



Col. Mark Holler
U.S. Army Air Defense Artillery
School commandant

Fighting air defense in multi-domain operations

There are those who will argue that the concept of multi-domain operations (MDO) is nothing new; that it is essentially a return to “business as usual” (with the addition of space and cyberspace domains). After all, we have understood the significance of fighting peer adversaries across multiple domains (air, land, and sea) since World War II. In fact, the need to synchronize operations across multiple domains to support maneuver against numerically superior enemy forces was central to “Air-Land Battle,” which served as our operating concept for a quarter of a century.

To think of MDO in these terms fails to account for the complexities of the current global operating environment, and the challenges they present to our joint and combined forces. As discussed in TP 525-3-1, our adversaries employ “layered stand-off” across all five domains in both competition and conflict phases to negate our ability to project power and globally integrate the actions of the joint force. Arguably, the military problem set associated with this is exponentially more complex than those we have faced at any other time in our history.

Air and Missile Defense (AMD) is vital to our nation’s efforts to negate our adversaries’ layered stand-off capabilities. In fact, it is integral to the **central idea** behind MDO, which calls for the joint force to prevail in **competition**, and when necessary, **penetrate and dis-integrate** enemy anti-access and area denial (A2AD) systems and **exploit** the resultant freedom of maneuver to achieve strategic objectives, forcing a return to competition on favorable terms.

The good news is, as a branch we are well-versed in the role we play when it comes to the key actions that support the “competition” as-

pect of MDO. This is attributed to the frequent employment of ADA forces in “shape” and “prevent” operations over the past two decades. What we are less familiar with are the key actions we must support in the wake of failed deterrence. Essentially the joint force’s efforts to penetrate and dis-integrate the enemy’s A2AD: **Exploit** the resultant freedom of maneuver to achieve strategic objectives and then return to competition. A look at AMD’s role across these key actions (italicized below) and the large scale combat operations (LSCO) associated with them helps to inform us of the skills we need to hone and the capabilities we need to develop across the ADA force.

Competition, the condition when actors in the international system have incompatible interest but neither seeks to escalate to open conflict...yet! Since Desert Storm of 1990, the U.S. Army’s Patriot Force has played a key role in this ongoing competition for influence across the globe. Patriot is a national strategic asset vital to stability in volatile regions of the world. Our deployment of Patriot to foreign soil sends a strong message of commitment and resolve to protect U.S., allied and regional partners national interest.

Penetrate A2AD

Our formations will play a significant role during joint and combined operations launched to penetrate the enemy’s A2AD systems. Perhaps our most significant action during this stage of LSCO will be to the protection of aerial port of debarkation, sea port of debarkation, Strategic locations and C2 nodes. Forward presence, early entry, and allied/partner AMD assets must defeat the long-range aerial threats that will be directed against these assets. Our theater AMD assets; THAAD, Patriot and



indirect Fires protection capability (IFPC) will also contribute to joint and combined efforts to *degrade the long-range intelligence, surveillance and reconnaissance assets* that are so vital to our adversary's A2AD system. As joint forces maneuver across strategic and operational distances to contest the enemy's maneuvering forces; Army ADA, operating across all echelons and integrated through common, networked C2, must be able to converge capabilities to *neutralize the enemy's long-range systems*. Our theater SHORAD assets must also enable freedom of cross-domain maneuver to *deny the enemy's objectives*.

Dis-integrate A2AD systems

Upon successful penetration and early entry of capabilities, joint forces will seek to dis-inte-

grate our adversary's A2AD systems to allow for expanded theater operations and cross-domain maneuver. AMD sensors (Patriot, lower tier air and missile defense sensor, Sentinel, and forward-based mode (FBM) radars) assist in efforts to *refine intelligence preparation of the adversary's A2/AD systems*, contributing to the air and space portion of the wide area surveillance effort and ensuring common understanding of the air domain. Additionally, these AMD sensors, along with our networked C2, help enable *defeat enemy long-range Fires systems* by "seeing" long-range Fires systems during launch and providing point of origin (POO) data to Army and joint strike capabilities. As offensive Fires and other strike assets are used to destroy long-range enemy Fires, theater Army AMD assets (Patriot, THAAD,

Sgt. Garcia-Gordon, team chief with the 5th Battalion, 4th Air Defense Artillery, watches a Stinger missile launch during a live-fire exercise as part of Saber Guardian 19, in Capul Midia, Romania, June 20, 2019. Saber Guardian is an exercise co-led by the Romanian land forces and U.S. Army Europe June 3 - 24 at various locations in Bulgaria, Hungary and Romania. (2nd Lt. Ashley Goodwin/Mich. Army National Guard)



An Avenger Weapon System fires at a live-fire short-range missile range near Shabla, Bulgaria, June 10, 2019 during exercise Shabla 19. The system was operated by Soldiers with 5th Battalion, 4th Air Defense Artillery Regiment. SHABLA 19 is a bilateral, Joint Air Defense Live Fire exercise hosted by Bulgarian Armed Forces in Shabla, Bulgaria, from June 10-14, 2019. SHABLA 19 is a designed to improve readiness and interoperability between the Bulgarian Air Force, Navy and Land Forces, and the 10th Army Air and Missile Defense Command, U.S. Army Europe. (Capt. Aaron Smith/ U.S. Army)

FBM), integrated with joint and multi-national AMD forces, must defend against launched aerial threats. Concurrently, AMD forces (IFPC) must be prepared to assist in efforts to *neutralize enemy mid-range Fires* that target C2 and critical support nodes, while our M-SHORAD formations protect maneuver forces as they seek to *defeat the enemy system through deception and maneuver*.

Exploit freedom of maneuver

As the enemy's A2AD system are dis-integrated and defeated, the Army and joint force will seek to exploit opportunities in the close and deep maneuver areas to dislocate and defeat its defenses. In order to allow friendly forces to converge capabilities at these critical points in time and space, AMD forces (IFPC) must be prepared to

counter enemy mid-range Fires that target C2 and critical support nodes. As with the long-range systems discussed earlier, the POO data AMD sensors and C2 provide Army, and joint strike capabilities are crucial to the *defeat of the enemy's mid-range Fires*. Similarly, as the division engages in the close fight, the ability to neutralize the enemy's short-range systems becomes paramount. It will need to converge capabilities to achieve this objective, integrating its M-SHORAD and IFPC assets with the joint air campaign. As our ground forces *maneuver to isolate and defeat the enemy's land forces*, these M-SHORAD and IFPC elements support the effort by providing early warning, supporting the de-confliction of the air domain and defeating aerial threats



which could disrupt/interdict the division's scheme of maneuver.

Re-compete to consolidate and expand gains

The defeat of our adversary's forces is not the endstate. Joint forces must work to *produce sustainable outcomes* as we return to competition. As the field army consolidates gains, AMD forces will re-position to defend critical assets and forces. Additionally, Army AMD forces, in concert with joint and coalitions AMD assets, re-calibrate their force posture to *help set conditions for long-term deterrence* of any attempts at exploitation of the air domain by the defeated great power or their proxies.

So, what are the "take-aways" from this discussion? First, I would submit that we will need an ADA force that can:

- Protect maneuvering forces, as well as corps and division level critical fixed and semi-fixed assets.
- Defend critical assets in the the-

ater and operational support areas against complex integrated attacks.

- Converge AMD capabilities to create windows of superiority in the air domain that can be exploited by the Army's warfighting functions, joint and coalition forces and national assets.

Second, I believe that looking at our roles in MDO helps to reveal the attributes of the force we must develop. The LSCO described above will require us to employ our AMD capabilities in a manner that places an unprecedented premium on survivability, agility and the ability to respond to overmatch.

At the heart of this force will be ADA Soldiers and leaders, who understand and have prepared for this new environment, the capabilities they will employ and the missions they must execute. Victory hinges on this understanding and preparation!

First to Fire!

Soldiers with the 5th Battalion, 7th Air Defense Artillery Regiment stand ready to conduct a quick-response missile transport and reload training in Koper, Slovenia, June 3, 2019, as part of the joint exercise Astral Knight 19. AK19 is a multinational combined exercise designed to test integrated air and missile defense capabilities. The exercise involves a combination of flight operations and computer-assisted scenarios. (Sgt. Erica Earl, U.S. Army)