The best defense is a good offense

Opening windows of superiority with Short-Range Air Defense in multi-domain operations

By Maj. Will Viegas

“After all, the great defense against aerial menace is to attack the enemy’s aircraft as near as possible to their point of departure.”

–Winston Churchill

The issue

The U.S. Army War College challenged the Army research community to explain how operational level commanders might open windows of superiority and exploit the initiative in multi-domain operations (MDO). Ground-based Short-Range Air Defense (SHORAD) is inherently cross-domain and can be employed to open windows of superiority in both the air and ground, but fundamental changes to air defense (AD) doctrine are required to ensure that AD is prepared to fully support MDO.

A multi-domain concept of employment

The concept of employment (COE) sketch in Figure 1 describes a way in which SHORAD may be employed to open a window of superiority in the air and on land. In the COE, SHORAD possesses sufficient mobility, survivability and lethality maneuvers into the close area ahead of the decisive operation (DO). This SHORAD battalion is given the task and purpose to ‘seize Objective Dog and Control SHORAD engagement zone (SHORADEZ) from H+3 to H+6, to open a window of superiority along axis of advance BLUE and enable the DO.’ The reader may assess initially that this COE can be described and directed with current AD doctrine since the operational terms and graphics can all be found within ADP 1-02, but in fact this COE is a radical departure for AD that is more akin to offensive counter air (OCA). The following sections will discuss why this COE cannot be adequately described or directed with current AD doctrine, and identify fundamental changes to AD doctrine necessary to facilitate this COE.

Task, purpose and objective

While there is no prescribed list of tactical tasks that AD units cannot do, there is cultural acceptance that AD units conduct a narrow scope of tactical tasks in support of operations. Typical tasks to an AD unit might be “conduct area defense” or “deny threat aircraft.” The author has provided an unusual terrain-oriented task for an AD unit; however, it is key to note that attack operations are conducted by “special operations forces, fixed and rotary-wing aircraft and field artillery units.” Arguably, active AD may be used to describe the COE, but this is inadequate since active AD creates an image of providing defense to defended assets in the support areas. If doctrine writers do not assess the term attack operations should be broadened to include SHORAD, perhaps a new term could describe this COE, or perhaps OCA would suffice. Regardless, operational elements frame the way Air Defenders view their role on the battlefield, and in this case, they are inadequate to describe and direct this COE, which has an offensive flavor that is beyond the current terms.

Operational elements

AD doctrine specifies four operational elements: active air defense, passive air defense, attack operations and mission command. The COE provided seems to most aptly nest into attack operations, however, it is key to note that attack operations are conducted by “special operations forces, fixed and rotary-wing aircraft and field artillery units.” Arguably, active AD may be used to describe the COE, but this is inadequate since active AD creates an image of providing defense to defended assets in the support areas.
the terrain-oriented task, “control,” to an airspace control measure, in this case a SHORADEZ.

In the case of tactical task, purpose and objective, AD doctrine may not require changes to describe and direct the COE, but the way Air Defenders culturally view the scope of their operations must change, and these cultural changes are largely driven by changes in doctrine. The AD community would benefit from a series of vignettes that describe how AD supports MDO. These vignettes need to push the envelope on tasks, purposes and objectives assigned to AD units.

**Modes of control and autonomous operations**

A key piece of AD doctrine is the modes of control. There are currently two modes of control, centralized and decentralized, both of which require continuous and reliable integration. At a minimum, integration requires timely communication from the engagement control authority to the firing unit. These modes of control are sufficient in support of unified land operations, but the future threat outlined in TRADOC Pamphlet 525-3-1 will contest all domains and the electromagnetic spectrum, which will dis-integrate friendly SHORAD. Additionally, the COE illustrates time-distance that would likely preclude the ability to integrate SHORAD in this operation.

Neither mode of control will support this operation. Arguably, current doctrine has an answer to this in the form of autonomous operations, which “a unit assumes... after it has lost all communications with the higher and adjacent echelons.” Autonomous operations are inadequate to describe this COE since autonomous operations are not deliberately planned, but are a consequence of environment or threat. Doctrine developers could create a third mode of control to support this concept of employment. This new mode of control might simply be described as autonomous operations.

**Way ahead**

The flexibility and adaptability of doctrine is powerful, but at the same time, the flexibility of doctrine can fool writers into believing that it is sufficient to meet the challenges of the future. In the case of MDO, AD doctrine is inadequate. It would be a terrible error to assume that AD is inherently multi-domain since it crosses land and air. AD may be cross-domain, but changes need to occur across all elements of DOT/MLPF-P to create AD units capable of supporting MDO. Fundamental changes to AD doctrine must be made, no punches can be pulled. Concepts developers must question even the most time-tested principles.

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**Figure 1. Concept of employment sketch. (Courtesy illustration)**