MILITARY INTELLIGENCE PROFESSIONAL BULLETIN

JANUARY–JUNE

2026 COLLECTION

Intelligence in Three Dimensions: The Intelligence Staff Officer in an Air Defense Brigade

by Major Aaron Lawless

Soldiers from the 31st Air Defense Artillery Brigade prepare for their culminating field training exercise at Fort Sill, OK. (U.S. Army photo)

Lessons for a Three-Dimensional Battlefield

For many of us who entered service in the mid-2010s, counterinsurgency ruled the day. Our first tactical experience as intelligence professionals came against the Taliban in Afghanistan, al-Qaeda in Iraq, or other similar adversaries across the globe. We faced decentralized cells of insurgent fighters equipped with rifles, rockets, mortars, and improvised explosive devices; our higher headquarters defined our area of operations; and our planning took place primarily in two dimensions.

Now, nearly 15 years later, the fight has changed. Army doctrine has changed the primary focus from contingency operations to large-scale combat operations against another major military force. The battlefield is now an operating environment, and it is a three-dimensional fight.

Large-scale combat operations mean more than tanks, artillery, and long-range precision fires targeting enemies in their division or corps rear area. It also means potentially being on the receiving end of enemy long-range precision fires and airstrikes. It means intelligence professionals must adapt to a three-dimensional operational environment stretching 2,000 kilometers or more.

This article seeks to provide insights and lessons learned from recent operational experiences to help prepare military intelligence (MI) Soldiers for service with air defense units. While this article is written with air defense artillery in mind and draws on recent experience with the 31st Air Defense Artillery Brigade, analysis of missiles and other enemy long-range fires may fall to any analyst at any deploying unit. In these paragraphs, I hope not only to offer some developmental pointers to MI Soldiers heading to air defense units but also to provide some general lessons learned for any analyst supporting multidomain operations.

Understanding Contemporary Threats

Before we begin, we need to understand the scope and dimensions of the threat by looking at recent events. In April 2024, Iran launched hundreds of medium-range ballistic missiles, cruise missiles, and one-way attack unmanned aerial vehicles targeting Israel. Iran repeated the attack later that year, and in June 2025, it launched an extended missile campaign against Israel lasting several days.

First-person view drone warfare and Russian missile barrages in Ukraine further demonstrate the three-dimensional nature of the modern operating environment. The threat is no longer a doctrine problem or a training exercise; it is a fact of life for land component units across the globe. A three-dimensional battlefield requires a mental adjustment—intelligence professionals must embrace new skillsets, novel systems, and gain a broad understanding of the new threats to be successful.

Developing Technical Expertise in Missile Defense

Intelligence support to missile defense demands increased technical understanding. MI leaders need to learn ballistics, materials, the operational differences between solid- and liquid-fueled weapons, indicators of missile launch preparation, and more. In short, they must become junior rocket scientists.

The Ballistic Missile Threat Intelligence course, offered by the Space and Missile Defense Command at Redstone Arsenal, Alabama, is a great initial training opportunity to boost technical knowledge. For those unable to attend the course, air defense artillery fire control officers are a valuable source of information and mentorship. Seek out their expertise to glean an understanding of friendly and enemy systems, tactics, and operations.

Turn technical knowledge into practical application. Understanding unit operations will enhance the effectiveness of any intelligence professional; this is doubly true for air defense intelligence professionals, who should take every opportunity to become more familiar with the equipment, talk to systems operators, absorb "war stories," and learn the capabilities of friendly air defense systems. Just as in armor, aviation, or cyber formations, familiarizing yourself with friendly capabilities will help you gain insight into potential enemy courses of action. Learning how friendly forces operate, understanding their capabilities, and recognizing their limitations makes your red team analysis of the enemy much more potent and effective. For additional guidance on conducting intelligence preparation of the operational environment for air defense, consult ATP 3-01.16, *Air and Missile Defense Intelligence Preparation of the Battlefield*.[1]

Training Insights and Best Practices

Prior to a short-notice deployment, full participation in training events and staff exercises made the 31st Air Defense Artillery Brigade S-2 section an effective force multiplier and built trust between MI Soldiers, the commander, and the rest of the brigade staff. Demonstrating the capabilities and insights that the S-2 provides helped the staff understand how to shape requests for information and get the most out of the S-2 support. The training also created an environment for building professional interpersonal relationships and taught the S-2 how to provide the commander and S-3 with the information and assessments that best meet their needs. MI Soldiers assigned to air defense units should take every opportunity to attend training events, integrate with battle desk crews, and be present, even when there may not be a direct intelligence involvement role.

Just as large-scale combat and multidomain operations are joint endeavors, missile defense is a joint fight. For example, the U.S. Air Force provides defensive counter-air capabilities through its Red Sea fighter patrols and relies on media reporting from counter-Houthi operations to confirm successful shoot-downs of enemy unmanned aerial vehicles. The U.S. Navy operates the Aegis Combat System,[2] a network of radars and interceptors carried aboard ships. Our allies and partner nations have similar systems and use their own terminology and tactics. To successfully integrate, intelligence professionals must learn a new language of joint shorthand and brevity terms unique to the air defense community. Likewise, the ability to communicate with the operators of our sister services' defensive capabilities in their own language pays dividends and shortens response times. Just as the Army maintains doctrinal terminology for unified land operations, the Navy and Air Force do the same for their domains. If we play in other services' sandboxes, being "bilingual" is an asset.

The USS Lake Erie (CG 70), an Aegis guided missile cruiser, launches a Standard Missile-3 (SM-3) at a non-functioning National Reconnaissance Office satellite as it travels through space at more than 17,000 mph over the Pacific Ocean on February 20, 2008. The SM-3 is a component of the U.S. Navy's Aegis Ballistic Missile Defense System, unique for its ability to operate in the vacuum of space. (DoD photo by U.S. Navy)

Soldiers from Battery A, 4th Battalion, 3rd Air Defense Artillery Regiment, 31st Air Defense Artillery Brigade, Fort Sill, OK, fire a Patriot Missile during training at McGregor Range Complex, NM, as part of an emergency deployment exercise. (U.S. Army photo)

That said, the units most often threatened by missiles and enemy unmanned aerial vehicles are on the ground. While conducting intelligence preparation of the operational environment, the intelligence section cannot afford to hyperfixate on the air threat. It is not a question of ground or air; both are equally important. While the primary threat may come from the air, ground threats are still a factor. A ground attack from small arms fire, for example, can still put an air defense radar out of commission and pose a threat to friendly personnel. While contributing to the military decision-making process, account for threats from the air, certainly, but do not neglect the ground. Repair parts, ammunition, fuel, food, and water—all these things move by ground from the air or seaport of debarkation. Road conditions, restricted terrain, bridges, and water features still matter and should be considered in assessments. Be prepared to determine the line-of-sight for radar coverage and to evaluate how terrain may mask air avenues of approach.

Your other heavy-hitter analysis product will be a trend and pattern analysis. Upper- and lower-tier air defense assets take time to reorient and adjust to new threats. This is not a rapid or dynamic process, so your analysis of threat courses of action needs to be as predictive as possible. Air defense equipment requires periodic maintenance during which it may have to be shut down completely, rendering it unavailable for air defense. Avenues of approach, time of day for attacks, and the enemy's preferred weapons systems are all vital aspects when designing an air defense plan and when scheduling maintenance. The S-2 must be directly connected to the air defense planners, providing a steady flow of updated predictive analysis for the planned defense to be effective.

If you find yourself in an air defense unit, one of the first things you may notice is that battalion and brigade intelligence sections are probably relatively small, and your modified table of organization and equipment does not include organic collection assets. Expect the unit to operate widely dispersed, with battery commanders spread across an entire combatant command in some cases. Plan to support multiple air defense sites with assessments of air avenues of approach, line of sight, ground threats, and road conditions to move large pieces of delicate equipment. Establish a format beforehand so the assessments can be somewhat plug-and-play, while also leaving room to tailor support to unique needs.

Another option to boost a unit's intelligence capacity is to look at the company intelligence support team concept. Formalized in 2007 from concepts developed during Operation Enduring Freedom and Operation Iraqi Freedom, company intelligence support teams are essentially a way to task-organize intelligence Soldiers with varying specialties within a unit to provide direct support to companies operating independently. Even when there are not enough MI Soldiers available to provide direct support to each air defense battery, the company intelligence support team concept can be adapted to provide familiarization training for your air defenders. This can enhance their understanding of the intelligence disciplines, information collection and its operations, the foundations of your assessments, and your methods for gauging probability in threat courses of action assessment. During operations other than large-scale combat, air defense batteries tend to deploy and operate in a dispersed manner from the battalion or brigade headquarters, so there is some benefit to having Soldiers in the battery headquarters who are familiar with intelligence terms and material in the absence of a dedicated S-2 section.

Without organic assets, understanding how to network and leverage non-organic enablers, up to the national level, for information collection and targeting is an essential task, although it is often an implicit one. Get creative. For example, think of your unit's air defense radars as organic collection assets and handle their reporting accordingly. Use radar data to assess patterns of activity, preferred air avenues of approach, or enemy operating areas. With experience, it is possible to assess enemy actions in real time, helping air defense commanders make defense decisions in a very short window of opportunity.

When all this preparation, training, and development come together, it might look something like the following: Based on threat reporting, patterns of activity, and experience, the S-2 maintains assessments of the threat's preferred times, places, and systems for use against friendly forces. These assessments inform the defense design for air defense assets, which is postured against the most likely enemy course of action. When the enemy launches a missile, the intelligence section uses available data to provide updates on the threat, calling out the point of origin and threat type to describe the threat's anticipated capabilities. The radar data provides real-time fidelity on a possible point of impact and threatened friendly assets. The commander now has the best information to decide whether to commit or preserve air defense assets.

Preparing for Future Challenges

Intelligence support to air defense requires robust self-directed study and training, close integration with the operations staff and the rest of the unit, and an ability to adapt to the three-dimensional nature of the current operating environment. Intelligence plays a significant role in support to air defense, and equipping the right MI Soldier with the right training and preparation will pay substantial dividends. These tools and a willingness to adapt can help MI Soldiers succeed on an air defense staff, supporting a ready, vigilant defensive fires capability to protect critical assets.

Endnotes

1. Department of the Army, Army Techniques Publication 3-01.16, *Air and Missile Defense Intelligence Preparation of the Battlefield (AMD IPB)* (Government Publishing Office, 2016).

2. "Aegis Combat System," Products, Lockheed Martin, last updated November 18, 2025, https://www.lockheedmartin.com/en-us/products/aegis-combat-system.html.

MAJ Aaron Lawless is the 31st Air Defense Artillery Brigade S-2 at Fort Sill, OK. His prior assignments include deputy geospatial intelligence mission manager at the National Geospatial-Intelligence Agency, Joint Surveillance Target Attack Radar System deputy mission crew commander, and detachment commander. He holds a bachelor of arts in history from Tarleton State University and a master of arts in history from Sam Houston State University.