

USAWC STRATEGY RESEARCH PROJECT

**TRANSFORMATION OF THE ARTILLERY BRANCHES**

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## **ABSTRACT**

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In 2006, the Base Realignment and Closure (BRAC) process directed combining the Air Defense and Field Artillery centers and schools at Fort Sill, Oklahoma. This decision has fueled speculation that a move to combine the two branches is underway – a concept that is not new. In 1950, the field and anti-aircraft artilleries were combined into one Artillery branch. This integration lasted only until 1968 when the branch was split into the Field Artillery and Air Defense Artillery branches. These two branches have remained separate for almost 40 years. This paper will examine the current drive to combine the branches against the historical backdrop of the previous attempt at integration – and the resultant separation 18 years later. The author will determine why the branches were combined in 1950, why they were separated in 1968, and whether there are any similarities and differences that should shape decisions now. The author will make recommendations based on the findings of the research.



## TRANSFORMATION OF THE ARTILLERY BRANCHES

In January 2006, on the heels of the Base Realignment and Closing (BRAC) commission results, Colonel Mark McDonald, the Assistant Commandant of the Field Artillery School, published an article in the Field Artillery Journal, “Is it time for the ADA and FA to merge?”<sup>1</sup> Though posed as a question, Colonel McDonald’s article treats the issue as a forgone conclusion, asserting that the Army will not be satisfied with merely linking branches together in the Center of Excellence (CoE) construct and that maintaining two separate branches, “...simply does not pass the common sense test”.<sup>2</sup> McDonald asserts the driving force behind branch consolidation is the Army’s need to reduce the 19 separate branches to a more affordable number. Colonel McDonald feels that the BRAC decisions to establish CoEs will lead to inevitable branch mergers – creating synergies that ultimately will make the Army more efficient – a powerful draw for the Army during this point in the Army’s transformation.

In support of the branch merger, Colonel McDonald contends the ADA and FA branches are tailor-made for consolidation. He asserts that there is a commonality in Soldier skills, unit focus, and leader experience which is easily molded into a ‘multi-disciplined’ single branch. To McDonald, branch specific skills are of tertiary importance for leaders – leadership and effects coordination competency (now doctrinally once again called fire support coordination) are more critical. In the fall of 2006, the Army’s senior leadership weighed-in, offering the opinion that the ADA and FA branches could be merged, citing the commonality of equipment and, humorously, the commonality of Patronesses, Saint Barbara.<sup>3</sup> Certainly these views are in-line with the Army Chief of Staff, General Peter Schoomaker’s, vision: “I would tell you we need to move away from single-event athletes and single-event formations to more of a pentathlete or decathlete model for formations and individuals.”<sup>4</sup>

Colonel McDonald called a branch merger, “...clearly the Army’s vision for transformation...”<sup>5</sup> While the Army’s transformation efforts are much needed, the process is very broad and ‘over-spray’ often results from painting with too broad a nozzle. The momentum that is building to combine the two branches threatens to overshadow issues that may be appropriate to consider before transforming the artillery branches. This study will examine these issues and attempt to add some analytical insights to this debate, as well as make a recommendation on merging the branches. This is not the first time the artillery branch has been reorganized, nor is it the first time the Army has considered combining the Air Defense and Field Artilleries. Study of these previous attempts at integration is helpful in drawing parallels between the two time periods and, more importantly, bringing to light lessons learned so that previous mistakes can be avoided. Effort will be made to discover why the Air Defense

and Field Artillery branches were combined in the past ... why they were then separated ... and how these circumstances compare to the strategic situation today. This information may provide impetus to consider other options for transformation which may not have been considered and which could provide a better strategic solution for the Army and the Armed Forces.

### Background

The Department of Defense (DoD) Base Alignment and Closure (BRAC) commission report, completed in May 2005 and approved by President Bush in September 2005, directed realignment of broad components of the Institutional Army – that portion of the Army which supports war-fighting by raising, training, equipping, deploying, and ensuring the readiness of all Army forces. The BRAC process is designed to help DoD realize infrastructure efficiency while improving warfighting capability. The Secretary of Defense (SECDEF) stated, "... by rationalizing our infrastructure with defense strategy... BRAC 2005 should be the means by which we reconfigure our current infrastructure into one in which operational capacity maximizes both warfighting capability and efficiency"<sup>6</sup>. The Secretary of the Army shared this view and wanted the Army to retain a, "streamlined portfolio of installations with optimized military value and a significantly reduced cost of ownership"<sup>7</sup>. He saw base closure and realignment as a critical step in the transformation of the Army – transformation from a 'cold-war' forward based orientation to a continental United States (CONUS) based expeditionary force, designed for employment across a broad range of operations.

An important element of the Army's BRAC strategy was to continue the consolidation of institutional schools and centers begun ten years earlier with the 1995 BRAC commission. During this effort, both the Army Chemical and Military Police Schools and Centers were moved from Fort McClellan, Alabama, to an under-utilized Fort Leonard Wood, Missouri. Fort Leonard Wood was already home to the Army Engineer School and Center and the addition of two more proponents posed a challenge for the installation and the branches: How to gain the efficiencies inherent in the consolidation of similar activities – maneuver support – while still maintaining the identity and freedom of action of the three individual branches? In preparation for the move, working groups explored options and a variety of courses of action to address this dilemma.<sup>8</sup> In the end, the three schools were placed under the newly formed Maneuver Support Center (MANSCEN) as means to leverage synergies and exploit commonality between the branches and schools across the DOTML-PF domains<sup>9</sup>. The MANSCEN headquarters, directorates and departments integrated common areas across the schools such as core education for leaders,

training and combat development, and simulations, while the branch schools were responsible for ensuring branch specific competencies, initial entry training and maintaining branch identity.<sup>10</sup>

This arrangement was similar to the relationship that was established across two other functional lines: Personnel Services and Logistics. In the former, the Finance School and Adjutant General School were consolidated under the Soldier Support Institute (SSI) at Fort Jackson, South Carolina. Unlike the MANSCEN structure, the two branches remained autonomous along most of the DOTML-PF domains. The SSI only integrated training development between the two branches. Across the logistics function, the Army established a synergistic relationship between the Combined Arms Support Command (CASCOM) and the Quartermaster, Ordnance, and Transportation Schools, except that the three schools were not co-located at one installation. Because of the separation, CASCOM only integrated combat developments and doctrinal concepts for the logistics and sustainment operating function; the branch schools were responsible for training, education, and leader development. The Army continued to evolve the concept of consolidated functional centers, eventually determining focus areas that would be designated as either an Army Center or a Center of Excellence (CoE) to co-locate branch proponents or functions to gain synergies and efficiencies across the DOTML-PF domains. The Centers or Center of Excellence were:

- Networked Fires CoE (Field Artillery [FA] and Air Defense Artillery [ADA]) at Fort Sill, Oklahoma
- Maneuver CoE (Armor and Infantry) at Fort Benning, Georgia
- Aviation and Unmanned Aerial Vehicle CoE (Aviation and Aviation Logistics) at Fort Rucker, Alabama
- Maneuver Support CoE (Engineer, Military Police and Chemical) at Fort Leonard Wood, Missouri
- Combat Service Support Center (Transportation, Quartermaster and Ordnance) at Fort Lee, Virginia
- Intelligence, Surveillance and Reconnaissance (ISR) CoE at Fort Huachuca, Arizona

The 2005 BRAC process acknowledged and validated the Army's desire to continue consolidating branches at selected centers and CoEs. The Army included the Networked Fires (NETFIRES) CoE, the Maneuver CoE, the Aviation and Unmanned Aerial Vehicle (UAV) CoE, and the Combat Service Support Center (CSSC) as part of its recommendations to the BRAC commission. Each of these recommendations involved moving at least one branch school and center as well as the task of merging some or all of the DOTML-PF activities within the CoE. In

the case of the NETFIRES Center, the ADA Center and School would move from Fort Bliss, Texas to Fort Sill, Oklahoma and combine with the Field Artillery Center and School – “consolidating NETFIRES training and doctrine development in a single location”<sup>11</sup>.

The BRAC commission concurred with the Army’s CoE initiative and included the Army’s recommendations as part of the commission’s report. The report was approved by President Bush on 15 September 2005 and forwarded to Congress on the same day. Congress did not disapprove the recommendations and therefore the report became binding on 9 November 2005, 45 legislative days after the President presented it to Congress<sup>12</sup>.

Within weeks of the BRAC recommendations becoming law, discussion began about what the NETFIRES CoE portended for the future of the Artillery branch. Some viewed the consolidation of the two schools as an Army efficiency drill – designed to both eliminate redundant administrative functions and free up needed garrison and training space at Fort Bliss for the planned return of 1<sup>st</sup> Armor Division from Germany. To others, it offered little doubt that the Army intended to go beyond simply gaining efficiencies and had a full-scale reorganization of the Artillery in mind.<sup>13</sup> To achieve this end, establishing the CoE was a necessary first step in formally combining the Field Artillery and Air Defense Artillery into a single Artillery branch.

As would be expected, Colonel McDonald’s article – which was also printed in Air Defense Artillery – touched off a robust debate. Equally expected, the most passion was elicited from members of the Artillery, both field and air defense. The letters to the editor sections of both branch journals contained arguments for and against branch consolidation. Those who support a merger generally agree with Colonel McDonald’s assessment and reasons for consolidation and form their arguments along two major lines:

1. The branches share many commonalities in equipment, function, doctrine, and focus.
2. The combined branch would produce multi-disciplined Soldiers and leaders – pentathletes.

The perceived similarity between the branches is a forceful draw to those advocating a single artillery branch. Colonels Gregory Kraak (FA officer) and Harry Cohen (ADA officer), Chiefs of the Futures and Concepts Divisions at their respective branch centers, published a co-written article entitled, “ADA and FA – Finding Common Ground”. In the article they propose that, “...the branches [ADA and FA] now find that they have much in common with the potential for even greater commonality in the near future”<sup>14</sup>. They point to both ADA and FA Soldiers serving on the Counter Rocket, Artillery, and Mortar (C-RAM) system<sup>15</sup> and an air and missile defense (AMD) cell in an artillery brigade (Fires Brigade) headquarters as examples of synergy waiting to be exploited. Major Christine Gibney, a Brigade Air and Missile Defense (AMD)



officer in a Brigade Combat Team (BCT), goes further and reduces the branch similarities down to a single characterization: “The bottom line is that both artilleries operate in airspace, use radars and complex cueing systems and must develop their courses of action to support maneuver operations”.<sup>16</sup> Lieutenant Colonel Matt Michaelson, an air defense battalion commander, sees the airspace coordination requirement as an opportunity to develop officers with “battle officer interchangeability” – effects minded officers who can perform all aspects of air-ground integration.<sup>17</sup> Colonel McDonald envisions the effects coordinator (now doctrinally the fire support coordinator [FSCOORD]) as the ‘crown jewel’ of the merged artillery branch – responsible for integrating all fire support within the organization. “Combining our branches”, writes McDonald, “paves the way for such multi-disciplined Soldiers and leaders...Having officers trained on several systems and competent in effects coordination would allow them to gain the joint and combined arms experience that is so critical for preparation for command at all levels”.<sup>18</sup>

Those who oppose consolidation offer equally compelling arguments and assertions. In their view, the two branches do not share a great deal of commonality and are sufficiently complex and specialized to warrant remaining separate. Major James Crabtree, author of On Air Defense, argues that the initiative to merge the branches is solely driven by the Global War on Terrorism and Army Transformation and ignores future threats – threats that require the specialized skill of a dedicated ADA branch.<sup>19</sup> Colonel Wilfred Boettiger, author of Antiaircraft Artilleryman: 1939 to 1970, in a letter to the editor of Air Defense Artillery, goes even further as he outlines the technical nature of modern ballistic missile defense. Boettiger concludes his argument against consolidation by writing, “Modern air and missile defense combat is a complex, specialized field ...To merge the ADA branch and the FA branch would degrade air and missile defense and serve as a serious blow to national air defense and security”.<sup>20</sup>

Opponents of a merger also question Colonel McDonald’s premise that a merged branch would yield more capable officers and leaders. Marine Colonel James Pace, commander of the USMC Artillery Detachment at Fort Sill, Oklahoma, believes that it is a fallacy to assume that officers can be trained and educated, “... to become proficient and multi-faceted in fairly technical and complex skill sets.” Real synergy, Pace concludes, “...is realized when true experts come together from various skill sets and bring their expertise to support the one fight”.<sup>21</sup> Retired Army Colonel John Seitz, who served in both ADA and FA units when the branches were last merged, took exceptional issue with Colonel McDonald’s recommendation to merge the branches. Seitz offered his challenges in combat during Vietnam as examples of how merging the branches had failed the Soldiers and leaders, observing that Colonel

McDonald's arguments for merger sounded familiar to him. "These arguments", Seitz wrote in a letter to the editor of the Field Artillery Journal, "proved flawed in Vietnam...It is my opinion that both branches will lose by becoming one again".<sup>22</sup>

### Past Attempts at Reorganization

The Artillery has undergone eight separate attempts at fusion or integration in its 231 year history. The first, in 1794, combined the Field and Coastal Artilleries with the Engineers. This short lived eight-year union was dissolved because it was found that "the widely divergent missions of Engineers, Field and Coastal Artillery could not be accommodated by one corps".<sup>23</sup> The result was developing the Corps of Engineers as one branch, and the Field and Coastal Artillery as another.

Over the next 105 years, a variety of other consolidation experiments were conducted on the artillery, most notably combining the artillery and ordnance branches from 1821-1832. During the American Civil War it became apparent that the artillery company organization that served coastal artillery was ill-suited for artillery in the field. This was particularly evident during the battle of Chancellorsville in 1863, when the Union army was unable to mass artillery against Stonewall Jackson's flanking attack and was forced to retreat. As a result, artillery was organized into Artillery Brigades (modern battalions) with set structures designed to support maneuver forces.<sup>24</sup>

After the war the artillery was organized into one regiment, with twelve coastal artillery companies and two field artillery batteries. Though they remained one branch, the two artilleries grew more and more distant. Coastal fortifications and light battery development underwent great modernization; so much so that by 1900, most officers questioned the requirement to learn and master two very dissimilar crafts.<sup>25</sup> In 1907, the Chief of Artillery, Brigadier General Arthur Murray, recognizing the degree of specialization required in each branch, and the dissimilar missions of the coast and field artilleries, encouraged Congress to establish two separate artillery branches: "...the combination of the Coast and Field Artillery into a single Corps as is now done is not only unsound as a military principle, but the frequent interchange of officers between these tactically unrelated arms is considered to be clearly detrimental to the efficiency of both".<sup>26</sup> Congress agreed with Murray, voting later in the year to formally separate the two artilleries.

During World War I, the Field Artillery generally performed well as part of the Allied Expeditionary Force (AEF) while, because of its mission and fixed facilities, the Coast Artillery saw little action or use. Consequently, many Coastal Artillerymen were pulled from their coastal

fortifications and sent to the AEF to fill out the rapidly increasing number of AEF warfighting organizations – to include field artillery units. General Ernest Hinds, the AEF’s Chief of Artillery noted that, “We used them because they were, in consequence, available for other uses. They were trained and disciplined troops, an asset that in the great expansion of our army could not be permitted to remain idle”.<sup>27</sup> After the war, the nation embarked on a severe Army drawdown – seeking to inject efficiency into organizations and structures. In 1918, a merger between the Coast and the Field artilleries was once again considered. Proponents argued that consolidation was logical because, during the war, they employed common weapons and served as one arm (field artillery) and that, as a single branch, training and development would be more efficient and better coordinated.<sup>28</sup>

The 1919 AER Superior Board, convened by General Pershing to consider AER tactics and organization and make recommendations for the Army, considered whether the Coastal and Field artilleries should be consolidated. They concluded that the skills, training, equipment, and focus of the two arms were so different that a merger was not in order. In fact, the board recommended that, “Analysis of the duties involved in harbor defense indicates that these duties assimilate more nearly to the naval than to the military service (emphasis added)...Upon the navy rests already the main responsibility for keeping hostile ships from our shores. The whole responsibility may properly and logically be placed on the navy.”<sup>29</sup> General Pershing agreed that the two artilleries should not be combined and later, as the Army Chief of Staff, when a recommendation for consolidation was presented to him, disapproved it and ordered that it never be presented to him again.<sup>30</sup> Years later, looking back at the foiled merger between the artilleries, the former Chief of the Field Artillery, Major General Harry Bishop remarked, “If they had been merged, the only thing in common would be the letterhead on their stationary”.<sup>31</sup>

Twenty five years later, at the end of World War II, the Army’s rapid post-war demobilization and reorganization rekindled calls for a consolidation of the artillery branches. In September, 1945 a board of officers, headed by General Alexander Patch (and following Patch’s death, by Lieutenant G. Simpson in December 1945) convened to apply the WW II lessons learned and recommend new War Department organizations and processes. The Simpson Board completed its work and submitted its report to General Eisenhower, the Army Chief of Staff, in January, 1946, who quickly approved the recommendations ‘for planning’.<sup>32</sup> Among its many recommendations was a call to combine the Coast Artillery (comprised of coastal defense and antiaircraft units) and the Field Artillery into a single Artillery branch. The board had also examined the possibility of removing the Antiaircraft Artillery (AAA) from the

Army Ground Forces and placing it in the Army Air Forces, but this was ultimately rejected and board's recommendation was that the AAA would remain with the Artillery arm.

The Field Artillery community decidedly supported the marriage for the same reasons the Army Ground Forces leadership did. In March 1946, the Artillery Conference – attended by most of the senior World War II artillery commanders – was convened at Fort Sill, Oklahoma. Among other things, the merits of the integration with the Coastal Artillery were discussed. Not surprisingly, an overwhelming majority lent their support to the idea of integrating the branches.

While most of the Simpson Board's recommendations could be directed by General Eisenhower, the consolidation of the artilleries required congressional approval since they owed their current separation to Congress and its 1907 vote. On September 9, 1946, in anticipation of congressional approval the Commander of Army Ground Forces, General Jacob Devers, announced his decision to combine the three artillery schools (field, coastal, antiaircraft) into the Artillery School at Fort Sill, with an Antiaircraft and Guided Missile Branch at Fort Bliss. General Devers understood that most artillerymen might be concerned at the rapid pace of change, so he wrote an open letter to the Journal of the United States Artillery explaining his intent for artillery officers. They were first to be expert as ground force officers, second as artillery officers, and lastly as generalists on all artillery systems and weapons.<sup>33</sup> The integrated schooling system began in 1947 ... initially with the Officer Advanced Course, and later with the Battery Officer and Associate Battery Officer Courses. A portion of each course was taught at both Fort Sill and Fort Bliss.

In 1950, the 81<sup>st</sup> Congress took up the issue of artillery integration. By this time, many study groups had convened to probe and dissect the integration issue. While there were congressional hearings – and a great deal of spirited debate – it was clear to Congress that the field supported consolidation. Brigadier General Charles Hart articulated the majority view when he wrote, “While the policy of integrating the artilleries is progressing, it will not be completely successful until all members of the Coast and Field Artilleries are bound together by an Act of Congress under one insignia”.<sup>34</sup> Congress agreed, and consequently the consolidation of the Artilleries (Antiaircraft and Field – Coast Artillery was eliminated as a branch by this Act) was passed as part of the Army Reorganization Act of 1950 – for the following broad reasons:

- Branch consolidation was necessary for efficiency and economic reasons.
- The differences in the tactics, techniques, and procedures between the branches were not great.
- Both branches used cannons, and the evolution of guided missiles provided a common ground.

- The consolidated branches offered a larger variety of assignments for anti-aircraft artillerymen and cross-training for all artillerymen.<sup>35</sup>

The friction between the Antiaircraft and Field Artilleries began almost immediately upon consolidation of the branches. In theory, integration should have yielded a single artillery – with one school; one center; and one officer, trained and able to move freely between ‘cross assignments’, serving with ease in units of either arm. In practice, this was proving very difficult to implement. In June of 1950, three days after Congress integrated the branches, but three years after General Devers integrated the schools, the North Korean Army crossed the 38<sup>th</sup> Parallel and the Korean War began.

Initially, the Artillery branch charged ahead with the integrated training and cross assignment of officers in the branch. Officers assigned to units in Korea could expect to go to either an AAA or FA unit. Very soon, however, it became apparent that the forty-two week advance course was insufficient to prepare officers for duties in either of the two artillery specialties. Major William Cover, a Korean War Field Artillery veteran, relates his experiences, “I remember the succession of willing but bewildered AAA majors and captains who came into our headquarters under the non-discriminating “Arty” label which seeks to be all things to all artillerymen. There are just so many S1 and S4 jobs.”<sup>36</sup>

Rather than risk failure by artillery units in Korea, the integrated schooling and cross assignment was suspended for the remainder of 1950 and most of 1951 to provide for trained officers as the Army built combat forces for the mobile phases of the war.<sup>37</sup> As the situation turned static, the integrated schooling (still at two posts), and the cross assignment process was resumed – with less turbulence than at the beginning of the War. Brigadier General Theodore Parker, who commanded X Corps Artillery in Korea and the 45<sup>th</sup> AAA Brigade at Fort Sheridan, observed that the stabilized (static) condition in Korea made the integration more successful than it would have been during mobile operations because there was more opportunity for on-the-job training. He also noted that integrating FA officers in ADA units [and ADA officers in FA units] worked well at the senior levels (colonels and generals) and at the very junior lieutenant level, but was not practicable at the mid-grade (senior lieutenant through lieutenant colonel), “...where branch experience was critically important in order to perform satisfactorily in combat...”<sup>38</sup>

The editorial page of the October 1950 Combat Forces Journal<sup>39</sup> remarked that since the merging of the artillery schools three years earlier, there had been little change to the schooling or duties (assignment) of artillerymen, and it seemed there was little plan to institute “even small changes”.<sup>40</sup> In October 1952, the editorial page of the Combat Forces Journal once again

assessed the integration, blasting those it accused of 'foot-dragging' in more fully resuming integration measures. "It is no secret in the Pentagon and in the field", the editors wrote, "that certain things have hampered the integration of the two types of artillery".<sup>41</sup> The editorial pointed out that there were still two separate schools operating at Fort Sill and Fort Bliss – little changed from General Dever's initial efforts in 1947. Cross assignment options were not generally available to all artillerymen and there was, amongst the artillery force, a decided undercurrent of skepticism for the entire notion of branch integration. Two months later, Lieutenant Colonel Thomas Harris shot back with a letter to the editor railing that, "Your broad accusation of "foot-dragging can and should be resented by every thinking artilleryman. Is a man a foot-dragger just because he honestly opposes change?"<sup>42</sup>

And so began the opening salvo that over the next sixteen years would be fired many times over. During the course, the two arms within the Artillery branch would drift further and further apart. The great commonality of cannons and development of missile technology, which was intended to act as the catalyst to cement the integrated branch was, in fact, having the opposite affect. The AAA was eliminating cannons from the force in response to the jet age and the new threat of high-altitude intercontinental bombers. The last American antiaircraft cannon program, the 75mm Skysweeper, was eliminated in 1957, and coincided with the conversion of the Antiaircraft Artillery to the Air Defense Artillery.<sup>43</sup> At the same time, the Field Artillery was aggressively pursuing cannon artillery development. Modernization of the towed artillery fleet as well as development of new self-propelled systems such as the M107, M109 and M110 howitzers reaffirmed the commitment to cannon artillery as the close support weapon and thus, the preeminent system in the Field Artillery. The development of tactical nuclear projectiles for cannon artillery helped fuel the expansion of Field Artillery cannons at the same time Air Defense cannons were disappearing.

Meanwhile, guided missiles had become more complex and more specialized. In justifying integration, the term 'missile' had been used at a very base level, such as rifle or bicycle, with the inference that missiles were so alike they could be managed as a group – that if an officer was expert on one missile type he could be expert on all missile types. This was not proving to be the case. Initially, all guided missile research, development, and training was conducted at the Guided Missile Branch at Fort Bliss. However, the two arms used missiles in decidedly different ways. The Air Defense arm had developed a complex tracking and engagement network to engage moving targets with missiles – completely different from any Field Artillery missile employment, which ostensibly still used ballistic missiles to fire at stationary ground targets. The differences were becoming difficult to reconcile under one

Guided Missile School. Late in 1956, the two Field Artillery guided missile programs, the Corporal and the Lacrosse, were moved from Fort Bliss to Fort Sill, ending any guided missile link between the two arms. "Hardware, though similar, "it was felt, "couldn't entice a common mission."<sup>44</sup>

The late 1950s was a period of 'recession' in the integration of the branch. There was growing realization that the two arms within the Artillery were very different, and were growing more different with each passing day. In 1955, General John Dahlquist, Chief of Army Field Forces, initially a proponent of merging the two artillery branches, wrote to the Department of the Army, "...the complexity of equipment, and the differing, specialized techniques and tactics that are employed by the Artillery in each of its two major roles...now dictates the basic school training of Artillery officers in either of the two fields, but not both..."<sup>45</sup> Later in the year, General Williston B. Palmer, the Army Deputy Chief of Staff for Logistics (and later the Army Vice Chief-of-Staff) wrote to Brigadier General Watlington, the Deputy Commandant at the Artillery School expressing his sense that there was growing unease across the Army with the success of the integration<sup>46</sup>.

Coming to the defense of branch integration was one the strongest proponents of the integrated artillery branch, Lieutenant General Stanley Mickelson, the commander of the Army Air Defense Command. In his mind, a strong unified Artillery branch (particularly the guided missile portion) was a key building block in the Army's efforts to pull all Defense Department guided missile programs under Army control.<sup>47</sup> He argued for more robust integration of the branches in a series of letters to the Army Chief of Staff, General Maxwell Taylor. General Taylor forwarded Mickelson's recommendations to the US Continental Army Command (USCONARC)<sup>48</sup>. USCONARC's response back to General Taylor outlined the difficulties the Artillery was having with integration, highlighting the dissimilarities across the board. General Taylor concurred and sent his own letter back to Mickelson, "The reasons for not further integrating the Artilleries are fairly obvious in considering the fundamental differences in doctrine, tactics and techniques required in the employment of Field Artillery and Antiaircraft Artillery..."<sup>49</sup>

The two arms of the Artillery branch continued to drift further apart through the remainder of the 1950s and into the 1960s. The cause for closer integration was not helped by a series of studies during the time which repeatedly identified the stark differences in the arms as a major factor affecting cross training and assignment of officers between disciplines. In 1963, USCONARC directed both the Air Defense and Field Artillery communities to examine whether the branches should remain joined. The reply back from the study group was that the Artillery

branch should be separated into two branches. This recommendation was forwarded to the Department of the Army. While most of the Army staff concurred, the Deputy Chief of Staff for Personnel disagreed, citing a need for further study on the loss of assignment flexibility for Air Defense personnel that would result when combining the branches. The effort was shelved pending more review.

In April of 1965, the integration effort once again was viewed through the lens of combat when the 3<sup>rd</sup> Battalion 319<sup>th</sup> Field Artillery Regiment was the first of many field artillery battalions to deploy in support of the war in Vietnam.<sup>50</sup> As in the Korean War fifteen years earlier, it became quickly apparent that the Artillery was not one seamless branch, and that officers and leaders could not be cross assigned between air defense and field artillery duty with ease. Commanders in Vietnam began prohibiting cross assigned officers from duty in Air Defense or Field Artillery units or, as a minimum, severely restricting the duties they were permitted to perform. Most cross assigned officers in field artillery units were given duties which did not require a thorough grounding in field artillery tactics and techniques, such as the battalion personnel officer (S1) or logistics officer (S4). The same conditions existed for field artillery officers assigned to air defense units. This practice was reminiscent of similar procedures that developed during the Korean War

The integration of the artillery continued under increasingly heavy criticism as the Vietnam War and the realities of anticipated warfare around the world began to reveal a strained relationship between the two artillery arms. In his January 1967 Army article, "Grounds for Divorce, Incompatibility Reigns in the House of the King of Battle", Major William Hauser summarized the feeling from the field that the marriage of the two artilleries was doomed to fail from the start. "It was not a good marriage 16 years ago; now is the time for divorce".<sup>51</sup> To assess the full scope of the problem, in late 1966 an exhaustive branch study was directed by Colonel A. D. Pickard, Chief of the Artillery Branch, Officer Personnel Directorate. The study group examined a wide range of integration issues, from officer assignments, to promotions, to wartime efficiency. Their findings, published in early 1967, concluded that, "Artillery integration has never measured up to its advanced billing. Not one of the benefits envisioned at its conception have been realized".<sup>52</sup> The study recommended that the artillery arms be separated into two distinct branches, the Field Artillery and the Air Defense Artillery. The Army Staff once again took up the issue and this time there was overwhelming concurrence. On 14 June 1968, General Order No. 25 established the Air Defense Artillery as a basic branch of the Army, effectively splitting the branches into the FA and ADA we know today.



## Are Things Different This Time?

The use of history is to give value to the present hour and its duty

—Emerson<sup>53</sup>

In 1968 the Army separated the two branches because integration did not live up to expectations. The accelerated technology and continuing wars from 1950-1968 served to highlight that the integration was not successful because the two arms were, in fact, very different. But that was 1968 ... what of 2007? Does anything carry-over these 39 years or are things truly different this time? Have the two branches changed so much as to validate Kraak and Cohen's "...much in common and potential for even greater commonality..." assertion? The reasons that branch integration seemed a good idea in 1950 are strikingly similar to the prevailing thought today. Rapid advances in technology served to create the perception that differences between the branches are minimal while highlighting the benefits and ease of interoperability between the arms. In his May 2006 response to Colonel McDonald's call for a branch merger, Colonel (Retired) John Seitz, who served through the 1950 merger and subsequent separation, noted that McDonald's arguments are, "similar to the arguments that were advocated in the 1950s by well intentioned personnel planners."<sup>54</sup>

Colonel James Pace (USMC), in objection to a hasty branch merger decision, offered that, "We probably should take a critical look at the rationale for splitting the FA and ADA back in 1968 before we embrace consolidating the branches".<sup>55</sup> This has been the intent of the preceding pages – a critical look to determine both why the branches have merged in the past and why they have ultimately separated. At the heart of the issue was the focus by leaders on the perceived closeness in mission and systems between the branches, while failing to fully consider the corresponding impact on personnel. In the past, cross-assigning officers between the two had an adverse affect on the Army, the Artillery and the officer.<sup>56</sup>

Colonel McDonald and other Army leaders assert that the branches are ready to merge. While acknowledging past failed attempts, they propose that things are indeed different this time. As an example, Colonel McDonald offers that the reasons for splitting the branches in 1968 are no longer valid – or are, as a minimum, irrelevant in this operational environment and time of transformation, while Major Christine Gibney dismisses as "academic" all arguments about common branch synergies.<sup>57</sup> These views offer insufficient critical analysis necessary to avoid the pitfalls that marked past artillery reorganization efforts and will lead to yet another square peg in a round hole artillery merger. It is important to determine how much commonality the branches truly share in mission and systems. History has shown that ultimately this

commonality, and not personality, or desire, or willingness to transform, will determine success or failure of a branch consolidation.

#### Commonality in Mission, Focus and Tactics

The many failed attempts at pairing the field artillery with other branches and arms have shown an unmistakable correlation between a lack of commonality and dysfunctional branch integration. Without a common foundation to guide an integrated branch, air defense and field artillery will naturally drift apart. It will be, as one general described it, "...more an example of historical accident than of historical necessity".<sup>58</sup>

The logical first step in determining if there is common focus between the branches is to visit the branch mission statements. The mission statement is the definitive expression of what drives the branch and gives it direction and purpose:

- The mission of the Field Artillery is to destroy, neutralize or suppress the enemy by cannon, rocket and missile fire and to synchronize the integration of all lethal and non-lethal fire support assets in joint and combined arms operations.<sup>59</sup>
- The mission of US Army Air Defense Artillery is to protect the force and selected geopolitical assets from aerial attack, missile attack and surveillance.<sup>60</sup>

The dramatically different mission statements of the two branches stand in evidence of the divergent focus and roles each branch fills. The field artillery is oriented on having effects on the enemy force, with an offensive focus in support of operations. The ADA is oriented on protecting the friendly force and is defensively focused.

The difference in branch focus is made clearer when viewed against the backdrop of the warfighting functions (WFF) – a term which has replaced the battlefield operating systems (BOS) of the past. In joint warfighting, they are referred to simply as 'joint functions'.<sup>61</sup> Field Manual 5-0.1, The Operations Process, describes the warfighting functions as, "... a group of tasks and systems (people, organizations, information, and processes) united by a common purpose that commanders use to accomplish missions and training objectives."<sup>62</sup> Commanders visualize, describe, direct, and lead operations in terms of the WFFs. Commanders will also organize their staffs functionally [by WFF], as opposed to along branch or staff section lines. The field artillery is a component of the *fire support* WFF and is, in fact, responsible for synchronizing the fire support WFF – the related tasks and systems that provide collective and coordinated use of Army indirect fires, joint fires, and offensive information operations.<sup>63</sup> Air and missile defense [executed by the ADA], on the other hand, is a component of the *protection*

WFF – the related tasks and systems that preserve the force so the commander can apply maximum combat power. By mission and by function, the ADA is not aligned with the FA.

As a point of comparison, another component of the protection WFF is actions associated with chemical, biological, radiological, nuclear, and high-yield explosive (CBRNE) weapons.<sup>64</sup> The Chemical branch is the system which executes these associated tasks. The stated mission of the Chemical branch is, “To protect the force and allow the Army to fight and win against a CBRN threat.”<sup>65</sup> This mission statement is strikingly similar to that of the ADA branch – as well it should be. The two branches are united by a common purpose – protection of the force. In the same vein the Military Police branch, which also executes many of the components of the protection WFF (safety, antiterrorism, security, etc), has as an integral part of its mission statement, “...supports the Joint Force Commander by conducting combat and combat support operations including protection, enforcement and detention ...”<sup>66</sup>

In function and mission, the ADA is very closely aligned with the Chemical and Military Police branches. The three branches provide the preponderance of the protection WFF systems and, in all Army staffs brigade and above, form the core of the protection staff element itself.<sup>67</sup> The three branches share a protection focus in their mission statements because they are functionally aligned and structured – united by a common purpose – to perform the protection WFF, and that is how the commander will fight them. In contrast, the FA and ADA are dissimilar in mission and focus because they are dissimilar in function, in the same way Military Intelligence and the ADA are dissimilar in function. Are the FA and ADA branches complementary? Yes. Should their actions and effects be synchronized and integrated during operations? Of course ...but it is critical to understand that at the functional level of the war-fight – the level at which the commander will organize, direct and lead the operation – the FA and ADA are two very different branches, optimized to accomplish two very different missions and warfighting functions. Finding common ground in the current branch functions and missions is reminiscent of the difficulties artillerymen faced when the branches were last merged. In his 1954 article, “It Seemed Like a Good Idea”, Colonel Robert Hallock highlighted the conundrum of the merged branch when he observed, “What is of our mission? Here is the meat of the whole matter. How often have we heard the old rule, ‘You may forget your best friend, your name, or anything else, but never forget your mission.’ And it was never ‘missions’ ... Try to prepare a single statement of the mission of the field and antiaircraft artillery!”<sup>68</sup>

Another important divergent line of operations is the difference in operational focus between the FA and the ADA, and the corresponding difference in tactics, organization, and leader development that result. The FA is focused on the tactical and operational levels of war,

while the ADA is focused on the operational and strategic. The field artillery strives to extend its reach to the lowest levels, operating at a very intimate level with the maneuver force. The maneuver branches have a very personal relationship with ‘their’ artillery – a relationship that has been forged by over two centuries of trust built by incalculable effort on the part of field artillerymen. The ADA, on the other hand, must extend its reach upward, as part of a regional, or national, or theater, or global air and missile defense network. While the ADA ultimately protects the maneuver force, it has no relationship with the maneuver force because it has no interaction with it. The ADA relationships are established upward – in the global network.

The lack of shared inherent responsibilities is not accidental. On the contrary, it is the logical outcome of very dedicated and deliberate work by both branches. In 1961 General George Decker [Army Chief of Staff] and General Curtis LeMay [Air Force Chief of Staff] set this inevitable outcome in motion when they developed the joint warfighting concept which provided that in an operational theater the Air Force should have operational control of all air defense assets.<sup>69</sup> This doctrine evolved and continues today. The Joint Forces Air Component Commander (JFACC) (routinely, but not always, an Air Force element), is normally also designated the Area Air Defense Commander (AADC), with the authority to plan, coordinate and integrate the joint area air defense plan.<sup>70</sup> The AADC normally has operational control of all Army ADA assets in the Joint Operating Area (JOA).

This command and control structure has driven the organization of the two branches. ADA battalions and batteries have been eliminated in divisions and have been moved under the command of ADA Brigades. These ADA Brigades, once assigned to Army Corps, are now assigned to an Army Air & Missile Defense Command (AAMDC) – a theater-level organization that serves as the Theater Army Air & Missile Defense Coordinator (TAAMDCOORD). Upon deployment to an operational theater, the AAMDC (and its subordinate units) is under the operational control of the AADC. Air and missile defense has become a theater responsibility. There are no ADA units below the theater level and one ADA Brigade, the 100<sup>th</sup> Missile Defense Brigade, is literally a national level asset. The Brigade operates from fixed sites in Alaska and is designed to protect the homeland from intercontinental ballistic missiles.<sup>71</sup>

In contrast to the ADA, the Field Artillery force structure is decidedly tactical – moving field artillery units and Soldiers down to the lowest levels of maneuver formations. The Army’s modularity initiatives have eliminated the Division Artillery (DIVARTY) structure, transferring the direct support cannon artillery down to the BCT. Every BCT in the Army has an organic artillery battalion. The fire support personnel, once part of the artillery units, are now assigned to the maneuver unit they support. Additionally, platoon forward observers have been brought back

for mechanized infantry platoons. The result is that the 72% of all artillery battalions are located within Brigade Combat Teams and, because the fire support personnel are part of the maneuver units and not the artillery units, almost 80% of all artillerymen are part of BCTs.<sup>72</sup> The remaining artillery battalions are organized under Fires Brigades, designed to operate as the force field artillery headquarters for a Division. By comparison, the only ADA Soldiers in maneuver brigade combat teams (BCTs) are six members of the Air Defense / Airspace Management (ADAM) cell in the brigade headquarters.

The effect of this wildly divergent operational orientation cannot be overlooked because it shapes the talents and capabilities of the leaders in the branches. Through assignments in maneuver organizations – particularly during the company grade years, FA officers receive a thorough grounding in maneuver operations and are well versed in tactics and fire support. There are NO assignments for field artillery lieutenants outside of BCTs or fires brigades and 66% of all FA lieutenants assigned to BCTs fill fire support positions in maneuver companies. Additionally, every maneuver battalion in the Army has an FA captain as the fire support coordinator.<sup>73</sup> Conversely, there are NO ADA lieutenants in BCTs, and only 1 ADA captain per BCT. ADA company grade officers operate at the theater level of war and become expert in integrating a complex early warning and engagement system that literally spans the globe. The commandant of the ADA Center, MG Robert Lennox said, “ADA soldiers will confront future air and missile threats as team players in a global alliance of joint and coalition theater air and missile defense forces ...”<sup>74</sup>

Both of these disciplines, fire support and theater air/missile defense, require a level of expertise that is developed from the ‘ground-up’. The young field artillery captain must have more than a passing familiarity with the techniques for coordinating close air support for his maneuver battalion in Fallujah, Iraq, just as the young air defense captain at Iruma Air Base, Japan must intimately understand how to integrate with the Aegis ballistic missile defense system. It is unrealistic to expect this level of expertise can be gained by leaders who are continually moving between assignments in vastly different areas. Experience does count.

Proponents of a branch merger highlight airspace management as a common mission between the FA and ADA. In reality, the mission is more common between the ADA and either Army Aviation or the Air Force. At tactical and operational echelons, airspace management is accomplished for the Army by the Air Defense / Airspace Management (ADAM) cell in the various headquarters. The ADA Soldiers in the ADAM cell are responsible for both providing Air Defense situational awareness to the commander as well as supporting the unit’s airspace management process. The ADAM cell is led by an Army Aviation officer because at the tactical

level and operational levels, airspace management is an Army Aviation function, while at the strategic level it is an Air Force function – and the ADA at the theater level is under the control of the Air Force. Certainly FA is integrated into the airspace management plan, but the Fire Support Element is not the integrator – the ADAM cell is. As with the protect component of the ADA's mission, and the corresponding common ground with the Chemical or Military Police Corps, the ADA shares airspace management branch synergy not with the FA, but with the Army Aviation branch – and at the strategic level, with the Air Force, in concert with their theater AMD mission.

The Chief of Staff of the Army's term, pentathlete, is frequently used to fan the flames of integration by those who propose a branch merger. They argue that in the future, leaders must "be ready to adapt and develop new skills and knowledge".<sup>75</sup> The pentathlete is an admirable objective but is misapplied to the notion of a 'multi-branch' officer. The CSA's intent behind pentathletes was to build a broad base of complementary skills in our leaders – not to develop a leader capable of performing cannon gunnery at one moment and positioning Patriot radar assets the next. In a recent speech to the Army Staff Management College, former Secretary of the Army Francis Harvey articulated the Army vision for the pentathlete leader:

The Chief's and my pentathlete vision is a multi-skilled leader who is a strategic and creative thinker; a builder of leaders and teams; a competent full spectrum warfighter or accomplished professional who supports the Soldier; an individual who is effective in managing, leading and changing large organizations; a person who is skilled in governance, statesmanship, diplomacy and understands cultural context and works effectively in it. This skill set must, in turn, be accompanied by a number of leader attributes. Pentathletes will set the standard for integrity and character; be a confident and competent decision-maker in uncertain situations; a person who is empathetic and always positive; professionally educated, dedicated to life-long learning and an effective communicator.<sup>76</sup>

Clearly the vision of pentathlete goes well beyond branch skills. A pentathlete is assumed to be competent in the branch. The multi-skills that Secretary Harvey describes are the other dimensions apart from branch expertise – negotiating, leading, caring, stabilizing. Combining the FA and ADA will not produce a pentathlete any more than combining the Infantry and Finance branches will produce one. Pentathlete is not about branch, it is about leadership.

Merging the branches did not create multi-skilled leaders in 1950 and certainly will not do so now. The complexity of the branches and environment in the 1950s and 1960s is dwarfed by challenges FA and ADA leaders face today. In an era when even less time is available for leaders to master their branch it would be ill-advised to introduce another source of friction.

## Commonality in Systems

The ADA and FA have been on two markedly divergent material development paths over the preceding decades. Early WW II commonalities in cannons have long-since disappeared, and complexity and mission of individual missile systems has effectively eliminated any hint of similarity. The weapons system mix between the branches gives stark example of the dissimilarity<sup>77</sup>:

	% Rocket / Missile Units	% Cannon Units
ACTIVE COMPONENT		
Field Artillery	18%	82%
Air Defense Artillery	100%	0%
RESERVE COMPONENT		
Field Artillery	25%	75%
Air Defense Artillery	100%	0%

Table 1.

Inexorably, the ADA moved from a cannon and AAA gun-heavy force to an exclusively guided missile inventory. Once developed to allow maneuver with and support of tactical forces, Air Defense missiles are now optimized to down enemy ballistic and cruise missiles and are linked to a layered and complex acquisition and cueing system integrated at the national level.<sup>78</sup> Field Artillery systems, on the other hand, have remained a decidedly tactical and operational direction. Cannon artillery systems are still the mainstay of the artillery force, evolving into specialized systems designed to best facilitate the supported maneuver force. In the 1980s, the elimination of the Lance and Pershing missiles coupled with the development of the Multiple Launch Rocket System (MLRS) and the High Mobility Artillery Rocket System (HIMARS) shifted field artillery missile orientation from the strategic/theater to the tactical level – completely opposite the direction the air defense was pursuing. MLRS and HIMARS are optimized for close support of maneuver forces – designed to either provide general support fires for a division or to reinforce the close supporting fires of a BCT's cannon battalion.

The gap between the branches caused by the dissimilarity in weapons systems is bridged, proponents assert, by the common use of radars – frequently highlighted as the key component to a successful branch merger. In a lecture at the Army War College, a senior Army leader cited branch use of radars as the reason the two branches should be merged. Major Christine Gibney proposes that the 'bottom line' is that both artilleries operate in airspace and use radars, while Kraak and Cohen remind that the same 94A Radar Repairer performs maintenance on FA as well as ADA radars. They go on to offer the Army's Counterrocket Artillery and Mortar (C-

RAM) system as illustrative of the degree of synergy between the branches. The system uses an air defense command and control system to link field artillery and air defense radars with a Navy antiaircraft gun system to detect and engage incoming indirect fires.

The case for the branch commonality based on radars is reminiscent of the guided missile argument of the late 1940s. Radars are being used in the most general sense, such as trucks or rifles, implying that the systems and operators are interchangeable and would therefore require less specialized leaders to plan for their employment. Viewed in this way, any branch that uses radars, Military Intelligence or Army Aviation, for example, could be merged with the Field Artillery. In reality, though the branches all use radars, they are very different in purpose, capability and employment. ADA radars are employed to track, identify and classify airborne objects – everything from friendly helicopters to enemy ballistic missiles. FA radars, on the other hand, are designed to acquire artillery/rockets/mortar rounds in flight and determine the location of the enemy firing unit so that the firing unit can be engaged. In ADA target acquisition, the object in flight is the target, while to the FA, the enemy firing unit is the target. While the radars of each branch may be complementary – as in the case of C-RAM – they are not common in purpose, capability, or employment.

It is common for branch merger proponents, when comparing FA and ADA equipment, to accentuate the general similarities in the equipment, such as ‘they are both missiles’ or ‘they employ radars’, and dismiss incompatibility of purpose or capability as trivial. In reality, the differences in equipment are not as innocuous as they assert and highlight the same dissimilarities that drove the merged branch’s guided missile programs apart in 1957 and eventually helped drive the branches apart 11 years later: ADA systems are defensive, while FA systems are offensive; ADA systems are static, while FA systems are mobile; ADA systems are integrated up, FA systems are integrated down. These fundamental differences still exist today and create divergence by their nature. The impact of forcing these truly different systems under one branch is revealed in a 1957 letter by General Maxwell Taylor: “...Even in the weapons, many of great complexity, now employed in the two types of Artillery, it has been found impossible to train beginners in all systems. To attempt to do so would lead to an unnecessarily expensive, ineffective operation in which individuals...would be largely a group of jack-of-all-trades and masters-of-none...”<sup>79</sup>

### The Conclusion

A merger of the two branches will not succeed and should not be undertaken. The common ground shared by the branches is strictly at the periphery. At the center there are



significant differences. It is understandable that the BRAC decision caused speculation and excitement regarding a pending merger; moving the ADA School and Center to Fort Sill is a very big change. It is also understandable that merging the FA and ADA is seen as a logical step – putting things back the way they were in 1968. After all, both branches have artillery in their name, have crossed cannons in their branch insignia, are organized into batteries, wear red socks to the Saint Barbara's Ball, and operate missiles and radars. "Is it any wonder", writes Major James Crabtree, "that policymakers see little or no difference between our two branches?"<sup>80</sup>

The advocates of a single branch cheer the inevitability of a consolidated artillery branch, citing the kindred spirit of air defenders and artillerymen and the close and overlapping relationship the branches enjoy. Colonel McDonald highlights effects coordination [fire support] as the common thread; Colonels Kraak and Cohen offer a relationship between protect and strike, while Lieutenant Colonel Matt Michaelson and others see airspace management as the common focus between the arms.<sup>81</sup> The net is cast far and wide. Sadly, amid all of this dialogue, there is nothing to indicate that the ADA and FA share focus, mission, tactics, leader development, or systems in the degree necessary to ensure the success of a merged artillery branch. There actually is very little in common.

The two branches must proceed deliberately. The creation of the Fires CoE was designed as an efficiency measure, not a lever to force the merger of the two branches. It is critical that leaders learn the lessons of 1950 and leave the branches unchanged. The branch schools and centers will be collocated at Fort Sill. Using the existing CoEs as examples, leverage the synergies inherent in this collocation by reviewing both branches across the DOTML-PF and combining efforts and functions when it makes sense. There will be some areas where the branch requirements will be very similar – explore and capitalize on these opportunities. There will be other areas in which no efficiency can be gained – explore and accept these as well. Perhaps the most cogent statement summarizing the possible consequence of merging the branches comes from "The Artillery Branch Study" of 40 years ago, when the branches were last merged: "It's intent to train all students in all subjects has encouraged mediocrity...The doctrines, missions, techniques and equipment of the two entities has created a field so widely dispersed that it precludes concentration, thorough knowledge, or professionalism. It discourages the officer from mastering his art, since the possibility of obtaining absolute excellence is remote".<sup>82</sup> We must not allow ourselves to fall victim to hasty conclusions that will require years to mend.

### Other Areas for Research

1. Integrate the two branches into a single Artillery branch but manage the air defense and field artillery as two 'sub-branches', below the Department of the Army level. This option would provide the economic benefits of branch consolidation, while maintaining distinct career fields and expertise. The members of this branch would be artillerymen in name only as they would function almost exclusively in either the air defense or field artillery worlds – unless assigned to a branch immaterial billet. Risks to implementation would be that while each sub-branch would keep their customs and traditions and branch identity, camaraderie and unity of effort would suffer.

2. Retain the Field Artillery branch as it is and move the Army's air defense capability to the Air Force. This is clearly a radical option but it does align functional capability with functional responsibility. Normally an Air Force element is designated as the both the JFACC and the AADC. The Army air defense assets are placed under the operational control of the JFACC who has the responsibility for providing for air and missile defense of the land component. This option simply aligns the forces in peacetime with the headquarters they will fight with during war. There is risk with this option. The Army maintains air defense artillery to ensure that there are sufficient land based air defense assets for the ACC to provide coverage to ground forces. The risk is that the ground based air defense may be used by the Air Force to pay a funding or man-power bill sometime down the road. This could leave the Army with a reduced or eliminated ground-based air and missile defense support.

3. Merge the Air Defense Artillery, Chemical, and Military Police branches into a single branch – the force protection branch. The three branches already share significant commonality in focus and are already organized in theater-level organizations. The combined branch would be the Army's protection coordinator [just as field artillery is the Army's fire support coordinator] and would ensure unity of effort and focus in force protection. Risks would be significant and would require comprehensive analysis. The three branches do not share common equipment nor leader development and focus. These may be obstacles that are too large to overcome.

### Endnotes

<sup>1</sup> COL (P) Mark McDonald, "Is it Time for the ADA and FA to Merge?", The Field Artillery Journal, January – February 2006, p. 8.

<sup>2</sup> McDonald, p. 8.

<sup>3</sup> A senior Army leader spoke to the AY 2007 Army War College Class in Bliss Hall, Carlisle Barracks, Pennsylvania. As is the custom at the War College, guest speakers are afforded non-attribution and therefore the name of this source is not stated.

<sup>4</sup> James Kitfield, Interview with Peter Schoomaker, "Changing and Fighting, Simultaneously," The National Journal, VOL 36, Issue 44, p. 3300.

<sup>5</sup> McDonald, p. 9.

<sup>6</sup> Base Closure and Realignment Report (BRAC Report), Department of Defense, May 2005, VOL I, Part 2, Section 1, p. 1.

<sup>7</sup> Ibid, p 2.

<sup>8</sup> Mark T. Premont, "The MANSCEN Construct", Army Chemical Review, August 2001, p. 7.

<sup>9</sup> DOTML-PF is a construct the military uses to assess the current situation and manage change. The branch schools and centers are charged with leading the branch across the domains of Doctrine, Organizations, Training, Material, Leadership and Education, Personnel, and Facilities.

<sup>10</sup> Premont, p. 7.

<sup>11</sup> BRAC Report, VOL I, Part 2, Section 4, p. 12.

<sup>12</sup> Donna Miles, "BRAC Deadline Expires; DoD to Begin Closures, Realignment", Armed Forces Information Service, [http://www.defenselink.mil/news/Nov2005/20051109\\_3280.html](http://www.defenselink.mil/news/Nov2005/20051109_3280.html)

<sup>13</sup> Blare Case, "Will the Second Time Around Work for the Air Defense and Field Artillery?", Air Defense Artillery, July – September 2006, p. 34.

<sup>14</sup> Colonel Gregory C. Kraak and Colonel Harry L. Cohen, "ADA and FA, Finding Common Ground", The Field Artillery Journal, November-December 2005, p. 10.

<sup>15</sup> The C-RAM is a newly developed system with the capability to detect and intercept enemy rockets, artillery, and mortars. C-RAM was developed in response to an urgent need identified by the United States Central Command (USCENTCOM) Commander. Kraak and Cohen, p. 9.

<sup>16</sup> Major Cristine Gibney, "Operation Red Net, A Plan for a Dynamic Future", Air Defense Artillery, April – June 2006, p. 17.

<sup>17</sup> Lieutenant Colonel Matt Michaelson, "Thought Provoking Points", Air Defense Artillery, April – June, p. 15.

<sup>18</sup> McDonald, p. 9.

<sup>19</sup> Major James Crabtree, "Air Defense Artillery Branch: The Need for Distinction", Air Defense Artillery, July – September 2006, p. 4.

<sup>20</sup> Colonel Wilfred O. Boettiger, “Merging Field Artillery and Air Defense Artillery Would Degrade National Security”, Air Defense Artillery, p. 4.

<sup>21</sup> Colonel James A. Pace, USMC, “Response to: Is it time for the ADA and FA to Merge?”, The Field Artillery Journal, May – June 2006, p. 3.

<sup>22</sup> Colonel (Retired) John A. Seitz, III, “Response to: Is it time for the ADA and FA to Merge?”, Field Artillery Journal, May – June 2006, p. 4.

<sup>23</sup> “The Artillery Branch Study”, Morris Sweat Technical Library, Fort Sill, Oklahoma, 1966, p. 25.

<sup>24</sup> Lieutenant Colonel Jerre W. Wilson, USA, “The Evolution of Field Artillery Organization and Employment during the American Civil War”, United States Army War College, 1993, p. 38.

<sup>25</sup> “The Artillery Branch Study”, p. 27.

<sup>26</sup> Larry H. Addington, “The U.S. Coast Artillery and the Problem of Artillery Organization, 1907-1954”, Military Affairs, Vol. 40, No. 1, February 1976, p. 1.

<sup>27</sup> “The Artillery Branch Study”, p. 28.

<sup>28</sup> “Ibid, p. 29.

<sup>29</sup> The Superior Board, “AEF Superior Board on Organization and Tactics”, Combined Arms Research Library, Fort Leavenworth, KS, 1919, p., 45-46.

<sup>30</sup> “The Artillery Branch Study”, p. 29.

<sup>31</sup> Harry Bishop, Field Artillery The King of Battles, Houghton Mifflin Company, Boston, 1935

<sup>32</sup> Ray S. Cline, The United States Army in World War II, Washington Command Post – The Operations Division, The War Department, Washington, DC, 1951, p. 356.

<sup>33</sup> Brigadier General Charles E. Hart, USA, “Integration of the Artilleries”, Military Review, Volume XXIX, November 1949, p., 18.

<sup>34</sup> Hart, p., 22.

<sup>35</sup> “The Artillery Branch Study”, p. 34, and Brand, p. 9.

<sup>36</sup> Major William W. Cover, USA, “Letter to the Editor”, The Army Combat Forces Journal, March 1955, p. 8.

<sup>37</sup> Brigadier General Theodore W. Parker, USA, “...It will Take a Whole New Generation”, The Army Combat Forces Journal, January 1955, p. 45.

<sup>38</sup> Parker, p. 45.

<sup>39</sup> The precursor to ARMY [formed by the union of the Infantry Journal and Field Artillery Journal in 1950)

<sup>40</sup> Major William L. Hauser, USA, "Grounds for Divorce", ARMY, January 1967, p., 65.

<sup>41</sup> Editorial, Combat Forces Journal, October, 1952, p. 32.

<sup>42</sup> Lieutenant Colonel Thomas Harris, USA, "Letter to the Editor", Combat Forces Journal, December 1952, p. 6.

<sup>43</sup> Kenneth P. Werrell, Archie to SAM, A Short Operational History of Ground Based Air Defense, Air University Press, Maxwell Air Force Base, Alabama, August 2005, p. 71.

<sup>44</sup> "The Artillery Branch Study", p. 41.

<sup>45</sup> Ibid, p. 38.

<sup>46</sup> "The Artillery Branch Study", p. 41.

<sup>47</sup> "A Real Big Brawl", TIME Magazine, November 11, 1957, p. 1. Accessed at <http://www.time.com/time/magazine/article/0,9171,867921,00.html>.

<sup>48</sup> USCONARC was an organization responsible for training, manning and equipping all Army forces in the continental United States. It was replaced in 1972 by Forces Command (FORSCOM) and Training and Doctrine Command (TRADOC)

<sup>49</sup> General Maxwell Taylor, Letter to LTG Mickelson, Department of the Army, Washington DC, July 16 and September 10, 1957, as quoted in "The Artillery Branch Study", p. 42.

<sup>50</sup> The Pentagon Papers, Gravel Edition, Chapter 4, "American Troops Enter the Ground War, March-July 1965," pp. 389-485, and history, 173<sup>rd</sup> Airborne Brigade, accessed at: [www.173abnbde.setaf.army.mil/history.htm](http://www.173abnbde.setaf.army.mil/history.htm) (December 20, 2006), and "The Artillery Branch Study", p. 46.

<sup>51</sup> Hauser, p. 68.

<sup>52</sup> "The Artillery Branch Study", p. 115.

<sup>53</sup> Ralph Waldo Emerson, "Works and Days", The Complete Works of Ralph Waldo Emerson, Volume VII, 1905, accessed at [www.rwe.org](http://www.rwe.org) (December 4, 2006).

<sup>54</sup> Colonel (Retired) John A. Seitz, III, "Branches Will Lose by Becoming One", Field Artillery Magazine, May – June 2006, p. 9.

<sup>55</sup> Colonel James A. Pace, USMC, "Response to: Is it Time for the ADA and FA to Merge?", Field Artillery Magazine, January – February 2006, p. 3.

<sup>56</sup> "The Artillery Branch Study", p. 116.

<sup>57</sup> Gibney, p. 17.

<sup>58</sup> "The Artillery Branch Study", p. 61.

<sup>59</sup> The mission of the Field Artillery, United States Army Field Artillery School website, <http://sill-www.army.mil/USAFAS/>, accessed on 13 January 2007.

<sup>60</sup> Field Manual 3-01.11, The Air Defense Artillery Reference Handbook, Department of the Army, Washington, DC, October 31, 2000, p. 1-1.

<sup>61</sup> Joint Publication 3-0, Joint Operations, Joint Chiefs of Staff, Washington, DC, 17 September 2006, p. III-1

<sup>62</sup> Field Manual (Interim) 5-0.1, The Operations Process, Department of the Army, Washington, DC, March 31, 2006, p. 1-5.

<sup>63</sup> FMI 5-0.1., p. 1-5.

<sup>64</sup> FMI 5-0.1, p. 1-6.

<sup>65</sup> The mission of the Chemical Corps, United States Army Chemical School website, <http://www.wood.army.mil/usacmls/>, accessed 13 January 2007.

<sup>66</sup> The mission of the Military Police Corps, United States Army Military Police School website, <http://www.wood.army.mil/usamps/default.htm>, accessed 6 February 2007.

<sup>67</sup> FM 3-90.6, The Brigade Combat Team, Department of the Army, Washington, DC, August 2006, p. 2-11., and FMI 3-91 (DRAG Edition), Division Operations, Combined Arms Doctrine Directorate (CADD), Fort Leavenworth, KS, 20 April 2006, p. 2-10, and FM 3-93 (DRAG Edition), The Army in Theater Operations, CADD, Fort Leavenworth, KS, 20 February 2005, p. N-68.

<sup>68</sup> Colonel Robert F. Hallock, "It Seemed Like a Good Idea", The Army Combat Forces Journal, November 1954, p. 31.

<sup>69</sup> Hauser, p. 67.

<sup>70</sup> FM 3-01.15, Multi-service Tactics, Techniques, and Procedures for an Integrated Air Defense System, Air, Land, Sea, Application Center, Joint Forces Command, October 2004, p. II-1

<sup>71</sup> Major General Robert P. Lennox, "Air and Missile Defense Goes Global", ARMY, December 2006, p. 40.

<sup>72</sup> The Army will have a total of 59 active component artillery battalions. 42 of these battalions will be organic to the 42 maneuver BCTs. The remaining 17 artillery battalions will be divided among the 5 active component Fires Brigades.

<sup>73</sup> There are 24 Lieutenants in a BCT. 8 of them are in the artillery battalion and 16 of them are in fire support positions in the maneuver battalions and companies/troops.

<sup>74</sup> Lennox, p. 44.

<sup>75</sup> Gibney, p. 19.

<sup>76</sup> Former Secretary of the Army Francis J. Harvey, “Army Leaders for the 21<sup>st</sup> Century”, A speech to the Army Staff Management College, 21 January 2007, accessed at <http://www.army.mil/leaders/leaders/sa/speeches/2007JanAL21.htm>

<sup>77</sup> Army Structure (ARSTRUC) Message dated 7 April 2006, Program Objective Memorandum 08-13, Department of the Army.

<sup>78</sup> Lennox, p. 38.

<sup>79</sup> “The Artillery Branch Study”, p. 42-43.

<sup>80</sup> Crabtree, p. 4.

<sup>81</sup> Lieutenant Colonel Matt Michaelson, “Thought Provoking Points”, Air Defense Artillery, Fort Bliss, Texas, April – June 2006, p. 15.

<sup>82</sup> “The Artillery Branch Study”, p. 116.

