

THE ASSESSING ADAM/BAE CELL

By MAJ Gary Gonzalez

Arguably the most important aspect of commander's activities is assessing. An assessment forms bridges in and around the subsequent planning, preparing, and executing steps. Conceptually, and more broadly speaking, these activities, with assessment as the cornerstone, do not only apply to the commander, rather they represent a comprehensive learning process for anyone. More than a step, the assessment determines where one is in relation to where one wants to end. This is how improvements begin, adaptations spawn, and how self-discoveries occur. Indeed, they are the very hallmarks of learning organizations. For those who generate such weighty documents as unit tables of organization and equipment, assessments are no less important. The organizational structures that these pundits develop (i.e. plan and prepare) and that are subsequently implemented (i.e. executed) have far reaching effects on the lives of personnel in the Army every day. One such organizational structure is the air defense airspace management / brigade aviation element (ADAM/BAE) cell.

For many years now, the ADAM/BAE cell has existed within Army brigades to further develop the vertical dimension of operational environments. Just as the name suggests, this doctrinal special staff section is charged with a multitude of responsibilities regarding a ground

unit's usage of airspace within its area of operations. The section pulls together personnel from the air defense and aviation communities to fulfill these responsibilities primarily in a tactical environment.

In 2006, Training Circular 1-400, *Brigade Aviation Element Handbook* discussed the BAE as a formalized structure within brigade combat teams to facilitate the integration of Army aviation into the ground commander's scheme of maneuver:

*The BAE focuses on providing employment advice and initial planning for aviation missions, unmanned aircraft systems (UAS), airspace planning and coordination, and synchronization with the air liaison officer (ALO) and the effects coordinator (ECOORD). The BAE also coordinates directly with the aviation brigade or the supporting aviation task force (TF) for detailed mission planning.*¹

Years later, in June 2010, FM 3-55.1, *Battlefield Surveillance Brigade (BFSB)* was the only specific brigade echelon publication to speak of the ADAM/BAE as an integrated cell emphasized more of the aviation integration piece over and above airspace management and air missile defense. It described the cell's responsibilities in this way:

The ADAM/BAE combines the responsibility for coordinating the brigade's air and missile defense (AMD) operations and the

*responsibility for synchronizing Army aviation operations within the BFSB [battlefield surveillance brigade] concept of operations into a single element. The BAE is a planning and coordination element whose major function is to incorporate aviation into the ground commander's intent. The BAE focuses on providing employment advice and initial planning for aviation missions, UAS support, airspace planning and coordination, and synchronization with the air liaison officer (ALO) if provided. The BAE does not take the place of aviation task force involvement in planning. It assists the BFSB in aviation planning and provides the aviation brigade or the supporting aviation task force leadership with BFSB mission information. The ADAM/BAE is also the primary planning element for airspace C2 [command and control] and AMD. The brigade aviation officer is the chief of the ADAM/BAE, which is located with the BFSB main CP [command post] unless the mission dictates otherwise.*²

Three years later in 2013, yet another publication, ATP 3-01.50, *Air Defense and Air Management (ADAM) Cell Operation*, focuses the section's responsibilities more on airspace management and equipment, virtually treating the terms ADAM and ADAM/BAE as synonyms throughout the entirety of the publication:

The ADAM/BAE cell is an organic element of the corps, divisions, BCTs



[brigade combat team], and select support brigades. The ADAM/BAE cell plan, coordinate, and establish connectivity for unified actions with communications systems, command and control and intelligence/controller networks, as well as airspace users; provides situational awareness and early warning; conducts continuous planning and execution of airspace management requirements for the supported unit/echelon; and conducts AMD and Aviation planning and coordination to determine AMD and Aviation requirements across the spectrum of conflict.³



Between these three publications, the ADAM/BAE cell emphasis seems to fluctuate, not only in responsibilities but also assigned personnel and equipment. Each publication has discrete differences and nuances in manning and capabilities. With such doctrinal turbulence, ground maneuver brigade table of organization and equipment (TO&E) variance has inevitably ensued. Ground maneuver brigades employ their ADAM/BAE cells in

different manners in garrison and in the operational environments. The tactical setting clearly dictates the roles and responsibilities of airspace management, air defense, and aviation integration. But what of the garrison? How is the cell employed in the garrison setting?

The plans and preparations of Army structure and doctrinal authors pertaining to the ADAM/BAE have been executed for almost a decade. What assessments have been completed to determine the effectiveness of the ADAM/BAE cell embedded organizational structure within a ground maneuver brigade? What feedback has been taken into account? Should the ADAM/BAE cell continue to be assigned to the ground maneuver brigade? From this article's perspective and the author's experience, the ADAM/BAE cell should not be assigned to the ground brigade largely because of assigned personnel inexperience, habitual under resourcing and training, and misunderstood capabilities. Another contributing characteristic involves the stunted career progression and individual performance evaluations of the ADAM/BAE cell officers and enlisted Soldiers. This article's intent is to both generate professional discussion and advocate for attaching the ADAM/BAE cell to ground maneuver units vice assigning them.

The Experience Gap

The assignment of the brigade aviation officer (BAO) and air defense officer (ADO) in the ADAM/BAE is seriously flawed. The tasks of both of these positions require a definitive amount of resident expertise. This experience comes primarily through having held key developmental positions. The BAO should be a (post S-3) seasoned senior major. The ADO should be a seasoned senior captain, post command or air defense artillery fire control officer. Instead, the trend has been that these positions are used as stop gap measure for managing officers resulting in a significant lack of experience within the ADAM/BAE cell. Instead of Human Resources Command assigning appropriately experienced personnel to these positions, installation personnel managers are filling the positions. Under these circumstances, branch career

managers are unable to close the loop on how the careers of officers in their charge are properly developed.

The majority of ADAM/BAE personnel are not appropriately trained. They are not provided the opportunity to attend special schooling such as the Joint Airspace Command and Control Course or the Joint Personnel Recovery Course, both of which are necessary to perform their function within the ADAM/BAE cell. Incredibly, few are even provided the opportunity to attend the ADAM/BAE Course. The Infantry, Armor, Stryker, Aviation, and Intelligence communities focus their training in their respective areas while ADAM/BAE schooling invariably falls very low on training priority. Once assigned to their unit, ADAM/BAE personnel are often employed in their specialized skill set only during a training exercise while deployed. In garrison, ADAM/BAE personnel routinely become the "go to" personnel for extra duties or special projects with little consideration for their requirement to train their basic skill sets, let alone ADAM/BAE specific tasks. Yet, during training exercises or in a deployed environment, ADAM/BAE personnel are expected to coordinate airspace and aviation support to the brigade without fail because only then is their criticality realized.

Personnel and equipment shortages further deteriorate the performance of the ADAM/BAE cell. The ADAM/BAE cell is a special staff section whose capability, subject matter, and functionality are largely misunderstood throughout ground maneuver brigades. As a result, little consideration is given for physical space within the brigade command post as the ADAM/BAE cell requirements are an afterthought. The same goes for basic equipment with which to work. Essentials such as telephones, computers, tables, chairs, and vehicles come up short in the training and deployed environments. Inexperienced ADAM/BAE cell personnel are none-the-wiser until after the fact. The requirement to man a command post during day and night shifts decreases the cell's effectiveness because essential personnel positions have not been filled. Lack of experienced personnel within

the ADAM/BAE cell exacerbates the situation. Limited space, equipment, and personnel in aggregate result in minimal or suboptimal performance in the ADAM/BAE cell. This ultimately impacts ADAM/BAE personnel careers.

Career Conundrum

Brigade commanders have the difficult task of ranking their officers when preparing their efficiency reports. In a time of fiscal reductions, personnel drawdowns, and tailoring the Army to meet the requirements of a revised fiscal policy, this task only becomes more challenging. It is critical that senior leaders wisely select the future leaders from across the officer and enlisted ranks. For instance, an Infantry brigade commander must rank his Infantry officers within the constraints of his senior rater profile. Within that Infantry brigade combat team, the BAO or ADO are generally perceived as not significant contributors to the commander's top priorities, placing them at a disadvantage for top block evaluations. Additionally, the supplemental duties assigned to ADAM/BAE personnel are secondary and tertiary supporting efforts to the brigade's main efforts. They are not directly affecting brigade mission essential task list performance and therefore personnel assigned these duties tend toward center block or lower evaluations.

Another consideration is that the traditional positions of command, executive officers and operations officers, are key positions for career advancement. The officers in these positions have military occupational specialty (MOS) specific tasks to gain valuable experience and visibility for career advancement. The BAO and ADO positions, by contrast, are typically given non-MOS related tasks and are not in position to compete with the primary MOS of the brigade (Armor, Infantry, etc.) to which they are assigned. This likely places them in a severely disadvantaged position for career advancement with their own MOS peers. The BAO and ADO positions within the ground maneuver brigade are simply not as competitive and therefore these positions are not career competitive for either Aviation or Air Defense Artillery (ADA) officers. While the controversy

of whether "hard" and "soft" key developmental positions actually exists continues, BAOs and ADOs fall behind in timing and placement with their peers across the Army. Both officers and non-commissioned officers average ratings seem all but inevitable given brigade commander rating circumstances. For the officer, a center block in the field grade years severely detracts from command competitiveness or selection to the next developmental position. Promotion boards conduct assessments based on overall file strength. File strength emerges from multiple evaluations with their respective rating profile and associated verbiage. The top block recipients tend to be the command positions and superlative coordinating staff positions (i.e., executive officer and S-3).

For the enlisted Soldier, the job in an ADAM/BAE cell in garrison also does not contribute to career development. For instance, a Flight Operations Specialist (15P) assigned to a non-aviation TO&E organization will not equally perform duties associated with their MOS as a 15P in an aviation organization's flight operations billet. A Soldier assigned to an ADAM/BAE cell will emerge at a disadvantage with his peers that began their career in a flight operations assignment. Consider the air traffic controllers assigned to the cell. Unless this controller is permitted to maintain or gain requisite certificates, his career is, at least stifled. For Air Defense series enlisted Soldiers, the ADAM/BAE assignment presents similar challenges.

What do you do again?

Because ADAM/BAE cells rarely perform duties related to their reason for existence in garrison where much of their time is spent, neither ADAM/BAE personnel nor brigade leadership have a full understanding of the ADAM/BAE roles, responsibilities, and capabilities. As discussed previously, the cell has a wide scope of critical tasks to perform during tactical operations. As it happens, this is the only time their skills are at the forefront.

Aviation officers within the cell are responsible for coordinating all flight activity within the brigade's area of operations and continuously updating the vertical

and horizontal dimensions of the unit's airspace management plan. Overall lack of emphasis on training their warfighting skills/tasks require that personnel within the ADAM/BAE cell assigned to operate the Tactical Airspace Integration System (TAIS) are compelled to quickly refresh their skills at inputting a restricted operations zone, an air coordination area, or tie into the Air Force Global Area Reference System immediately prior to or even during deployment where the skill suddenly becomes essential. Again, because of the lack of emphasis on the



ADAM/BAE's training investment, it is routine to find that the only one within the ADAM/BAE cell that has any idea how to receive information on the TAIS or the air and missile defense workstation from other Army Mission Command Systems (AMCS) components is the Air Defense technician. Updates pushed from higher echelons, for the multiple systems that comprise the AMCS, compound the AMCS interoperability challenges. These updates frequently degrade the systems ability to receive data to deconflict and complete the airspace picture for the brigade commander.



Deconflicting and clearing airspace is, in some respects, the most important function of the ADAM/BAE. Without formal training, the ADAM/BAE cell's current operations section is often forced to develop and refine methods of clearing and deconflicting airspace in the midst of time-sensitive counter-fire missions and system failures. Simultaneously, the ADAM/BAE current operations personnel are expected to manage as much airspace that will facilitate the effects of Air Force, artillery, Army Aviation, and mortar fires while ensuring no degradation of aerial intelligence collection platforms within the area of operation. Often, ground units will argue for control of a vast airspace that they think will somehow facilitate the effects of organic artillery without consideration for implications regarding things like proportional airspace management complexity for Army Aviation rotary wing and Air Force close air support, unmanned aircraft systems, or air defense operations in support of ground forces.

The gap in misunderstanding or lack of understanding of the ADAM/BAE roles, responsibilities, limitations, and capabilities leaves the section vulnerable to inefficient employment. More importantly, it leaves the brigade at risk because of inefficient air defense and airspace management over its battlespace. This ignorance also increases culpability for the section.

Assessment

Still struggling with an identity problem within Army doctrine, the ADAM/BAE cell continues to face multiple challenges. At the forefront of these challenges, the experience gaps of personnel assigned to the ADAM/BAE cell degrade the overall performance potential of this critical section. Low prioritization on the ADAM/BAE by the ground brigades has rendered these sections under resourced, untrained, misunderstood, and misused. The personnel are placed at a disadvantage career wise as primary MOS skills and tasks atrophy and as peers that occupy weightier positions in Aviation and ADA positions progress ahead. Another career disadvantage is that leader evaluations tend to rank ADAM/BAE cell personnel behind brigade's MOS specific command and primary coordination staff. Altogether, this situation is undesirable and unfeasible. For these reasons ADAM/BAE sections should not be assigned to the ground maneuver brigade.

Another Side

Some may argue that keeping the ADAM/BAE cell organic to ground brigade organizations fosters a more efficient integration of air defense, airspace management, and aviation. Theoretically, this efficiency stems from the ADAM/BAE cell having a personal working relationship with ground maneuver units within the brigade and being familiar with their tactics,

techniques, and procedures. Within this utopia, the ADAM/BAE cell is fully embraced and viewed as essential to the warfighting function of the brigade. The organic ADAM/BAE then ideally harmonizes these efficiencies with their internal expertise and presents this as an asset readily available to the ground leadership.

This discussion is convincing at first glance. However, a closer look reveals that these ideal conditions are rarely attained. The ADAM/BAE cell is rarely manned with the full complement of personnel required to perform their minimum function. Most often, the personnel that end up in the ADAM/BAE cell have little to no experience in the tasks to be performed, the equipment, or programs necessary to their function. An AH-64 pilot typically is not an air assault planner. A Patriot battery commander may not know anything about Sentinel radar systems. Consider also that organizational standard operating procedures, by definition, are always in flux as a living document. Already inexperienced with ground unit particular capabilities, ADAM/BAE personnel are more challenged to learn their ever changing procedures. Additionally, personnel outside the ADAM/BAE typically do not understand the subject matter and capabilities within the section or their contribution to the organization. THE ADAM/BAE and brigade leadership turnover hinder the building of professional relationships



as both sides struggle to develop shared understanding. Add to these realities that the aviation task force assigned to the brigade typically uses its liaison officer to work directly with the brigade's operations section and bypasses the ADAM/BAE. The apparent integration efficiency, so appealing at first, is challenged with the reality of real world issues.

Recommendation

In general, to improve ADAM/BAE cell operations, personnel strength, equipment, and training should be increased. However, instead of being assigned to the ground maneuver brigade, the ADAM/BAE personnel should be assigned to the combat aviation brigades (CAB) and air defense artillery battalions to provide the same functionality in a manner similar to Air Force assignment of the ALO. Like the concept of the fire support coordinator, the CAB S-3 should be dual hatted as the BAO. The remaining ADAM/BAE cell aviation personnel should also come from the CAB. The ADO should also be dual hatted as the ADA battalion assistant S-3 (post command). Rather than installation human resources assigning ADAM/BAE personnel, the ADA and CAB commanders in coordination with Human Resources Command oversight, should select ADAM/BAE personnel. Fully aware of the significance

of the air- ground relationship, the CAB and ADA commanders would ensure personnel of the proper experience and education were assigned to the ADAM/BAE positions.

The CAB and ADA battalion should be responsible for training and resourcing the ADAM/BAE with personnel. To lend stability to the positions, they should be attached to the supported ground maneuver brigade for a minimum of one year rotational assignments, thereby, minimizing any detrimental effect on their primary MOS related tasks and skills. The CAB and ADA commanders should be responsible for ensuring the ADAM/BAE personnel receive appropriate professional military education. Instead of being marginalized in efficiency rankings, ADAM/BAE personnel would remain competitive since they represent an essential link to the supported ground unit and remain within their respective parent unit commander's rating scheme. The ADA and CAB commanders would rate their respective ADAM/BAE personnel instead of the brigade commander of the supported unit.

The number of personnel within the ADAM/BAE cell should be increased in consideration of the requirement for 24 hour operations. The CAB and ADA

battalion should also be responsible for all equipment necessary to provide a fully functioning ADAM/BAE cell. This would include communications, computers, software, and ancillary interface equipment required to interface with the AMCS and the supported unit's network.

Lastly, the CAB and ADA battalion should present a capability brief on the functions, capabilities, and expectations of the ADAM/BAE cell to each incoming brigade combat team commander and his senior leaders.

Conclusion

By increasing personnel, equipment, and training in this manner, the ADAM/BAE cell becomes a stronger entity in support of ground maneuver units. Also stemming from this construct, the CAB and ADA battalion will derive a vested interest and buy-in to the ADAM/BAE cell. Manned properly, the CAB liaison officer will be integrated in the ADAM/BAE cell to more effectively enhance air-ground operations with the supported ground maneuver unit.



¹ U.S. Department of the Army, Training Circular 1-400, Brigade Aviation Element Handbook (Washington D.C.: U.S. Department of the Army, 27 April 2006), 1-1.

² U.S. Department of the Army, Army Training Publication 3-01.50 (Washington D.C.: U.S. Department of the Army, April 2013), 1-1.

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Acronym Reference

ALO - air liaison officer	C2 - command and control
AMCS - Army Mission Command System	CAB - combat aviation brigade
ADAM - air defense airspace management	ECOORD - effects coordinator
ADA - air defense artillery	MOS -military occupational specialty
ADO - air defense officer	TAIS - Tactical Airspace Integration System
AMD - air and missile defense	TF - task force
BAE - brigade aviation element	TO&E - table of organization and equipment
BAO - brigade aviation officer	UAS - unmanned aircraft system

