, ISBN 9780199743810. This is a dramatic account of the disastrous attempt to overthrow the prime minister of Cuba, Fidel Castro, in April 1961. Drawing on recently declassified Central Intelligence Agency documents, Jones deftly examines the train of self-deceptions and missteps that led to the invasion of U.S.-trained exiles at the Bay of Pigs. Ignoring warnings from the ambassador to Cuba, the Dwight D. Eisenhower presidential administration put in motion an operation that proved nearly unstoppable, even after the inauguration of John F. Kennedy. Meanwhile, both the Central Intelligence Agency and the Pentagon had voiced confidence in the outcome of the invasion.

Delaware's Ghost Towers: The Coast Artillery's Forgotten Last Stand During the Darkest Days of World War II (2d edition), William C. Grayson, AuthorHouse, 2005, ISBN 978-0-7414-4906-1. This short book explores how, when faced with depressed economic conditions prior to World War II, our Army responded to a new and revolutionary threat and goes on to describe how we protected a key section of our coastline throughout the war.

Saratoga: Turning Point of America's Revolutionary War, Richard M. Ketchum, Holt and Company, 1997, ISBN 978-0-712665025. In the summer of 1777, under General John Burgoyne, the British launched an invasion of America from Canada. It was the campaign that was supposed to crush the rebellion, but instead resulted in a series of battles that changed America's history and the history of the world.

Fiction

Ghost Fleet: A Novel of the Next World War, P.W. Singer and August Cole, Houghton Mifflin Harcourt, 2015, ISBN 978-0-544-70505-0. This very popular protection-heavy fictional novel has aged extremely well and is worth a reread, given today's latest international climate and developments.

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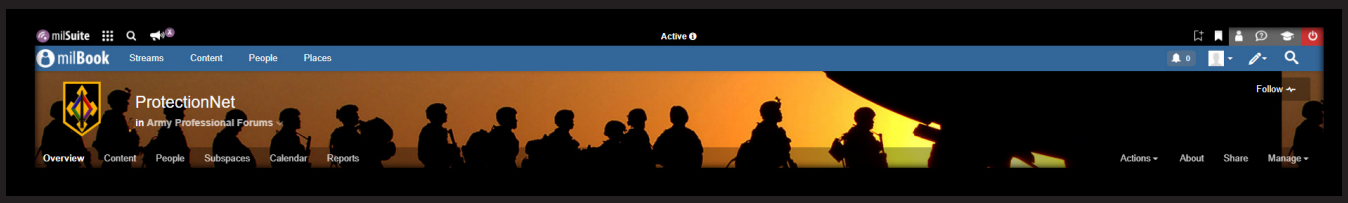

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