

AIR DEFENSE ARTILLERY



THE JOURNAL OF AIR DEFENSE ARTILLERY • APRIL - JUNE 2006

The Debate Continues

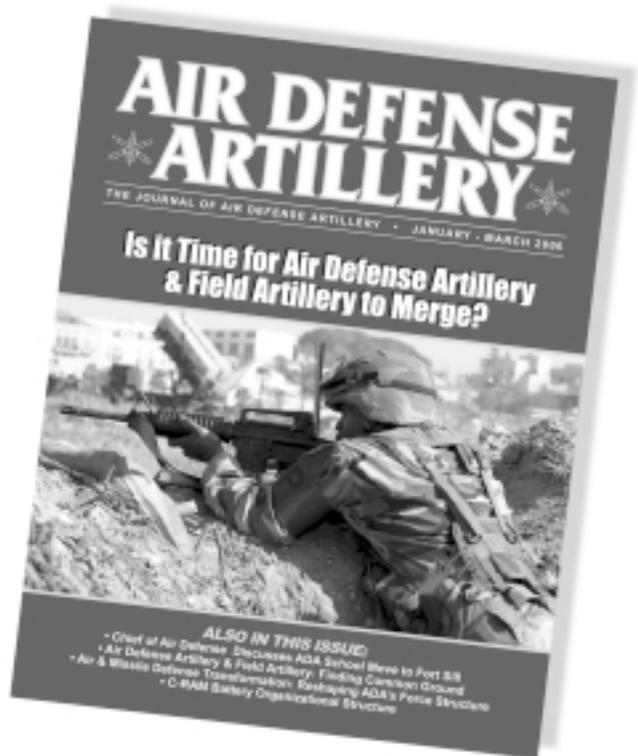
Is It Time for Air Defense Artillery & Field Artillery to Merge?



ALSO IN THIS ISSUE:

- Homeland Air Defense • The First PAC-3 Engagement
- ADAM Cell Officer-in-Charge • Fires Center of Excellence Logo Contest
- Convoy Security Escort • Combat-Focused ADA Officer Basic Course

DO YOU HAVE A WAR STORY?



ADA Magazine Needs ADA War Stories!

Air Defense Artillery magazine invites ADA Soldiers who deployed, or are still deployed, for Operation Iraqi Freedom and Operation Enduring Freedom to submit short narrative descriptions, or vignettes, describing a specific event, an ambush, a ballistic missile intercept or humanitarian mission that for them defines their combat experiences.

Email vignettes, along with any photos you may want to submit, to adamag@bliss.army.mil.

See *Air Defense Artillery* magazine's **Writer's Guide** at <http://firsttofire.com/adamag/WritersGuide.pdf> and **Digital Photo Shooter's Guide** at <http://firsttofire.com/adamag/Photo%20Specs.pdf>.





ADA MAGAZINE

The Journal of Air Defense Artillery

APRIL — JUNE • 2006

FEATURES



Intercept Point Brigadier General Robert P. Lennox praises the work of transition teams tasked to manage the collocation and integration of the Air Defense Artillery School and Field Artillery School. **Page 4**



Stripes Air Defense Artillery's command sergeant major announces his retirement and encourages Soldiers to build on the momentum the branch has built during its transition to the 21st century. **Page 6**

Always On Guard Army National Guardsmen defend the National Capital Region from air and cruise missile attack. **Page 7**

The Last Air Defense Mission The New Mexico Army National Guard's last air defense unit carries out one final mission before exchanging its Air Defense Artillery insignia for Combat Support insignia. **Page 10**

Fires Center of Excellence Logo Contest The chiefs of Air Defense Artillery and Field Artillery sponsor a contest to find the perfect logo design to represent the Fires Center of Excellence. **Page 12**



The Branch Merger Debate: Is It Time for Air Defense Artillery & Field Artillery to Merge? Air Defense Artillery Soldiers weigh in on both sides of the branch merger issue. **Page 13**

The First PAC-3 Engagement Echo Battery, 2nd Battalion, 43rd Air Defense Artillery, launches the first Patriot Advanced Capability-3 missile fired in combat and saves a critical headquarters from possible destruction. **Page 29**

The ADAM Cell Office-in-Charge Twenty-first century warfare has pushed the air defense airspace management cell to the forefront of battlefield operations. **Page 32**

Air Defense Artillery Officer Basic Course: Planting the Seed for Success An air defense lieutenant deployed for Operation Iraqi Freedom discovers his officer basic instructors knew what they were talking about. **Page 35**

Convoy Security Escort: Down a Long and Perilous Road An Air Defense Artillery platoon copes with the hazards of convoy security escort duty in Iraq. **Page 37**

By Order of the Secretary of the Army:
Peter J. Schoolmaker
General, United States Army
Chief of Staff

Official: 
Joyce E. Morrow
Administrative Assistant to the
Secretary of the Army, 0607432

BG Robert P. Lennox
Chief of Air Defense Artillery

Editor-in-Chief
Blair Case

Editor
Kathleen M. Doyle

Assistant Editor
Socorro A. Cooper

DISCLAIMER: *Air Defense Artillery* is published quarterly by Headquarters, Department of the Army, under the auspices of the U.S. Army Air Defense Artillery School, Fort Bliss, Texas. The views expressed in articles are those of the authors, not the Department of Defense or its components. *Air Defense Artillery's* content does not necessarily reflect the Army's or the U.S. Army Air Defense Artillery's school stance on issues, nor does it supersede information in other official Army publications.

PURPOSE: The purpose of *Air Defense Artillery* is to transmit news and analyses of ADA developments, changing roles and missions, and evolving tactics, techniques and procedures while serving as a forum for debate on topics and issues that affect Air Defense Artillery Soldiers.

SUBMISSIONS: E-mail manuscripts and photos to adamag@bliss.army.mil or mail them to:COMDT, USAADASCH, ATTN: ATSA-ADA (Magazine), 2 Sheridan Road, Fort Bliss, TX 79916-3802. Telephone numbers are DSN 978-5603 or (915) 568-5603.

DISTRIBUTION: Distribution is unlimited. Free distribution is restricted to the U.S. Army Air Defense Artillery School, Air Defense Artillery units, air and missile defense program offices, U.S. Military Academy and ROTC programs.

SUBSCRIPTIONS: Subscriptions are available through the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C., 20402-9375. The telephone number is (202) 512-1800.

REPRINTS: *Air Defense Artillery* is pleased to grant permission to reprint articles. Please credit the author and *Air Defense Artillery* magazine.

ON THE COVER:

The front cover collage merges Air Defense Artillery and Field Artillery weapon systems to illustrate the branch merger issue. Beginning on page 13, air defenders voice their opinions on both sides of the issue.



INTERCEPT POINT

by Brigadier General Robert P. Lennox

School, launched a debate with an article titled “Is It Time for Air Defense Artillery and Field Artillery to Merge?” This issue of *Air Defense Artillery* contains the initial response of ADA Soldiers, to Colonel McDonald’s question.

The responses do not include arguments from Soldiers of the 2nd Battalion, 44th Air Defense Artillery, or C Battery, 3rd Battalion, 13th Field Artillery, which is unfortunate, since they have a unique perspective on the branch merger issue. Until their recent redeployment to the United States, the two units, with the Field Artillery battery attached to the Air Defense Artillery battalion, worked together as a team to execute the hazardous gun-truck mission, escorting logistic supply convoys along Iraqi’s treacherous highways.

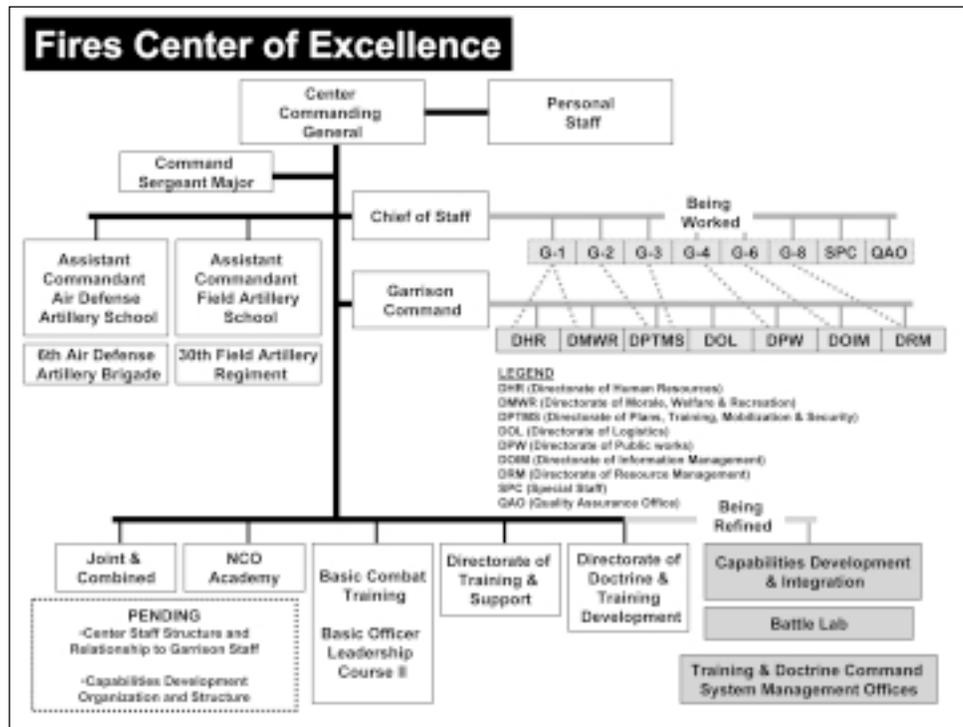
From their perspective, neither the branch merger debate nor the consolidation of the Air Defense Artillery School and Field Artillery School to create the Fires Center of Excellence probably seemed important. Rather than focusing on their branch affiliations, they concentrated on a single, unified objective, accomplishing the mission.

This spirit of working toward a single, uniform objective characterizes the work of the Air Defense Artillery School and Field Artillery School transition teams tasked to structure the Fires

Center of Excellence, formerly referred to as the NetFires Center of Excellence, while managing the move of the Air Defense Artillery School from Fort Bliss, Texas, to Fort Sill. The Base Realignment and Closure (BRAC) task is immense, the details are complex and the stakes are enormous. How fully we succeed in harnessing the synergies inherent in school consolidation and integration will, in large part, determine how well we will be able to synchronize and synergize fires on the battlefield.

Members of the BRAC transition teams are making remarkable progress. “I recently returned from a ‘Home-on-Home’ conference at Fort Bliss for both transition teams,” Major General David C. Ralston, the chief of Field Artillery, writes in his bimonthly column scheduled for the upcoming issue of *Field Artillery* magazine. “I am delighted to report that they worked as one team to solve problems and implement the BRAC directives in a spirit of absolute cooperation—I applaud them.”

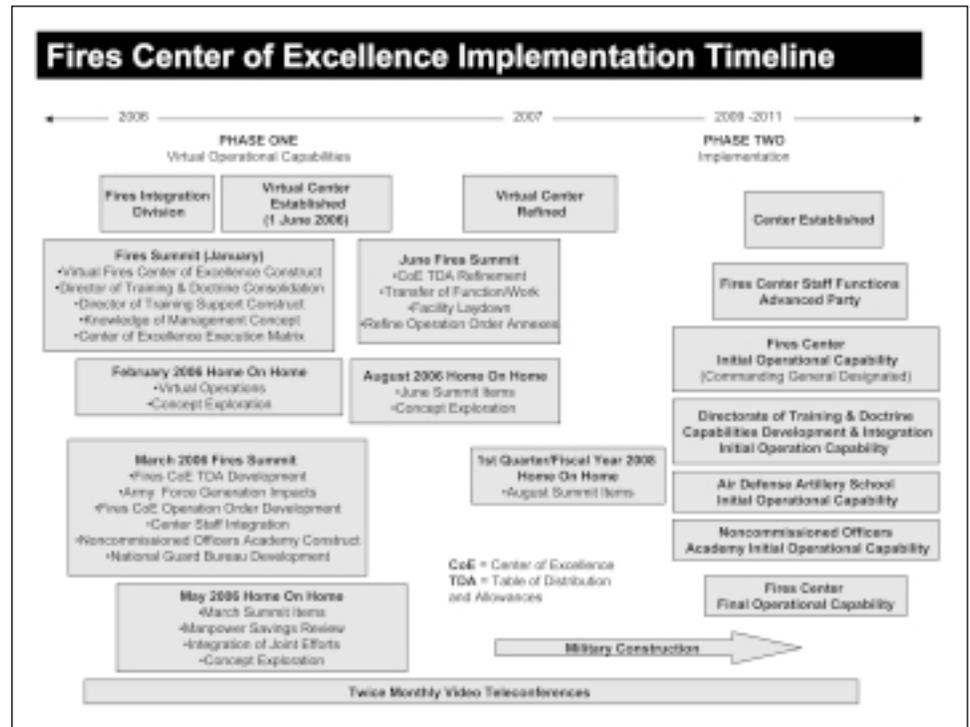
The organization chart above and timelines chart below are “pre-decisional” briefing charts subject to modification and change. However, they should give you a picture of where we are headed and how we plan to get there. Major General Ralston’s article, scheduled for publication in the May-June issue of *Field Artillery*, which will soon be available on the *Field Artillery* magazine website at <http://sill-www.army.mil/famag/index.asp> will provide more detailed information.



The debate over a possible Air Defense Artillery and Field Artillery merger will continue to attract participants from both sides of the issue, but when it comes to school collocation and integration, there's only one side. We have donned our Army Combat Uniforms—the new ones with no insignia—and are working together to ensure that the Fires Center of Excellence provides Soldiers of both branches the quality support they so richly deserve.

Robert P. Lennox

Robert P. Lennox
BG, USA
Commanding



SCANNING

Field Artillery Invites Air Defense Artillery Leaders to Fires Seminar at Fort Sill 31 May - 1 June 2006

The U.S. Army Field Artillery School will host the 2006 Fires Seminar at the Reimer Conference at Fort Sill, Oklahoma, from 31 May through 1 June 2006. The seminar has two main focus areas. The first is the collocation of the Field Artillery and Air Defense Artillery Schools at Fort Sill, establishing the new Fires Center of Excellence with a ceremony to unveil and initiate the "Virtual Fires Center of Excellence" website. The second focus is on the role of fires in the contemporary operational environment, including urban and counterinsurgency operations.

Invitees will include Army active and Reserve component, Field Artillery, Air Defense Artillery and Marine Field Artillery senior leaders, as well as, brigade-level and higher commanders and nominative command sergeants majors. Other invited guests will include other Army leaders; "fires" representatives from the joint community; and allied representatives. Invitations were sent via email in March.

As more information on the seminar becomes available, it will be posted on the Fires Seminar portion of the Fort Sill Home Page: <http://sill-www.army.mil>, to include an email address.

—Colonel Anthony J. Puckett, commander, 30th FA Regiment, Fort Sill, Oklahoma

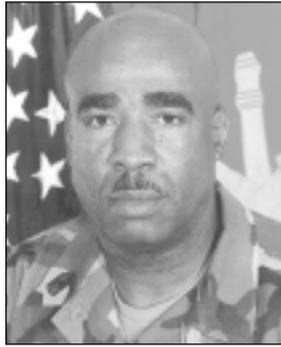
Fort Bliss Patriot Batteries Will Move to Fort Hood

Four Patriot air and missile defense batteries, currently assigned to 31st Air Defense Artillery Brigade and 108th Air Defense Artillery Brigade at Fort Bliss, Texas, are expected to begin moving to Fort Hood, Texas, in July 2006. This move is in support of the Army's Air Defense Transformation.

At Fort Hood, the Patriot batteries will become part of the 4th Battalion, 5th Air Defense Artillery, commanded by Lieutenant Colonel Reginald Davis, creating a composite air and missile defense battalion. The battalion will consist of four Patriot batteries, a headquarters battery, an Avenger battery and a maintenance company.

Families and equipment will be the first to arrive, with the rest of the unit completing the movement by the beginning of August. Approximately 790 personnel from the Fort Bliss, Texas Patriot brigades are expected to make the move to Fort Hood, and a welcome ceremony is tentatively scheduled for 10 August 2006.

—III Corps Public Affairs Office



STRIPES

by Command Sergeant Major Stanley L. Davis

By the time the next issue of *Air Defense Artillery* magazine appears, I will be retired, so this is my farewell column. My hope for the future is that our ADA Soldiers continue to perform as they have during the past three decades, an era in which Air Defense Artillery has risen from virtual obscurity to become one of our nation's premier fighting forces.

When asked what I view as the most important development during my 32 years in Air Defense Artillery, I answer that it is not new weapon systems development but the professional development of our Soldiers. Our Noncommissioned Officer Education System has made remarkable progress, and we are blessed with competent and dedicated Soldiers. I want to use this final column to address ADA Soldiers and NCOs who may be considering switching branches.

You may have heard that Air Defense Artillery is a dying branch, gutted by Army Transformation, but this is simply not true. Air Defense Artillery began its own transformation in the mid-1980s, long before Army Transformation began reshaping the rest of the force. Today, Army Transformation is something that is "happening" to the rest of the Army while Air Defense Artillery continues to lead as a proponent of change rather than a victim of change. This has enabled us to remain relevant and ready for the 21st century, shaping our own destiny, which is total domination of the third dimension, from "mud to space." The most recent promotion-board results show that our multifaceted Soldiers are highly competitive with their counterparts of equal ranks in other branches. You have every reason to expect this decades-long trend to continue; post-transformation Air Defense Artillery has plenty of room for you to grow.

We are merging our divisional air defense force with the Patriot force to create composite air and missile defense battalions. We will have fewer battalions, but this downsizing will be more than offset by the creation of air defense airspace management cells within divisions and combat brigade teams. The creation of these cells, with their high demand for ADA warrant officers, has opened wide the door for ADA Soldiers who want to become ADA warrant officers.

The air and missile defense force will grow, not shrink, as the ballistic- and cruise-missile threat continues its rapid growth. Funding is robust for the development of the Terminal High-Altitude Area Defense and Medium Extended Air Defense systems, which will produce new manning requirements as they enable us to meet the air and missile defense threat expected to rise during the first part of this century. These systems will require fewer Soldiers per firing battery than Patriot, but the growing missile threat dictates that we will need more firing batteries, and therefore, more slots for ADA Soldiers.

Additionally, the new Counter-Rocket, Artillery and Mortar mission will swell the ranks of Air Defense Artillery, enhancing leadership and promotion opportunities. The first Counter-Rocket, Artillery and Mortar fire unit is already in Iraq, where it is saving lives and taking the fight to insurgent mortar teams. Air defense Soldiers crew the interceptor—the Land-Based Phalanx Weapon System—and Sentinel radar while Field Artillery soldiers operate the system's Firefinder and Lightweight Counter-Mortar Radar. This new mission is breathtaking in scope and ambition. Our intent, as laser or directed-energy systems replace the current interceptor, is to counter indirect-fires—long the "greatest killer" on the battlefield—as effectively as we counter the air and missile threat.

Furthermore, assignment opportunities are about to increase. For more than a decade, the bulk of the Patriot force has been massed at Fort Bliss, Texas, but U.S. Army Forces Command projections show Fort Bliss Patriot brigades dispersed throughout the United States within the next several years.

Air Defense Artillery has had its ups and downs since I joined the Army in 1974, but the trajectory has been mostly up. The performances of ADA Soldiers and weaponry in Desert Storm, Iraqi Freedom, Enduring Freedom and Noble Eagle have earned the branch tremendous respect, even admiration. Our roles and missions are a top national priority when it comes to budgeting and mission planning. There has never been a better time to be a Soldier—particularly an ADA Soldier.

While I look forward to the challenges awaiting me in the civilian world, at heart, I will always be a Soldier and an air defender. The future holds no prospect for greater rewards than the ones I have already received—the honor and privilege of serving with Soldiers who wear the crossed canons and missile insignia.

First to Fire!

Stanley L. Davis

Stanley L. Davis
CSM, USA





Army National Guard Soldiers perform their joint, interagency and multinational mission from the Joint Air Defense Operation Center.

Always On Guard

Army National Guardsmen Defend the National Capital Region from Air and Cruise Missile Attack

by Colonel John Buckley and Colonel Lynn Fisher

“We cannot over-emphasize the importance with which we of the Army staff regard the on-site missile program. These units are unquestionably performing the most important peacetime mission ever assigned to the National Guard. We do not know of any other job being done at the present time, which is more important to the safety and well being of our nation. It’s a job, which must be done perfectly every minute of the day and night, and every day of the year. Any failure here regardless of how slight could mean disaster.”

—Record of Proceeding, 7 September 1960, National Guard Bureau Army Air Defense Conference

Army National Guardsmen wrote the evaluation of the homeland air defense mission that appears above almost a half-century ago, when Guard and active-duty air defenders crewed surface-to-air missile batteries at sites

scattered throughout the continental United States, defending the nation from Soviet long-range bombers. It could just as accurately describe the homeland air defense mission that Guardsmen are performing today. Since 9/11, Air Defense Artillery units from South Carolina, New Mexico, Florida and Mississippi have been vigilant in their mission to protect the National Capital Region and—on order—other high-value assets within the United States from air attacks. Soon, units from the Ohio Guard will take up the seven-day-a-week, around-the-clock vigil.

The threat from the air is real and continues to evolve. The tragic 9/11 attacks on the World Trade Center’s Twin Towers and on the Pentagon dramatically demonstrated the threat posed by hijacked commercial airliners, but each one of the thousands of small civilian aviation platforms operating daily out of hundreds of airports across the country also represent potential threats. The daily specter of



Homeland air defense operations in an urban environment require new employment methods for sensors such as the Army Sentinel radar in an elevated configuration.

land-based, sea-based or air-launched cruise missile attack grows more menacing as cruise missile systems and technologies become more widely available.

To accomplish the homeland air defense mission, Guardsmen are performing three major tasks: command and control, sensor coverage, and shooters. Each one has its own unique challenges associated with deployment within the borders of the United States.

Prior to 9/11, command and control procedures for ground-based air defense within the continental United States were fairly clear. In accordance with Joint Publication 3-01.1, *Aerospace Defense of North America*, published in 1996, “available surface-to-air defense assets are incorporated in the overall defense plan and subjected to the integrated procedures and weapons control measures of CINCNORAD [Commander-in-Chief North American Aerospace Defense Command].”

The events of 9/11 changed the landscape and led to the development and implementation of new homeland air security and homeland air defense policies. These policies have led to an environment in which joint service, interagency and multinational operations are being performed by Guardsmen executing command and control

missions. Joint-service operations require Soldiers to perform side-by-side with members of other services, such as the Air Force and Coast Guard. Interagency operations involve coordination with organizations such as the U.S. Secret Service, the Federal Bureau of Investigation, Federal Aviation Administration and the Department of Homeland Security. Interagency coordination, public visibility and tight rules of engagement create unique deployment, employment and execution challenges for air and missile defense leaders and soldiers.

All homeland air and missile defense operations performed are in the context of a multinational mission conducted by the United States and Canada within the North American Aerospace Defense Command (NORAD). As documented by the Directorate of Combat Developments, U.S. Army Air Defense Artillery School, Fort Bliss, Texas, NORAD’s plan is to support homeland defense by “deploy[ing] tailored task forces” to the United States and its territories as part of a layered joint and interagency integrated air and missile defense network.

The command and control missions performed by the Guard-manned Task Force Osprey at the Joint Air Defense Operations Center, located within the National Capital Region, have met these new requirements head-on. Commanded by Colonel Frank Laudano of the 164th Air Defense Artillery Brigade, Florida Army National Guard, Task Force Osprey is breaking new ground on how Army air and missile defense operates within the United States.

The sensor mission brings new technologies to the Guard air defender. Not only does the homeland air defense mission require the use of traditional air defense sensors, such as the ground-based Sentinel radar, but other non-Army sensors such as the Federal Aviation Administration radars. The elevated Sentinels must be used to provide air defense decision makers the best possible “air picture.”

The challenge involves integrating these diverse sensor systems and using them in urban environments such as the National Capital Region. Army Guardsmen, with the help of other organizations, such as the Air and Missile Defense Command and Control Systems Project Office, Cruise Missile Defense Systems Program Office and the Space and Missile Defense Command, have insured that the Army sensors used for the missions are always mission capable and continually improved with the latest in technological innovation.

For Avenger crewmen and other members of an Avenger battalion (-), the homeland air defense shooter mission poses challenges that require them to push the envelope of the Avenger and manportable Stinger weapon systems. Operations in built-up areas force them to deal with urban traffic and curious civilians while transporting live missiles. Weapons emplacement requires them to deploy and operate their weapon systems from the roof-tops or upper floors of office buildings occupied by civilian workers going about their daily chores. Target identification—distinguishing “good planes” from hijacked planes while watching for cruise missiles—and target tracking





National Guardsmen operate a non-U.S. Army air defense system while performing the homeland air defense mission.

are complicated by the heavy civil air traffic. Skyscrapers, the prominent terrain features of the urban environment, frequently mask approaches. The mission must continue around the clock, day and night in all kinds of weather.

The homeland air defense shooters must also train on a weapon system not currently in the U.S. Army inventory. This system has its own unique launcher and fire-control system, which must be seamlessly integrated into the total shooter environment. The shooter battalion is led by Lieutenant Colonel Glenn Skawski, of the 2nd Battalion, 263rd Air Defense Artillery South Carolina Army National Guard.

The Army National Guard is providing 200-plus soldiers for the 24/7/365 mission to provide defense from air attacks against the U.S. homeland. The importance of this mission cannot be overstated. In an *Aviation Week* article published in September 2004, former NORAD commander, General Ralph E. Eberhart, explained, “If we ever had to [shoot an aircraft down]—the person or people who authorized that decision, their life would never be the same, nor would the life of the—man or woman—who actually

pulled the trigger or released the missile.”

The Guard air defenders of today are meeting these “no room for error” missions with professionalism and competence. It is safe to assume that most air defenders in the Guard will at some time in their career be called to perform this vital homeland defense mission. In a *Joint Force Quarterly* article published in 2004, Lieutenant General H. Steven Blum, Chief of the National Guard Bureau, noted, “homeland defense—the original mission of our militia forebearers when they first settled this continent—has returned to the forefront.”

Our Guard Air Defenders are the cutting edge to that forefront.—Protecting America's Living Heritage.



Colonel John Buckley is the G-3 operations officer of 263rd Army Air and Missile Defense Command (AAMDC), South Carolina Army National Guard. Colonel Lynn Fisher is the G-2 intelligence officer of 263rd AAMDC, South Carolina Army National Guard. Up until February 2006 Fisher was the commander of Task Force Anzio, the predecessor of Task Force Osprey, operating from the Joint Air Defense Operation Center within the National Capital Region.

SCANNING



Captain Todd Schmidt.

Homeland Air Security A Challenge in Defense Transformation

Today, Army National Guard Soldiers assigned to Avenger/Sentinel units play a crucial role in homeland air security. They are tasked to defend the National Capital Region against air and missile attack, a mission ensnared in a bureaucratic tangle that badly needs unraveling. Read Captain Todd Schmidt's recommendations for streamlining the homeland air security bureaucracy at <http://airdefense.bliss.army.mil/adamag> or go direct to the article at <http://www.airdefense.bliss.army.mil/adamag/March%202006/Homeland%20Air%20Security.htm>.



The Last Air Defense Mission

With the Capitol Building in the background, a New Mexico Army National Guard Stinger team rehearses its homeland air defense mission in the early days of Operation Clear Skies.

A New Mexico Air Defense Battery Carries Out a Final Homeland Air Defense Mission Prior to Transformation

by Lieutenant Colonel Kimberly Lalley

Any unit would consider an assignment to deploy air and missile defense systems to defend America's National Capital Region against air and missile attack a mission of exceptional importance, but the 15-month mission had a special significance to Soldiers of the 1st Battalion, 200th Air Defense Artillery. Scheduled for transformation to a combat support unit, they knew the mission would be their last air defense mission, as well as the last air defense mission for the New Mexico Army National Guard, an organization whose name was once virtually synonymous with Air Defense Artillery.

The homeland air defense mission, a subset of the homeland air security mission, began as Operation Clear Skies, a series of exercises that began shortly after the 11 September 2001 terrorist attacks on New York's World Trade Center and the Pentagon. Suddenly, Americans watching the evening news were treated to live footage of Avenger air defense systems poised for action with the Washington Monument or National Capitol Building in the background. These startling images drove home the seriousness of the terrorist aerial threat to the American heartland.

At first, active-duty units accomplished the mission. Early participants included the 32nd Army Air and Missile Defense Command; 35th Air Defense Artillery Brigade; 1st Battalion, 3rd Air Defense Artillery; and the 4th Battalion, 5th Air Defense Artillery. These regular Army

units were supplemented by Stinger teams from New Mexico's 111th Air Defense Artillery Brigade. As Operation Clear Skies evolved into the homeland air defense mission, Guard units replaced active-duty units. Air defense units from South Carolina, New Mexico, Florida, and Mississippi deployed to the National Capital Region, following stopovers at Fort Bliss, Texas, for mission-specific training.

The 1-200 ADA's turn in the rotation came in August 2004 when the Army activated nearly 200 of the battalion's Soldiers for the homeland air defense mission. Most of them came from Alpha Battery, an Avenger/Stinger unit stationed in Roswell, New Mexico, but since some of the battery's Soldiers had just returned from Iraq or Afghanistan deployments, some Soldiers were drawn from other New Mexico air defense units for the National Capital Region deployment.

The 1-200th ADA drew the homeland air defense assignment as the New Mexico Guard, once predominantly an air and missile defense force, was rapidly converting all of its Patriot and Avenger/Stinger batteries to other types of units. Knowing this, some of the battery's Soldiers had volunteered for Operation Iraqi Freedom deployments with other units and were already in Iraq. Other 1-200th ADA Soldiers had volunteered for upcoming deployments. However, their plans to battle insurgents in Iraq had to be put on hold—their air and missile defense expertise would

be needed one final time for a top-priority stateside mission.

Much of the 1-200 ADA's homeland air defense mission, such as the specific location of weapons emplacements and the actual sites or facilities they protected, was shrouded in secrecy. Within the crowded National Capital Region air corridor, they were responsible for distinguishing, tracking and, if necessary, engaging potential threats, such as hijacked aircraft or cruise missiles.

The duty day was 24 hours on with two days a week "off," one for administrative duties and one for training. The battery arranged a sleep rotation schedule so it had

alert soldiers on duty at all times. With such long duty days, Soldiers whose duty stations placed them in civilian facilities had to plan for meals ahead of time and eat at their work area. They lived in apartments with roommates. Their days consisted of work and physical training. Their average physical training scores were high, according to Major Alric Pugh. The battery's three platoons competed to post the best scores, and most Soldiers scored 240 or better, while all scored above 200. They took an Army physical fitness test every six months. Leaders also ensured that all Soldiers who were eligible received the appropriate Noncommissioned Officer Education System (NCOES) courses

during their deployment. Sergeant First Class Fermin Pena, the assistant operations sergeant, sent 39 soldiers to NCOES courses. Some of the battery's officers managed to attend the Captain's Career Course, and a major finished a foreign language course.

The battery adapted their training programs of instruction to the urban environment. For site navigation, Soldiers would find their way to various historical sites. They got to see the Washington Memorial and Lincoln Memorial. They made historical side trips to Gettysburg, Antietam and other battle sites.

The residents of Southeastern New Mexico, an area that includes Carlsbad, Hobbs, Roswell and Artesia, came together as one to support the Soldiers and their families. The New Mexico Guard's Family Readiness Group stepped in to help the families with regular meetings and support.

Lorena Vigil, a family support specialist, said, "We did a lot of youth activities, the Easter Egg Extravaganza,

Movie Night, a trip for the kids to go to Carlsbad Caverns. We had a barbecue with the VFW [Veterans of Foreign Wars] in Carlsbad and the first annual GI Joe Night—that was a night where the parents could drop off their kids for the weekend—and the spouses had a 'pampering' session at Mrs. Pugh's house. It was great because the spouses didn't have to worry about their kids. Since the guys missed Christmas, we made the welcome home in Roswell a huge Christmas party with thousands of toys for the kids and great presents for the Soldiers."

The Hobbs supporters hosted Hot August Night, a fund-raiser with pictures of all deployed Soldiers displayed

on cars. Roswell supporters sponsored a mile walk with the marcher displaying Soldier photos for another fund raiser. A church conducted a mile walk, lining the route with pictures of the Soldiers. Residents also conducted a huge Fourth of July car wash to raise funds for the Family Readiness Group. "Awesome" was a word that came up a lot in descriptions of the deployment and the welcome home ceremony.

In December 2005, having completed its final air defense mission, the battalion cased its Air Defense Artillery colors and became the 717th Brigade Support Battalion. However, 1-200 ADA Soldiers still deployed in Operation Iraqi Freedom continue to wear the Indian sun symbol

patch of the inactivated 111th Air Defense Artillery Brigade. The U.S. Central Command Public Affairs Office featured Specialist Lance E. Bennett, an Avenger missile repair specialist from Artesia, in a March 2006 article, which included a photo of the specialist—still wearing the sun symbol patch—behind a truck-mounted machine gun. Having deployed with several other of the brigade's Soldiers in November 2005, Bennett said he was considering volunteering for a second tour. "I'm ready to put in for a second one," he said. "I think this is great."

After more than 50 years in the air and missile defense business, the New Mexico Army National Guard had taken up a new line of work.



Brigadier General Kenny C. Montoya, Adjutant General of New Mexico, congratulates Soldiers of the 1st Battalion, 200th Air Defense Artillery, for their successful completion of their last air defense mission, homeland air defense of the National Capital Region.



Lieutenant Colonel Kimberly Lalley is the New Mexico Army National Guard public affairs officer.

Fires Center of Excellence LOGO CONTEST

The chiefs of Air Defense Artillery and Field Artillery are sponsoring a contest to find the perfect logo design to represent the Fires Center of Excellence. Ultimately, this logo will be unveiled at the opening ceremony of the "Virtual Fires Center of Excellence" on 1 June 2006 at Fort Sill, Oklahoma.

The Air Defense Artillery School at Fort Bliss, Texas, and the Field Artillery School at Fort Sill, Oklahoma, are standing up the "Virtual Fires Center of Excellence" as a prelude to the Base Realignment and Closure Commission's mandated physical collocation of both branches and the establishment of the joint and coalition fires home at Fort Sill.

The chiefs of Air Defense Artillery and Field Artillery are sponsoring this contest to enlist a full spectrum of design ideas for the Fires logo. The contest is open to (regardless of branch) active duty Soldiers; military retirees, dependents and civilians, as well as other interested parties. Three logos will be selected from the submissions and designated first, second and third place with the designers receiving \$1000, \$300 and \$200 respectively. Funding for the awards is being donated by the Air Defense Artillery Association and Field Artillery Association. The winning logo could potentially become the permanent Fires Center of Excellence logo.

Requirements

The logo should be a simple, catchy, full-color design that is equally attractive when printed in black and white or grayscale. It should be crisp and clear and of high quality, making it easy to reproduce for use post-wide for items such as conference folders, briefing slides, etc. The winning design also may be reproduced on raised-surface plaques for walls, the main gate entrance, adorn the front of podiums, etc. The logo design must be a minimum of 8-by-10 inches with a 300 dots-per-inch (dpi) quality. Digital submissions must be in JPEG (filename.jpg) format with a minimum quality setting of medium. Submissions must include the designer's full name, address, telephone number, email address and, as applicable, military rank, job title and unit listed on a sheet separate from the logo.

Send Submissions

Submissions must be received by 1630 hours, 1 May 2006. Judging will be performed by a panel of visual information and strategic communications specialists, as well as selected Air Defense Artillery and Field Artillery senior leaders. Submissions will be provided to the judges anonymously, who will also determine whether the first place logo design will be used as the permanent Fires Center of Excellence logo. The judges' decisions will be final.

SUBMISSIONS: Ms. Shirley Dismuke, (580) 442-8075/3944 (DSN 639)

Email: shirley.dismuke@sill.army.mil

Mail: Office of Strategic Communications, U.S. Army Field Artillery Center; ATTN: ATZR-T; Fort Sill, OK 73503

FEDEX: McNair Hall, Room 210; 455 McNair Road; Fort Sill, Oklahoma 73503

***NOTE:** All contestants waive copyright to the logo designs. All submissions become the property of the Fires Center of Excellence and will not be returned. Winners will be notified by 1 June 2006. Winning logos will appear in upcoming editions of Air Defense Artillery and Field Artillery magazines.*

THE BRANCH MERGER DEBATE



Air Defenders Must Retain Separate Identity Page 14
Air Defense Artillery sergeant major says, “If it ain’t broke, don’t fix it.”

Thought Provoking Point Page 15
Air defender sees advantages to branch merger, but isn’t prepared to remove the missile from his branch insignia “just yet.”

Operation Red Net: A Plan for a Dynamic Future Page 16
An ADA major fashions an operational plan for successfully merging the branches.

Managing Fires Page 21
ADA lieutenant colonel says the Army needs to look beyond merging Air Defense Artillery and Field Artillery to a new organizational structure for the application of firepower.

Common Ground Page 23
The ADA branch historian argues that the 1950s decision to merge Antiaircraft and Field Artillery was based on faulty premises that doomed the union to failure.

Is It Time for Air Defense Artillery & Field Artillery to Merge?

In his article, “Is It Time for Air Defense Artillery and Field Artillery to Merge?” which appeared in the January-March 2006 issue of *Air Defense Artillery* magazine and the January-February 2006 issue of *Field Artillery* magazine, Colonel Mark McDonald challenged readers to debate the merits of merging the two branches. Since Colonel McDonald is the assistant commandant of the Field Artillery School, the article attracted considerable attention. Air defenders responded to Colonel McDonald’s challenge by composing full-scale articles, short essays or letters to the editor, some of which appear on the following pages.

Air Defenders Must Retain Separate Identity

by Sergeant Major Dennis M. Burch

I'd like to write a few words in response to Colonel Mark McDonald's article, "Is It Time for Air Defense Artillery and Field Artillery to Merge?" I am an active duty Air Defense Artillery sergeant major currently stationed in South Korea. I've been Air Defense Artillery my entire career and have witnessed much change and transformation within our branch.

Colonel McDonald writes, "Because of the differences in our branches, many think there is no question that the branches must stay separate, that the argument made in 1968 to split the branches still must be valid." He also advises those of us who agree with that statement to "stop reading" the article. Well, Sir, I disobeyed your order and continued reading!

First, let me say that I do believe our senior leaders know what they are doing. I'm sure that much thought went into making the decision to collocate the Air Defense Artillery School and Field Artillery School. I do not, however, believe the Base Realignment and Closure Commission's directive for the Air Defense Artillery School to move from Fort Bliss, Texas, to Fort Sill, Oklahoma, is the "writing on the wall" concerning the future "merging" of our branches. Here's why: in an interview titled "NetFires Center of Excellence," which like Colonel McDonald's article, appeared in both *Field Artillery* and *Air Defense Artillery* magazines, Brigadier General Robert P. Lennox, chief of Air Defense Artillery and commanding general of Fort Bliss said, "As General Ralston [Major General David C. Ralston, chief of Field Artillery] and I move forward on establishing the NetFires Center, we'll recommend that ADA and FA become one branch if it makes sense for the Army." I heard an "if" in there. The chief of Air Defense Artillery and commanding general of Fort Bliss said it. His use of that one little word let's me know that the die has not been cast.

Collocating similar functions to form centers of excellence makes sense, although most air defenders probably wish the Field Artillery branch were moving to Fort Bliss instead of the Air Defense Artillery School moving to Fort Sill, Oklahoma. We can't help it. History and tradition grow deep roots.

Prior to 1968, Air Defense Artillery and Field Artillery was the same branch. Functions can't get much more "similar." In fact, Webster's II New Riverside Dictionary (the one with "Property of U.S. Government" stamped on it) defines similar as "resembling though not completely identical." There you have it, the reason for collocating our respective branches into a center of excellence. Some would like to take "the bull by the horns and move out on

a plan to merge the two schools and branches." Why the push to merge? Colonel McDonald's "take the bull by the horns" analogy can be countered with one of my favorite sayings: "If it ain't broke, don't fix it." Just because our branches "resemble" each other doesn't mean they should be one and the same.

In their article, "Finding Common Ground Air Defense Artillery & Field Artillery," which also appeared in the same issue of both magazines, Colonel Gregory C. Kraak (director of the Field Artillery School's Directorate of Combat Development) and Colonel Harry L. Cohen (director of the Air Defense Artillery School's Directorate of Combat Development), explore interoperability concepts for a potential merger of Air Defense Artillery and Field Artillery. The article begins with discussion concerning the "U.S. Central Command requesting an immediate capability to counter the growing threat to U.S. forces from insurgent rockets and mortars." The Counter-Rocket, Artillery and Mortar (C-RAM) system was developed to address the threat. Air Defense Artillery, Field Artillery and U.S. Navy weaponry were combined to create the C-RAM system of systems. I agree with the colonels that the C-RAM "produced a capability in theater that already has proven its value by saving Soldiers' lives and taking the fight to those who seek to use rockets and mortars against our forces." The C-RAM system development and fielding is a wonderful success story. However, the resulting examination of potential areas of synergy attempts to make the "leap" from branch similarities to a future "unfettered by the branches' existing structures."

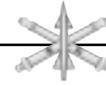
Why must Air Defense Artillery and Field Artillery merge to have synergy? The C-RAM was developed with both branches' and the US. Navy's involvement. It serves as a shining example of our ability to work together, separately. Let's not forget the Navy's involvement in the C-RAM system. Maybe we should consider combining the Navy with the Army. My point is you can find "common ground" just about anywhere you look for it. After all, the U.S. Air Force was once the Army Air Corps. They have pilots; we have pilots. Imagine the possibilities!

Is it time for Air Defense Artillery and Field Artillery to merge? I don't believe so. The talk of commonality, synergy and the like has not convinced me. Does the conversion of 36 Field Artillery battalions to 149 Military Police units have anything to do with the much anticipated, by some, merger? I'm sure most of us have heard the term "self-licking ice cream cone," which exists for its own purpose and serves no one.

Is It Time for Air Defense Artillery & Field Artillery to Merge?

I agree with Brigadier General Lennox when he said “The Netfires Center of Excellence will be an exciting place to be.” I am also convinced that the “way ahead” for our branch should allow us to maintain our separate identity. Another of the general’s statements, I believe, serves to reinforce my point. “If you look at the Combined Arms Support Command, CASCOM [Fort Lee, Virginia], it has been a center of excellence for as long as I can remember,

but Quartermaster, Ordnance and Transportation have retained their branch identities.” We, as air defenders, must retain ours.



Sergeant Major Dennis M. Burch is assigned to Headquarters and Headquarters Battery, 35th Air Defense Artillery Brigade, Osan Air Base, South Korea.

Thought Provoking Points

by Lieutenant Colonel Matt Michaelson

While I’m not prepared to remove the missile from within my Air Defense Artillery branch insignia just yet, Colonel Mark McDonald does offer some thought-provoking points in his article, “Is it time for Air Defense Artillery and Field Artillery to Merge?” All leaders realize that Soldiers with a “glass half full” mentality will make greater strides in tackling the missions from the Base Realignment and Closure Commission than those with a closed-minded, archaic stance who attempt to fight against the current of creating a Fires Center of Excellence. In that regard, Colonel McDonald’s points in the article regarding center of excellence synergies are especially applicable in light of some current practices already ongoing in the force today. For example, the two branches already share aspects of “common ground,” from networked sensors in support of the Counter-Rocket, Artillery and Mortar program, to both Air Defense Artillery and Field Artillery noncommissioned and enlisted military occupational specialties readily sharing skill sets to maximize equipment readiness and employment downrange.

Inside the brigade combat team battle staff, the requirement for the closest coordination between the Air Defense Artillery officer who serves as the air defense airspace management cell officer-in-charge and the Field Artillery officer who serves as the effects coordinator cannot be over-emphasized. Requirements to synchronize and deconflict airspace platforms from surface-to-air rocket, artillery and task force mortar fires with Army airspace command and control is paramount to ensuring maximum effects in support of the ground commander. Such close coordination requires an element of battle officer interchangeability that only the best battle staffs have recently begun to internalize. Many brigade combat team battle staffs already enforce the requirement for effects-minded members of the commander’s air-ground integration team to cross-train in doctrinal application, systems understanding, and requirements on staff. Such flexibility within

battle-staff ranks pays big dividends when trying to simultaneously plan future operations, direct current operations and continually work to preserve options for the commander. Colonel McDonald alludes to these war-fighting commonalities between branch officers and rightfully directs that continued systems integration can only work to enhance our ability to maximize the third dimension of battlefield operations (air).

While not quite a “level playing field” just yet, it would be ridiculous for professionals not to continue discussions in this regard and work to bring both our branches together in such a way that makes our warfighting potential unrivaled. Certainly a failure to make such dialogue would give the enemy first crack at setting his conditions during the war game—and that is something we all can agree should be absolutely prohibited.



Lieutenant Colonel Matt Michaelson is the air and missile defense/air defense airspace management cell senior trainer, Bronco16, National Training Center, Fort Irwin, California.

Join the Branch Merger Debate!

Should the Army merge Air Defense Artillery with Field Artillery? It’s not too late to add your opinion to the branch merger debate. E-mail letters to the editor or articles to adamag@bliss.army.mil.

OPERATION RED NET

A Plan for a Dynamic Future

by Major Cristine Gibney

“Change has a considerable psychological impact on the human mind. To the fearful, it is threatening because it means that things may get worse. To the hopeful, it is encouraging because things may get better. To the confident, it is inspiring because the challenge exists to make things better.” —King Whitney, Jr., *Wall Street Journal*, 7 June 1967

In his article, “Is It Time for Air Defense Artillery and Field Artillery to Merge?” which appeared in both *Air Defense Artillery* and *Field Artillery* magazines, Colonel Mark McDonald, the assistant commandant of the Field Artillery School, challenged both Air Defense Artillery and Field Artillery Soldiers to open the debate regarding a branch merger.¹ This article is a response to that challenge. It is time to take an active role to ensure that we worshippers of Saint Barbara serve the Army as well in the future, as we have in the past.

Great organizations recognize a changing environment and make adjustments to survive. February 2006 marked the end of the Western Union telegram, an American institution for 154 years. Why is this relevant to a branch merger? Because Western Union changed to survive; it is now a financial services company, instead of a communications company.² The company spokesman commented, “[t]he decision was a hard decision because we are fully aware of our heritage.”³ Western Union traded their historic identity for progress. That is a little sad, but also inspiring, because the company keeps its heritage as it moves toward success in the future. Field Artillery and Air Defense Artillery can learn from Western Union. We can keep our rich heritage while we create a new, dynamic future.

Like Western Union, the first step is to eliminate our visceral response to the concept of a branch merger. We must be honest about the arguments we make against a merger—how many are analytical arguments and how many are based on feelings? There is so much change going on in the Army right now that it is difficult to digest these changes. We are involved in a long war and must be

prepared to do what is best for the Army and the nation. With email and cell phones, can you think of any reason why anyone might send a telegram? We must avoid the temptation to give the Army “telegrams” and, instead, base our capabilities on the transformed Army’s requirements.

The Army is in the middle of transformation and has already made significant changes outside of the Air Defense Artillery world. We are rapidly moving out of the “black-boot Army” and to an Army that wears tan boots and whose combat uniform includes no branch insignia.⁴ Take the “Transformation Quiz” below to test your knowledge of some structural changes in the heavy brigade combat team (HBCT), the centerpiece—along with Infantry and Stryker Brigades—of the transformed force.

Transformation Quiz

Use the HBCT force structure for your answers on the following three questions:

- A HBCT has _____ Infantry battalions.
- An armored reconnaissance squadron has _____ M1 Abrams Tanks.
- A fires battalion has _____ M7 Bradley Fire Support Team (BFIST) vehicles.

The answer to all questions is zero. HBCTs have two combined arms battalions (CABs), which include two Armor companies; two Infantry companies; one Engineer company; one HHC, with sniper, scout, mortar platoons and a fire support element; and one forward support company. HBCTs have an armored reconnaissance squadron (ARS) that is equipped with M3 Bradleys and M1114s, but has no M1 Abrams Tanks. Finally, the HBCT has 11 total BFISTs. BFISTs are assigned to the CABs and ARS while the HBCT fires battalion has Paladin self-propelled howitzers and radars, but no BFISTs.

New Organizations, New Paradigms

Why are the nuances of the HBCT modified table of organization and equipment relevant to an article about

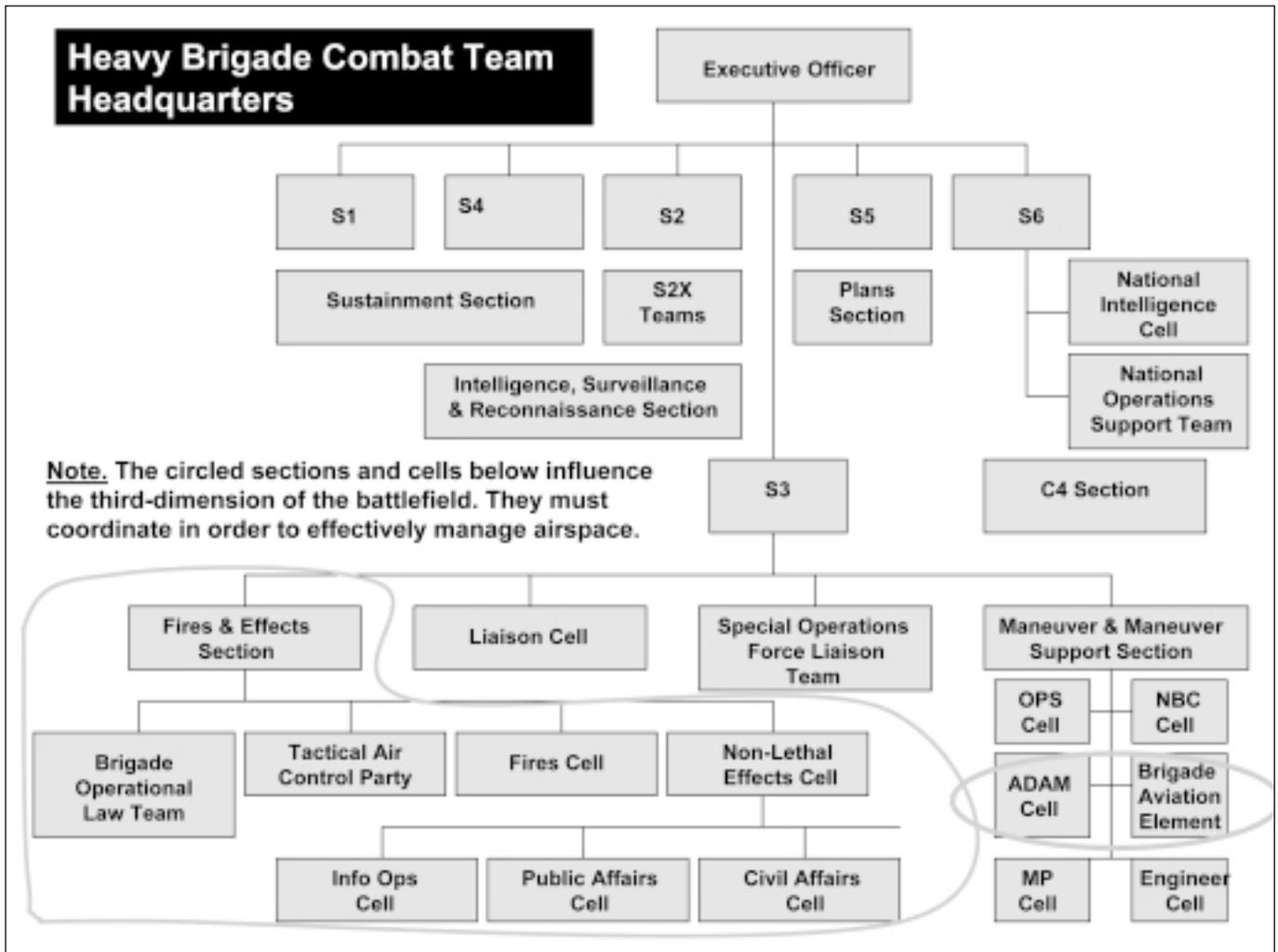
¹ Colonel Mark McDonald, “Is It Time for Air Defense Artillery and Field Artillery to Merge?” *ADA Magazine Online*: [http://airdefense.bliss.army.mil/adamag/2006/January%202006/branch merger.htm](http://airdefense.bliss.army.mil/adamag/2006/January%202006/branch%20merger.htm), accessed 2 Feb 2006.

² Associated Press, “Western Union ends telegram service after 154 years,” *Killeen Daily Herald*, Killeen, Texas, 5 February 2006, p. F3.

³ Ibid.

⁴ Black-boot Army is a term that references “non-transformed forces” or Soldiers and leaders who adhere to outdated thoughts or ways of doing things, coined by Major Christopher Wilbeck after receiving Rapid Fielding Initiative Boots for the new Army Combat Uniforms.

Is It Time for Air Defense Artillery & Field Artillery to Merge?



the future of Air Defense Artillery? It helps put transformation into context. Radical changes are happening all around us.

In accordance with Base Realignment and Closure (BRAC) Commission recommendations, which have passed into law, the U.S. Army Armor School is moving from Fort Knox, Kentucky, to Fort Benning, Georgia, where it will be collocated with the U.S. Army Infantry School to form the Maneuver Center of Excellence. This parallels the BRAC collocation of the Air Defense Artillery School and Field Artillery School to form the Fires Center of Excellence at Fort Sill, Oklahoma. This is just getting underway and will take years to complete. However, our Infantry and Armor brothers are already assigned together in the same battalions. The CAB battalion commander's vehicle is an M1A2 System Enhancement Package Abrams Tank. Why is that significant? A battalion commander wearing Infantry brass is now a member

of a tank crew. If we can put an infantryman in a tank, it is time to consider putting an air defender in a BFIST.

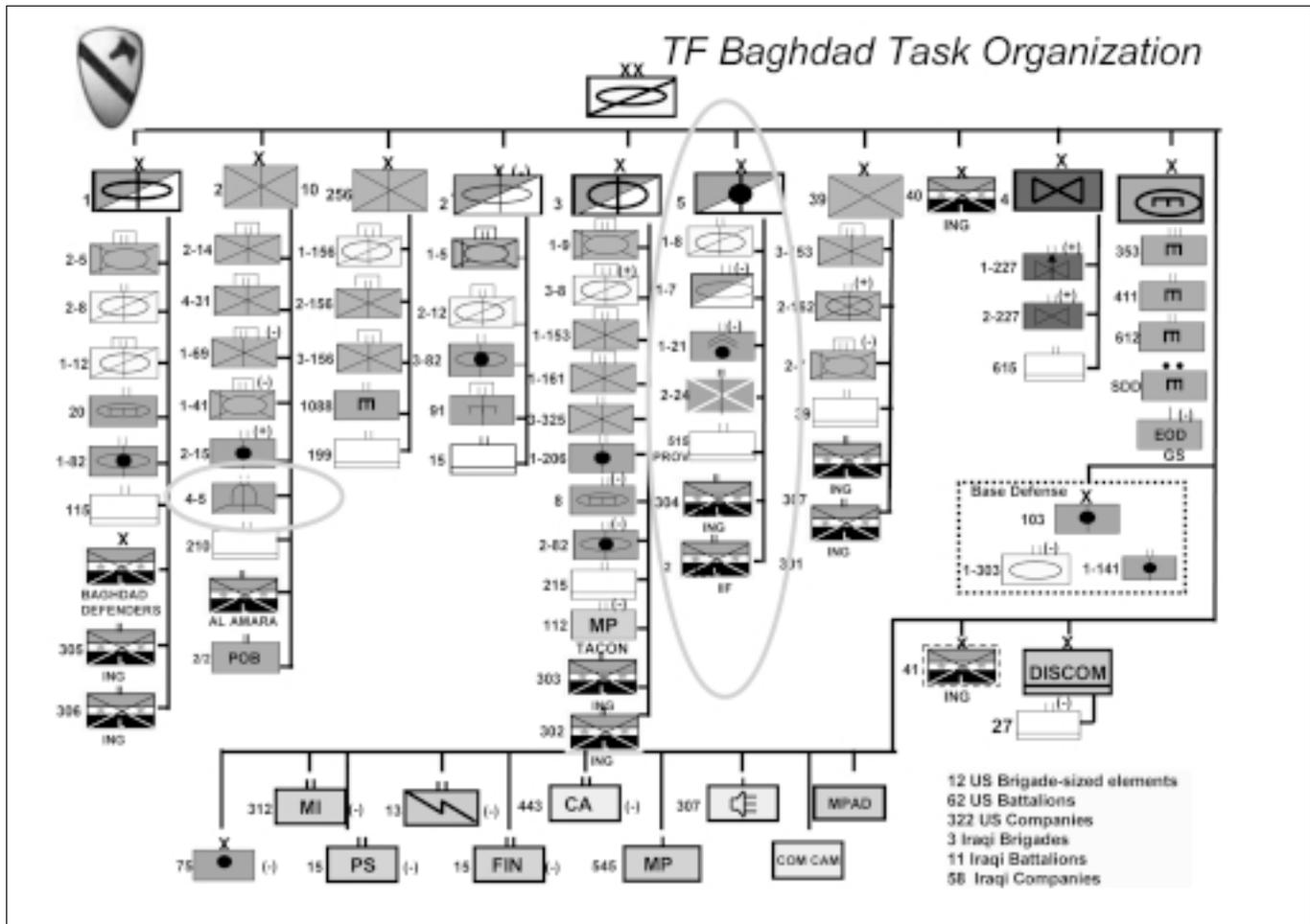
Do the Branches Have Enough in Common?

In their article, "Finding Common Ground," which appeared along with Colonel McDonald's article in both branch magazines, Colonel Gregory Kraak, director of the Field Artillery School's Directorate of Combat Development, and Colonel Harry Cohen, his counterpart at the Air Defense Artillery School, discuss common synergies between the branches. I could make arguments that Air Defense Artillery should fall under the Fires Center of Excellence or Maneuver Support Center of Excellence—but all arguments are academic.

The bottom line is that both artilleries operate in airspace, use radars and complex cuing systems and must develop their courses of action to support maneuver operations.⁵

⁵Colonel Gregory C. Kraak and Colonel Harry L. Cohen, "Finding Common Ground: Air Defense Artillery and Field Artillery," *ADA Magazine Online*, <http://airdefense.bliss.army.mil/adamag/2006/January%202006/Common%20Ground.htm>, accessed 2 Feb 2006.

Is It Time for Air Defense Artillery & Field Artillery to Merge?



As a newly transformed HBCT, the brigade I am assigned to (2nd BCT, 1st Cavalry Division) is working through roles and responsibilities within the staff. The current relationship between the fires and effects section and the air defense airspace management (ADAM) cell is a source of friction. Field Manual (Interim) 90-6, *Heavy Brigade Combat Team*, states that the fire-support coordinator is responsible for all planning, coordination and execution for lethal and non-lethal effects.⁶ However, the ADAM cell and brigade aviation element are part of the maneuver support section. We have doctrinally established a system that has the air liaison officer functionally separated from the aviators and air defenders on the staff.

There may be wisdom involved in the rationale to separate the main players in the third dimension, but I have not yet been able to figure out why we've organized this way as we struggle through physical layout and functional issues of setting up our tactical operations center. My argument to fuse the ADAM cell with the fires and effects section is based on the dysfunctional

arrangement we currently have in the HBCT organization. Can we make it work? Absolutely, but we have designed a less than optimal construct. Why did we do that? From someone executing this doctrine, it appears to be more a result of parochial concerns than of a commitment to optimize functions.

Adaptive Soldiers

If you look at the current operating environment, both branches are full of adaptive Soldiers. This common trait was evident in Operation Iraqi Freedom. During Operation Iraqi Freedom II, the ADA battalion attached to Multinational Division-Baghdad, which was organized under the 1st Cavalry Division flag, operated as a heavy/motorized infantry battalion. The 4th Battalion, 5th Air Defense Artillery, was responsible for Route Irish, the (in) famous Airport Road, which links Camp Victory to the International Zone. The battalion's M6 Bradley Linebackers operated in an M2 Bradley role. Delta Battery, 4-5 ADA, the Avenger battery, served with the Division

⁶U.S. Department of the Army, FMI 3-90.6 *Heavy Brigade Combat Team*, March 2005, Page B-8.

Is It Time for Air Defense Artillery & Field Artillery to Merge?

Support Command (DISCOM) and performed convoy security missions.

The Field Artillery also has bragging rights. The 1st Cavalry's Division Artillery, also known as "Red Team," became the division's fifth organic maneuver brigade. Red Team not only commanded and controlled an armor battalion and the ground companies from the division's cavalry squadron, but also exercised command and control over a Marine expeditionary battalion along with Iraqi National Guard and Intervention Force battalions.

These examples demonstrate how Air Defense Artillery and Field Artillery Soldiers have a tradition of adaptive behavior. Both branches rose to the occasion when the 1st Cavalry Division asked them to go to combat outside of their normal skill sets. This trait will help both forces transition in future endeavors.

Operation Red Net

How do we integrate the branches? *How the Army Runs: A Senior Leader Reference Book*, a publication of the U.S. Army War College, asserts that "[c]hanging large organizations with well-developed cultures embedded in established hierarchical bureaucracies is incredibly difficult. The mere existence of functioning complex organizational systems and processes tend to thwart change."⁷ We must devise a systemic plan that will facilitate change.

Here is a "back of the envelope" model for a campaign plan to reach a transformed Fires "branch." There are five simultaneous but staggered lines: Materiel; Personnel, Leadership and Education; Doctrine and Organization; Training; and Facilities.

Materiel. Due to the acquisition process, the materiel line must initially use currently programmed systems. As other lines mature, materiel requirements must transition to systems identified by operational requirements. The overall structure of the Army must drive these requirements.

Personnel, Leadership and Education. Personnel, leadership and education must be the main effort. The attitude of Soldiers and leaders in each branch is decisive and will determine the success of this plan. Why lay the ground-

work for this line before beginning the doctrine and organization line? Legacy branch leaders must establish a positive sense of security and of the future before a real discussion about doctrine or organization can begin. We must make 13- and 14-series personnel confident in their futures so that they look for options to make the Army better instead of options that protect their piece of "turf."

Both of the branches must focus on what the Army *needs*, not what constituencies of Soldiers *want* a branch to look like.

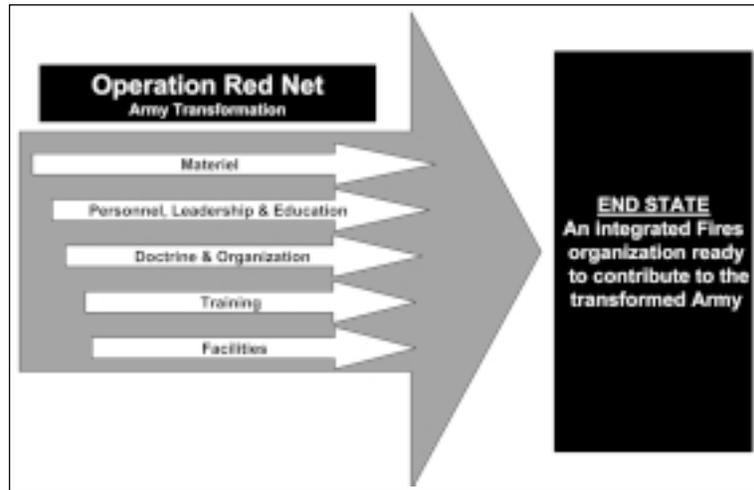
Addressing personnel issues first will help quell some of the emotions surrounding a new identity. The Q-36 Firefinder radars will make it through organizational change just fine; it is the Soldiers who need to perceive this change as positive.

We may need to develop commander's critical information requirements that includes perceived deprivation in any one group, or parochial behavior in units or other organizations. Both Field Artillery and Air Defense Artillery Soldiers must believe that they will have a future and will be value-added in this new organization.

As the Army highlights personnel issues, every Soldier must understand that they must personally be adaptive to change. Soldiers should see the Army's attempt to put them first during transition as a contract. Everyone must be ready to adapt and develop new skills and knowledge.

'We must make our commissioned officers pentathletes.'

The greatest impact of a merger will be on the commissioned officer corps, but it will also support the Army vision for officers. I attended a Human Resources Command brief a few months ago in which briefers discussed developing "pentathletes," a reference to the modern Olympic pentathlon, which requires athletes to compete in five events emphasizing different skill sets in one grueling day. We must make our commissioned officers pentathletes. There may be a way to merge some warrant or enlisted military occupational specialties, but this will not occur until there are material changes that require adjustments on military occupational specialties. This cross-fertilization may not be as difficult as initially thought.



⁷ Colonel Edward Fililberti, *How the Army Runs* (Chapter 1), Army War College, Carlisle, PA, p.1.

Is It Time for Air Defense Artillery & Field Artillery to Merge?

Within the ADA community, the high- to medium-altitude air defense (HIMAD) and short-range air defense (SHORAD) divide was bigger than some of the Field Artillery and Air Defense Artillery divides. My ADA planner was a SHORAD lieutenant (opposition forces at the National Training Center). I believe he would have an easier transition to a HBCT fires battalion than he would if he went to a Patriot battalion. The gap between Patriot and Paladin may be great, but how great is the gap between a BCT fire support element and the ADAM cell?

As we broaden skills sets, there will be a requirement for more deliberate personnel management. How do we broaden the view of our officer corps without jeopardizing the skills cultivated in a smaller branch? One way may be to make commissioned officers “generalists,” or pentathletes, and increase the role of the warrant officer and/or senior noncommissioned officers to ensure stability in units. The personnel system will need to be more deliberate in both managing individuals and synchronizing experience in units.

These issues should be addressed as we begin a transition to free the attitudes of the people at the table during doctrinal and organizational discussions. This line will continue to develop as doctrine, training, etc., solidify the direction of the Fires merger.

Doctrine and Organization. Initial focus on the personnel and leadership systems will set conditions for doctrine and organization. A developed way-ahead for personnel will enable open and productive discussions based on Army requirements.

As the doctrine and organization line becomes clearer, there may be required adjustments in the personnel and leader development lines. This is the reason that these lines may start staggered, but lines must mature through simultaneous operations once the line enters the construct. A decisive point along the doctrine and organization line would be force structure within fires battalions and/or Patriot battalions, all the way up to corps, Army air and missile defense command and theater-level fires and missile defense cells. Another decisive point could be the publication of a manual similar to FM 44-100, *U.S. Army Air and Missile Defense Operations*, to communicate the new doctrine to the field.

Training. The training line of operations will build upon the doctrine and leader development issues developed in the other lines. Personnel and doctrinal concepts will shape the future and develop training requirements.

Facilities. The facilities line has the final temporal start point during the staggered campaign plan. As we identify the training and organizational requirements, we can organize facilities prior to the Air Defense Artillery School’s

move to Fort Sill. This will eliminate a large-scale duffle-bag drag as we set up a new “heart of the [Fires] branch.”

Transform or be Transformed

Both branches must avoid the instinct to bend over backwards to avoid moving forward. The BRAC ruling to move the Air Defense Artillery School to Fort Sill is the handwriting on the wall. Most likely, this merger will occur, but do we want to take an active roll in making this a successful merger, or do we want the merger to happen to us?

We must be like Western Union and find a way to celebrate our rich history, while identifying our place in the future. We must support the emerging doctrine and transformation. Much has already changed, but there is still a lot of change that must happen with the current momentum. We have the opportunity to contribute. I recommend that we put our smart Air Defense Artillery and Field Artillery minds together, become pentathletes and make the Army a stronger organization ready to dominate land warfare in the future.



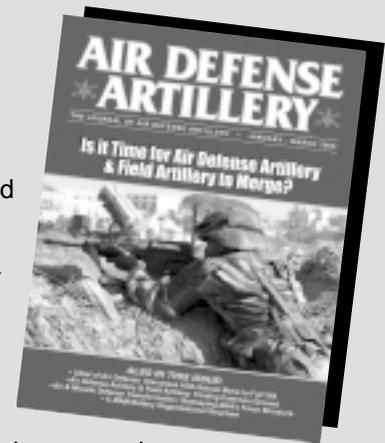
Major Cristine Gibney, the air and missile defense officer for the 2nd Brigade Combat Team, 1st Cavalry Division, served as the G3 maneuver planner for Multinational Division-Baghdad/1st Cavalry Division during Operation Iraqi Freedom II. She previously commanded B/4-6 ADA and D/1-1 ADA (Patriot).

SCANNING

Visit ADA Magazine Online

Read original air and missile defense articles, many of which never appear in print. Stay abreast of air and missile defense developments by clicking daily

updated links to articles appearing on news media websites. Download the print version of Air Defense Artillery magazine in PDF format. Go to <http://airdefense.bliss.army.mil/adamag>.



Managing Fires

The Army Needs to Look Beyond Merging Air Defense Artillery and Field Artillery to a New Organizational Structure for the Application of Firepower

by Lieutenant Colonel Elliott Bales

The transformation of the way the U.S. Army conducts warfare inevitably leads to the creation of new capabilities and organizational concepts. One of the logical concepts that grow out of technological developments and the dramatic changes that have occurred in the military operating environment is the need to integrate all elements involved in delivering fires. The current discussion of merging Field Artillery and Air Defense Artillery has focused on how we can work together towards common goals. This linear plodding from where we are today to the next obstacle will result in unnecessary and expensive side trips to find common ground. Intellectually, the Army must develop a visionary view of what we need to do to apply fires in the coming decades, and looking back towards today's stance, chart a path for the future to achieve that vision.

The proliferation of command, control, communications, computers and intelligence (C⁴I) has given the world's military and paramilitary forces the ability to synchronize the delivery of fires from tactical through strategic platforms. These platforms themselves have made enormous advances in range, payload, miniaturization, mobility, accuracy and cost. The proliferation of Internet, satellite and cellular communications combined with global media coverage has given even rag-tag militias the means to deliver timely and accurate fires.

Fires as a System

To create a vision of how U.S. forces should organize to operate in the fires domain of modern warfare, it is important to look at the way in which we apply fires today. The Army employs a number of ground-launched capabilities, including mortars, howitzers, rockets and short-range ballistic missiles. The Army, along with the other services, employs unmanned aerial vehicles for targeting and rotary wing aircraft to deliver fires. The Navy, Air Force and Marine Corps deliver fires with cruise missiles and fixed-wing aircraft. National capabilities affecting fires include unmanned aerial vehicle reconnaissance

and fires, long-range ballistic missiles and satellite collectors. In the near future, U.S. forces will add directed-energy technology to its arsenal of fires delivered from various platforms.

Most competitor forces have some or all of these same capabilities to use against U.S. forces, allied nations and even against the U.S. homeland. Our forces must develop an integrated capability to execute the timely and accurate delivery of fires while simultaneously countering any adversary's fires system. This will require a fires organization that can operate in four distinct focus areas of the fires domain to provide comprehensive and complimentary solutions to the fires challenges of today and tomorrow. These four areas are offensive fires, counter fires, airspace control and targeting/early warning.

Offensive Fires

Offensive fires encompasses the traditional challenges of delivering fire support for maneuvering forces and destructive fires using precision and area munitions; they also include the delivery, through non-lethal means, of messages and themes that lead to successful manipulation of a target's behavior. Offensive fires are designed to generate initiative and momentum, creating opportunities for exploitation by maneuver or the application of other instruments of power.

Counter Fires

Counter fires embrace the historical mission of destructive fires against enemy ground-based systems. They also extend to the destruction of enemy air and missile platforms in the air and on the ground. With the emergence of technical capabilities to counter enemy rockets, artillery and mortars, this focus area would also deal with the development and application of these tools. Counter fires would also deal with the measures taken to counter enemy information campaigns and minimize the effects of negative information. Counter fires are designed to nullify the effects of enemy offensive capabilities and

Is It Time for Air Defense Artillery & Field Artillery to Merge?

destroy the enemy's ability to generate those capabilities.

Airspace Control

Airspace control deals with the application of positive and procedural controls to move users through volumes of airspace with no impact to other friendly systems. The proliferation of unmanned aerial vehicles, the increasing number of air platforms operating within the aerial dimension of the battlespace, and the complications of accommodating coalition and civilian airspace users makes this a complex area. Providing multiple control organizations that have the authority to direct the use of specific airspace and Army airspace users into joint control headquarters must be a priority. The technologies to maximize the use of positive rather than procedural controls for airspace exist and must be explored and developed.

Targeting/Early Warning

Targeting/early warning focuses on the process of collecting and managing the information that leads to the application of offensive and counter fires. The system used to detect, distinguish and designate targets has a great deal in common with the process used to detect, identify, locate, track, discriminate and minimize the effects of enemy fires. Combining these functions allows for the development of systems and applications that perform multiple roles. The interplay of offensive fires triggering enemy counter fires and vice versa makes it imperative that this focus area bring these two important concepts together.

Combining these functions into a single operating system called fires shatters much of our current branch-focused paradigm. This kind of institutional shift entails much more than just combining the Air Defense Artillery and Field Artillery branches. It means drawing mission areas from many different branches and bringing them into a united organizational structure. It means leveraging technologies to ensure that system or system-of-systems designs begin with interoperability rather than merely adding technologies as an afterthought.

The most dramatic advantages should be obvious. The combining of several organizations into one, dramatically reduces the overhead costs of several branches and reduces duplicate structure. A single oversight organization could ensure common hardware and software interfaces that enable greater flexibility and opportunity to migrate personnel between systems. The opportunity for a wider variety of development and advancement opportunities make the fires domain an attractive place to work and continue working, with the potential to improve recruiting and retention. A single organizational structure can develop solutions, field systems and apply force within the fires domain more efficiently, with less cost and with greater effect. Clearly, this means bringing more than just the Air Defense Artillery and Field Artillery proponents

together. A successful merger of functions will need to include elements of the Signal, Intelligence, and force protection communities as well.

The Army has launched the largest organizational change it has undertaken in decades. This proposal to merge Air Defense Artillery with Field Artillery simply serves to continue that process: leveraging technologies and expertise, exploring the future of warfighting in the fires domain in a unified effort, eliminating wasteful duplication and providing greater opportunities for our Soldiers and leaders. Combining a similar look at other domains of the battlefield with an equally fresh approach will provide the Army with the streamlined, functional structure it will require for the next several decades.



Lieutenant Colonel Elliott Bales commands the 1st Battalion, 44th Air Defense Artillery, Fort Bliss, Texas. The battalion, which employs both Patriot and Avenger systems, is the Army's first composite air and missile defense battalion.

SCANNING

**Wonder
What Field
Artillery
Soldiers
are Saying
About
Merging
with Air
Defense Artillery?**



Follow the branch merger debate in the pages of *Field Artillery* magazine. Go to <http://sill-www.army.mil/famag/index.asp>. Download the entire magazine or read articles and letters to the editor in easy to access web format. Upcoming issues of *Field Artillery* also will feature articles about the collocation and integration of the Air Defense Artillery School and Field Artillery School.



In this grainy World War II photo, Quad .50 halftracks defend the captured Rhine bridge at Remagen. During antiaircraft artillery's moment of glory, antiaircraft fire downed an average of one German plane each hour.

Common Ground

The Antiaircraft and Field Artillery Merger of 1950

by John Hamilton

The Base Realignment and Closure decision of 2005 mandated, among other things, the consolidation of the Air Defense Artillery and Field Artillery Schools into a Fires Center of Excellence. The location for this center will be Fort Sill, Oklahoma. The consolidation efforts and the establishment of this and other centers foresee a transformed Army that works more closely together and achieves synergies of effort on a future battlefield.

The consolidation will, it is hoped, produce a sharing of doctrine, equipment, training, and ultimately battlefield effects as we proceed through the 21st century. Another benefit will be to achieve economies in personnel, as battlefield tasks and subjects common to both branches can be taught in combined classrooms. As the execution date for the consolidation approaches, we can expect much dis-

course, many briefings, and perhaps dozens of PowerPoint productions to iron out the differences between the branches. The objective, of course, is to produce a viable center of excellence that produces soldiers and leaders in both branches who are proficient in their weapons systems, plus can work closely together on the battlefield.

As the dialogue proceeds, it is worthwhile to look at a brief history of the merger of the Field Artillery and Coast Artillery branches that occurred at the end of World War II and existed until 1968. Why even bother with this? Simply because we may be able to learn from the experience as we proceed. Certainly, history will not provide a cookie-cutter solution. Some of it may not even be relevant. But we may gain valuable perspective as we plan the consolidation. In a recent history symposium at Fort Leavenworth,

Is It Time for Air Defense Artillery & Field Artillery to Merge?

Kansas, retired Major General Robert H. Scales mused on the use of history in transformation. As he said, "... what I find interesting is that in virtually every war there are indicators, signposts, bits of evidence that, if you collect them together and apply the process of reasoning, you can pick out those sinews, those signposts, those bits and pieces of evidence that will place you on the right path to the future."¹ So maybe a brief look at the existence of Antiaircraft and Field Artillery Soldiers in one branch for a period of 18 years may produce a few signposts for us. Appropriately, this is an effort to review the Air Defense Artillery and Field Artillery experience, stimulate more debate, and hopefully improve the effort to form the center of excellence.

At the end of World War II, the Army assessed its experiences as the expeditionary forces came home and demobilized. Two artilleries existed, the Field Artillery and the Coast Artillery. The majority of the Coast Artillery, of course, was the antiaircraft force built to fight against the enemy air forces. The actual Coast Artillery forces, which defended the U.S. coastline, did not fire a shot in anger, and the antiaircraft forces had seen action in both the European and Pacific Theaters in a variety of ways.

The Field Artillery units supported maneuver of the Armor and Infantry units with indirect fires. Antiaircraft units performed their primary air defense missions. For example, when the 27th Armored Infantry Company seized the Ludendorff Railroad Bridge at Remagen—the "first bridge across the Rhine"—massed antiaircraft battalions demonstrated their effectiveness in their primary mission by fighting off desperate German air attacks against the bridgehead. However, as Allies established air superiority in Europe and in the Pacific, the number of enemy air attacks dwindled, and the antiaircraft units were diverted to other missions. In defending Pacific islands, they provided labor for unloading ships. In Europe, they provided ground support fires. The 90mm gun was employed against tanks, bunkers and other emplacements. The 40mm guns and the Quad .50-caliber weapons provided direct fires as well. In some cases, 90mm battalions fired indirect fire missions in support of field artillery units, under the control of a field artillery fire direction center. In Italy, some excess antiaircraft units were actually converted to infantry, and they acquitted themselves very well. Thus, the experience was of two arms that seemed to be close to each other in capabilities. Senior commanders took note

of this, and from this conflict they derived their postwar views of how the branches should be organized.

The position of the Army Ground Forces at war's end was that it made sense to combine the Field Artillery and the Coast Artillery into one branch. Some postwar studies supported this view. The Patch Board, commissioned in August 1945, arrived at this conclusion. Lieutenant General Alexander Patch chaired this board, which examined Army organization at the end of the war. "For the purpose of preparing an 'organization appropriate for peacetime adoption,' a board was constituted on 30 August 1945 to 'examine into the present organization of the War Department.' The board conducted inquiries for several weeks, submitted its report to the Chief of Staff on 18 October 1945, and was dissolved two days later."² The board based its conclusions on precedents established during the war. "The precedents of World War II were cited, interpreted, reinterpreted, recommended and condemned, particularly the performances of the high command and the higher staffs in Washington. Those precedents would be the point of departure for discussion and debates for years to come."³ A major conclusion of the board was, obviously, to replace the Cavalry branch with the Armor branch. Another conclusion was to combine the Coast Artillery and Field Artillery into one branch. The Commanding General of the Army Ground Forces, General Jacob Devers, took all of the recommendations to heart, particularly those which he had doubtlessly already pondered. A year later, during a staff conference, he announced "his decision to consolidate the three Artillery schools into the Artillery School at Fort Sill with an Antiaircraft (AA) and Guided Missile (GM) branch at Fort Bliss." In an open letter to the *Field Artillery Journal*, he said that "legislation consolidating Field and Coast Artillery was anticipated; that they were first to be ground forces officers and second Artillery officers; that future artillery officers were to have a general knowledge of all artillery weapons and a specialized knowledge of some."⁴ The merger required congressional action, so it was not immediately accomplished.⁵ The arguments to consolidate seemed overwhelming: "consolidation was economical, both arms used cannons, and the evolution of guided missiles would represent a common ground for mutual understanding and language between the two [branches]."⁶

There were many voices within the Antiaircraft and Coast Artillery community favoring consolidation. After all, the coast artillery forces fired not one shot in anger

¹Scales, MG (R) Robert H.: "Change During War: Contemplating the Future While Fighting in the Present," in McGrath, John J., ed.; *An Army at War: Change in the Midst of Conflict*, CSI Press, Ft. Leavenworth, Kan., August 2005, p. 3.

²Cline, Ray S.; *Washington Command Post: The Operations Division*, Office of the Chief of Military History, Department of the Army, Washington, D.C., 1951, p. 353.

³Ibid, p. 352.

⁴*The Artillery Branch Study*, Fort Sill, Oklahoma, circa 1966, p. 32.

⁵Hewes, James E., Jr.; *From Root to McNamara: Army Organization and Administration, 1900-1963*; U.S. Army Center of Military History, United States Army, Washington, DC, 1975, p. 150.

⁶*The Artillery Branch Study*, page 33.

Is It Time for Air Defense Artillery & Field Artillery to Merge?

during World War II. The two oceans separated the United States from long-range attack. The only major engagements near the coasts were against German submarines that penetrated all the way into the Gulf of Mexico. Further, the advent of the guided missile, particularly with the arrival of the German rocket scientists at Fort Bliss, Texas, seemed to indicate that the future of both branches was more homogeneous. The effect of the debate, or lack thereof, seemed to progress toward consolidation. There weren't many articles on the merger in the *Antiaircraft Journal* of the day, but those that appeared favored the merger. One in particular was written by a Coast Artillery officer, Colonel Donald J. Bailey. "We will be combined with a Branch in our own Army family, many of whose missions are similar to ours; we will receive more strength in joint affairs; higher command eligibility will accrue from knowledge of the functions of more than one Branch; and appropriations are more easily justified and obtained by a larger and important combat Arm than a small one."⁷ Command opportunities for officers of the merged branches would be uniform. "The accepted standards of command are universal, regardless of the Branch or Service and emphasize character, leadership and intelligence more than canalized technical knowledge."⁸ Further, Colonel Bailey felt that guided missiles would be the binding force between the two branches. "The catalyst that will entirely amalgamate the two artilleries will be guided missiles I believe that the future of Antiaircraft Artillery will expand in direct proportion to the increased development of ground-launched guided missiles which are, to be sure, an extension of antiaircraft and field artillery weapons."⁹ Other editorials echoed Colonel Bailey's sentiments, and supported proceeding toward merging the two branches into one. "Throughout its history the Coast Artillery Corps welcomed the assignment of Field Artillery missions, and met such responsibility with confidence and enthusiasm With its readers, the *Journal* recognizes the unification into one Artillery, as a move toward greater strength and flexibility in national defense. Relying on the versatility of artillermen the *Journal* will favor a strong unification."¹⁰

The formal consolidation came in 1950. "By the Army Reorganization Act of 1950, the 81st Congress integrated the Artilleries. In subcommittee hearings it has listened to the Chief of Staff [of the Army], General Lawton Collins testify that the Army was opposed to a separate Antiaircraft Corps; that a need existed for Antiaircraft in the early

phases of war but as air superiority was gained these people could be transferred to other artillery duties; and finally, that the differences in technique were not that great."¹¹ The *Antiaircraft Journal* hailed this as a leap forward. One article affirmed that this action simply made official what already existed. "There is no indication of immediate change in the organization or instruction in either the AAA or the GM Branch or the Field Artillery Branch of the Artillery School. Actually the instruction of the two branches has already been integrated. Long-range plans are under consideration to provide a higher degree of integration to the end that all Artillery officers in the regular service will get earlier training in both types of artillery."¹² The headquarters of the newly merged Field Artillery branch would be at Fort Sill; however, the school would still maintain an antiaircraft and guided missile school at Fort Bliss, where missile testing was being conducted and on the adjacent White Sands Proving Ground in New Mexico. Officers would undergo Field Artillery training at Fort Sill, followed by specialized training in missiles and antiaircraft at Fort Bliss. The future would be a single branch with some specialization, interchangeable based on the conflict.

The actual future did not conform to the conceived future. Three things happened to cause changes in direction. First, on 29 August 1949, the Soviet Union tested its first nuclear weapon at the Semipalatinsk Test Site in Kazakhstan. This test occurred three years before the United States expected it to happen, and it ended the United States monopoly on the nuclear weapon.¹³ Second, the Soviet Union fielded the Tupolev TU-4 Bull bomber. The Bull was a piston-engine long-range bomber that also entered service in 1949. The design was very similar to the Boeing B-29, the result of the reverse-engineering of three U.S. B-29 bombers that the Soviets interned during World War II. It was heavier than the B-29, which reduced its range and payload. And, if flown against the continental United States, it would have been a one-way trip.¹⁴ Still, these were decidedly terrifying developments. They caused a reassessment of continental defense, and they would markedly affect the direction of the Field Artillery branch. The third event was the invasion of the North Korean Peoples Army into South Korea. Having demobilized after World War II, the United States was unprepared for these three events.

Responding to the Korean War brought the Field Artillery branch into focus. Aside from a few early antiaircraft

⁷Bailey, Col Donald J, GSC (CAC); "Our Antiaircraft Artillery Has a Bright Future," *Antiaircraft Artillery Journal*, March-April 1950, p. 14.

⁸Ibid, p. 14.

⁹Ibid, p. 14.

¹⁰Author Unknown, editorial; "The Coast Artillery Corps," *Antiaircraft Artillery Journal*, July-August 1950, p. 30.

¹¹*The Artillery Branch Study*, p. 34.

¹²Author Unknown, editorial; "Army Reorganization," *Antiaircraft Artillery Journal*, July-August 1950, p. 27.

¹³<http://www.vce.com/coldwar.html>, accessed on 6 February 2006.

¹⁴http://en.wikipedia.org/wiki/Tu-4_Bull, accessed on 31 January 2006.

Is It Time for Air Defense Artillery & Field Artillery to Merge?



A 90mm anti-aircraft battery, left, delivers indirect fire in support of the Field Artillery during the Korean War. Quad .50 anti-aircraft halftracks, right, were used in ground support roles.

engagements at Suwon Airfield, anti-aircraft units in Korea conducted ground-support actions. Some 90mm gun battalions fired in support of the Field Artillery, as they had in World War II. The need for Field Artillery outweighed the need for anti-aircraft units in this war, and Field Artillery was faced with the first actual test of the integration.

Things did not go as envisioned. With a large number of anti-aircraft officers available, the Army decided to mobilize them for Korean service along with everyone else. Arriving in the theater, anti-aircraft officers were first considered for assignment to anti-aircraft units. If they were full, they could be assigned to the divisional anti-aircraft automatic weapons battalions. If those were full, they were assigned to Field Artillery gun units. Arriving there, the anti-aircraft officers were found to be deficient in such subjects as gunnery and survey techniques. With no time to train on the job, anti-aircraft artillery officers found themselves serving as S1s, S4s, headquarters and service battery commanders, headquarters and headquarters battery commanders, and ammunition officers. They were not firing battery commanders until they had proven they could fire without endangering themselves or friendly forces. Integration in Korea was thus marginal.¹⁵

With the appearance of the Soviet nuclear threat, the Army was confronted with the challenge of devising ways to counter that threat. The strategic bombing surveys of World War II showed the damage that the Allied bombing campaigns had inflicted on the enemy, especially the Japanese. The United States had no anti-air defenses at all at the time. With this new threat came the inter-service

squabble between the new Air Force and the Army as to who would be responsible for overall air defenses. The Air Force pressed hard to integrate anti-aircraft units into the Air Force. Ultimately, the Air Force was given overall responsibility for air defense of the continental United States, with the Army anti-aircraft units under its operational control. The Army recommended the formation of an Army Anti-aircraft Command, working for the Continental Air Force. On 29 June 1950, Department of the Army General Orders No. 20 established the Army Anti-aircraft Command (ARAACOM) with headquarters initially in the Pentagon. Command of the organization fell to Major General Willard Irvine, an anti-aircraft officer. Initially, the actual control of the anti-aircraft gun battalions fell to the numbered Continental Armies, which would eventually be relieved of these responsibilities.¹⁶

There was an immediate need for anti-aircraft gun battalions to protect nuclear facilities, industrial centers, centers of government, air force bases, and major cities. Initially, 66 gun battalions were required for deployment to areas across the country. Most came from the Regular Army, but many also came from the Army National Guard. Within three years, from 1949 until 1953, the Army deployed 40mm, 90mm and 120mm gun battalions as they were reactivated and equipped. The 40mm guns from World War II were very rapidly replaced with the 75mm Skysweeper gun, a more modern gun with integral search radar and gun direction. Sites for the gun battalions were supposed to be on Army or government owned lands, but most places had no areas of this type available. The Army leased, rented, or bought land to provide sites for the guns.

¹⁵Parker, BG Theodore W.; "... It Will Take a Whole Generation," *Army Combat Forces Journal*, Volume 5, No. 6, January 1955, pp. 43-45.

¹⁶Barnard, LTC Roy S.; *The History of ARADCOM, Volume I: The Gun Era, 1950-1955*; Headquarters, ARADCOM, Historical Project ARAD 5M-I, p. 55. Although this was to be volume one of multiple volumes, no other volumes were ever produced.

Is It Time for Air Defense Artillery & Field Artillery to Merge?

The Army then constructed barracks, mess halls, small post exchanges, chapels, and other amenities for soldiers deployed there.

After the merger, the Field Artillery branch fed officers and soldiers not only to the Field Artillery battalions but also to the Antiaircraft Command to conduct this specialized mission. Those assigned to ARAACOM had to learn to coordinate with the Air Force in accordance with a complicated set of rules of engagement and lead troops in a stateside environment. ARAACOM established its own culture, readiness requirements, and tactics, techniques and procedures. So, the single branch resulting from World War II continued to diverge as the 1950s progressed.

By late 1952, the progress on antiaircraft guided-missile development was well along. The Western Electric Company, aided by the Douglas Aircraft Company, produced a prototype that could engage high-flying aircraft. As the gun battalions were obsolescent, the Nike Ajax missile was the immediately viable replacement. The gun battalions were gradually converted to the new systems.

The alert requirements for Nike units were similar to those of the Strategic Air Command, in that the presumption was that there might be little or no warning of an air attack. Headquarters, ARAACOM maintained the following alert status:

- 25 percent of all Nike batteries had to be capable of launching one effectively controlled missile within 15 minutes of a warning and maintaining sustained fire until all ready missiles were exhausted.
- 50 percent of all Nike batteries had to be capable of launching one effectively controlled missile within 30 minutes of a warning and maintaining sustained fire until all ready missiles were exhausted.
- 25 percent of all Nike batteries could be on a training and maintenance cycle, but capable of returning to operational status within two hours of a warning.¹⁷

Battery commanders' careers hinged on the successful performance of the tasks associated with these alerts. Units practiced at Red Canyon Range and on White Sands Proving Ground, New Mexico. Further, units were subject to something called Short Notice Annual Practice, whereby a battery would be alerted for an operational test,

deploy to Fort Bliss, live-fire, and return to its station.

As the antiaircraft units and their leaders required more and more specialized training, the Field Artillery School began to struggle with its program of instruction. The plan to integrate training in the combined branch rapidly moved apart, starting during the Korean War. The "forty-two week



During the Cold War, Nike missile batteries replaced obsolete antiaircraft gun batteries. The Nike site above defended San Francisco against the threat of Soviet long-range bombers.

advanced course was not adequately preparing the officer for his duties. Consequently, the AA and FA officers, after a short integrated period of instruction on staff organization, were separated between the two schools to specialize in their particular science."¹⁸ Efforts to go forward with the cross-training of officers in the branch yielded relatively poor results. One major stumbling block was the need to repeat basic instruction in Field Artillery gunnery in the advanced course program of instruction. Those officers who had been in air defense units could not be

assigned to cannon units without it, and field artillery officers coming from cannon units were bored by this redundancy.

To make matters worse, the Artillery Branch of the Career Management Division then combined the two separate Antiaircraft and Field Artillery sections into one. All officer career files were "combined into one alphabetized pool."¹⁹ By 1954-55, the branch was actually two de facto branches, with separate weapons systems and tactics, organizations and missions. Accordingly, the two schools proposed separate schooling for both specialties, with emphasis on separate training at Fort Sill and Fort Bliss. The recommendation alarmed the Career Management Division, as this contravened the one-branch concept. The Career Management Division actually suspended the assignment of officers to Artillery School classes that appeared to be in conflict with current DA policy, pending clarification of the school program.²⁰ In the meantime, the branch struggled on.

The issue of one branch finally came to a climax with the onset of the war in Vietnam. As Field Artillery units deployed to the theater, they needed trained cannoneers to serve as forward observers, fire-direction controllers, or battery commanders and in similar positions. The one-year tour constraint further exacerbated things, as there was no time to conduct on-the-job training for officers

¹⁷Ibid, p. 185. The underlining is as it appears in the basic document.

¹⁸Field Artillery Branch Study, p. 35.

¹⁹Ibid, p. 38.

²⁰Ibid, page 39.

Is It Time for Air Defense Artillery & Field Artillery to Merge?

whose major experience was with Nike or the newer Hawk missile systems. As officers from Nike units in the Army Air Defense Command rotated in, they again served as S1s, S4s, and the like. Naturally, good officers adapted well and learned their roles, but again the branch struggled.

The culminating point came with the Field Artillery Branch Study, conducted in 1966. The study concluded, among other things, that the combined branch suffered in competition for promotion and senior service college selection in comparison with the Infantry and Armor. The training requirements for the branch, with its varied missions and weapons systems, were too difficult to deal with. Officers cross-assigned or assigned to branch-immaterial jobs were simply not as competitive. The solution was to split the branch. This occurred on 14 June 1968 by publication of General Order No. 25, establishing Air Defense Artillery as a separate combat arms branch.

As we proceed down the road to combine the Air Defense Artillery and Field Artillery schools into a center of excellence, what are the signposts we can see from this experience?

First, we should recognize that, despite the air space management requirements that the two branches share, they really are quite different. Aside from the counter-rocket, artillery and mortar systems which rely on the Field Artillery to sense and warn and Air Defense Artillery to engage, the missions and equipment are different. Air Defense Artillery focuses more toward the operational and strategic sides of warfare, while Field Artillery enables maneuver. Despite the move toward shared systems, such as the multi-mission radar, the software packages to run the system for Field Artillery and Air Defense Artillery will certainly be different. Substituting a Field Artillery for an Air Defense Artillery radar crewman, for example, may be done only with extensive training and even then perhaps at some peril. Therefore, perhaps initially the merger should take pains to maintain branch identity and training, even at a higher cost. One recent article on the merger suggested that the combined school should produce soldiers who are leaders first, then effects coordinators, then weapons specialist. Perhaps the more appropriate priority would be to train soldiers as leaders first, then weapons specialists, then effects coordinators.

Second, we amalgamate or transform based on our view of future warfare. But what if the future doesn't conform to that view? After World War II, the Army's view over the horizon did not conform to the future as it actually unfolded. It may not be going forward now, either. We should retain some capability to shift gears, even if it means a greater cost or perhaps even to return to what we had before.

Lastly, both schools should proceed in a deliberate fashion and do their homework carefully. The process to consolidate should be to "test, assess, revise, and then test

again." If one consolidated Directorate of Combat Developments does not work, for example, we should be prepared to revise the plan.

Otherwise, we may struggle for the next ten to twenty years after the merge to make it work, as the previous generation of soldiers did. That leaves it up to the captains and majors of today to implement the fixes when they finally achieve colonel and general officer rank.



John Hamilton is the Air Defense Artillery Command Historian, U.S. Army Air Defense Artillery School at Fort Bliss, Texas.

SCANNING

Patriot Performance in Operation Iraqi Freedom

The Patriot deployment was substantial, involving up to 40 U.S. fire units and 22 fire units from four coalition nations. Two types of Patriot interceptor missiles were used: the improved PAC-2 [Patriot Advanced Capability-2] missile, which is the traditional Patriot interceptor; and a new hit-to-kill missile, the PAC-3. Both were used with success in Operation Iraqi Freedom (OIF), with the bulk of the engagements falling to the PAC-2. All nine enemy tactical ballistic missiles that threatened areas designated for Patriot defense were engaged.

Eight of these engagements were observed by enough other sensors to conservatively declare them successes; the ninth engagement is judged to be a probable success. None of the attacking tactical ballistic missiles caused any damage or loss of life to the coalition forces. The Patriot battalions operated reliably, and the two variants of the interceptor missile worked well against these Iraqi tactical ballistic missiles.

One can argue that these relatively slow missiles which did not break up in flight like the Scuds of Desert Storm, were not stressing targets; however, their short range and the coalition's goal of large defended footprints and high-altitude intercepts due to chemical warhead concerns made them somewhat stressing targets for the Patriot and their crews.

In an overall sense, the task force assessed the Patriot missile defense in OIF to be a substantial success.

—Report of the Defense Science Board Task Force on Patriot System Performance



An Echo Battery, 2nd Battalion, 43rd Air Defense Artillery, Patriot radar in position at Camp El Paso, Kuwait, in early March 2003. The power generating facility smokestacks in the background are commonly referred to as the "Scud Goalposts" in Operation Iraqi Freedom lore.

The First PAC-3 Engagement

Patriot Intercept Credited With Saving Vital Operation Iraqi Freedom Headquarters from Destruction

by Captain Joseph C. Scott

The Iraqi tactical ballistic missile attack on the Combined Forces Land Component Commander's (CFLCC) headquarters on 20 March 2003 provided one of Operation Iraqi Freedom's most dramatic moments. A CNN camera crew was filming inside the CFLCC tactical operation center when warning sirens announced the approach of an incoming tactical ballistic missile. The camera crew continued shooting as CFLCC personnel inside the tactical operational center, including Lieutenant General David D. McKiernan, the CFLCC commander, who has since been promoted to general, donned their protective masks.

The stakes were enormous. A direct hit on the CFLCC could have "decapitated" the command responsible for U.S. and coalition forces driving on Baghdad. However, we will never know if the inbound missile would have scored a direct hit. A Patriot Advanced Capabilities-3 (PAC-3) missile launched by my unit, Echo Battery, 2nd Battalion, 43rd Air Defense Artillery, scored a direct hit on the Iraqi Ababil-100 missile just seconds away from the intended target.

The intercept, which marked the first combat target kill by a PAC-3 missile, won accolades for the Patriot system and for Air Defense Artillery. "Had it hit, American

and British commanders of the land war may well have perished. This crucial coalition headquarters could have been wiped out," reported a Fox News journalist. "We understood perfectly that Patriot had thwarted what might have been a crippling blow."¹

The 32nd Army Air and Missile Defense Command chief of staff, Colonel Charles C. Anderson, who has since been promoted to brigadier general, described the scene inside CFLCC headquarters. "The CG—I'm talking about Lieutenant General McKiernan—said 'everybody put their mask on,'" recalled Anderson, "and they sat there, and they continued with the BUA [battle update assessment briefing]. There was so much confidence in the weapon system [Patriot] that nobody moved. Then suddenly, you heard the walls rumble, and you heard the sound of those missiles take off, and there it went, two more missiles in the air. Then you heard a loud explosion. This time pieces of metal actually fell on the roof of our headquarters. That was a high-five moment."²

During the opening hours of Operation Iraqi Freedom, our battery, part of Task Force 2-1 ADA, was positioned just south of Camp Doha, Kuwait, providing Patriot defense for CFLCC headquarters at Camp Doha, and the I

¹"Operation Iraqi Freedom: ADA Soldiers Encounter Triumph and Tragedy on the Road to Baghdad," *Air Defense Artillery Yearbook 2003*, U.S. Army Air Defense Artillery School, Fort Bliss, Texas, page 4.

²*On Point: The United States Army in Operation Iraqi Freedom*, Office of the Chief of Staff, U.S. Army, Washington, D.C., 2004, page 98.



At left, the Echo Battery, 2nd Battalion, 43rd Air Defense Artillery, command post at Camp El Paso, Kuwait. At right, from left to right, Sergeant Theron Bostick, Sergeant Donald Spicer and First Lieutenant Joseph Scott in the Echo Battery engagement control station a few days before the 20 March 2003 intercept.

Marine Expeditionary Force headquarters at Camp Commando. Our battery was organically part of the 108th ADA Brigade, but had been placed under operational control of the 11th ADA Brigade.

On 20 March 2003, Echo Battery was undergoing scheduled maintenance downtime when we received word on the net that a missile was inbound from Iraq. At 1030Z the air and missile defense work station (AMDWS) had picked up an Iraqi launch of an Ababil-100 missile from just south of Al Basrah. Indications showed Camp Commando and Camp Doha as the intended targets.³

My crew of outstanding noncommissioned officers instantly leapt into action. My tactical control assistant, Sergeant Theron Bostick, who has since been promoted to staff sergeant, booted up the operational software and our communications operator, Sergeant Donald Spicer, informed the battery that a missile had been fired. The launcher crew hurried downrange to bring the launchers into ready-to-fire status, and the rest of the unit donned their chemical protective gear and headed for the bunkers. However, this inbound missile's target was the 101st Airborne Division (Air Assault) tactical assembly area at Camp Thunder, which was defended by Delta Battery, 5th Battalion, 52nd Air Defense Artillery. Delta Battery unleashed a salvo of three Patriot guidance-enhanced missiles, scoring a direct hit.

A reporter, who was on the scene, wrote that the soldiers of the 159th Aviation Brigade, 101st Airborne Division (Air Assault), gave the Patriot soldiers a standing ovation.⁴ Major General David Petraeus, the division's commander, who has since been promoted to lieutenant general, later stated, "Patriot saved the 101st!"⁵

About an hour later, a second missile was fired at our defended asset. When our radar picked up the inbound

missile, it was still in boost phase and climbing. Then the system showed the track was beginning its final descent right towards Camp Doha and Camp Commando.

The tactical ballistic missile continued its descent until the Patriot system indicated that the target was eligible for engagement. Our launchers were in operational status, and in accordance with Patriot engagement doctrine, we waited a few seconds for the system to automatically engage. These few seconds seemed to stretch forever, and the system had still not engaged.

Sergeant Bostick said, "I ain't going to wait all [expletive deleted] day on this thing here," and I ordered him to engage the track manually.

Seconds later we had two missiles away from our Launcher No. 8. We tracked the outbound missiles while I hard-copied all of our system information on the track. Less than a minute later, the system indicated a probable kill, followed seconds later by the track dropping off our scope.

Sergeant Bostick informed the information coordination central of our confirmed kill, while Sergeant Spicer excitedly reported to our battery command post that we had destroyed the missile at an altitude of 12 kilometers, 20 kilometers away from our position. The engagement control station was temporarily filled with cheering while I tracked the debris from the engagement.

Brigadier General Howard B. Bromberg, now a major general, exercised responsibility for air and missile defense throughout the theater of operations as the commanding general of the 32nd Army Air and Missile Defense Command. He hurried to our site to inform us that ours had been the first combat engagement using PAC-3 missiles, and that we had destroyed an Iraqi Ababil-100. Then, we were on CNN, the end of a very busy day.

³Operation Iraqi Freedom: Theater Air and Missile Defense, 32nd Army Air and Missile Defense Command, Fort Bliss, Texas, September 2003, page 48.

⁴"Operation Iraqi Freedom: ADA Soldiers Encounter Triumph and Tragedy on the Road to Baghdad," Air Defense Artillery Yearbook 2003, U.S. Army Air Defense Artillery School, Fort Bliss, Texas, page 2.

⁵On Point: The United States Army in Operation Iraqi Freedom, Office of the Chief of Staff, U.S. Army, Washington, D.C., 2004, page 97.



At left, the E/2-43 ADA “Big Four” (antenna mast group, radar, engagement control station and electric power plant) at Camp El Paso Kuwait. At right, the missile launched by Echo Battery streaks toward its intercept point in the historic first PAC-3 combat engagement. (Photo by Staff Sergeant Anthony Wiley)

“These guys made it happen. We fight as a unit and could not have done it without everybody there—everyone from the launcher guys going down range to put the launchers in operation, to the maintenance guys who take care of the equipment—anytime anything goes down, they’re on it—to the fire control crews,” said Captain Aaron Montgomery, our battery commander. “It also includes everyone from the signal node centers that were there to help provide additional forms of communication to higher so that we could receive early warning, to 3rd Platoon, Bravo

Company, 1st Battalion, 179th Infantry, [Oklahoma Army National Guard], which provided security for our site.”⁶



Captain Joseph C. Scott, then a first lieutenant, served as a tactical control officer assigned to Echo Battery, 2nd Battalion, 43rd Air Defense Artillery, during Operation Iraqi Freedom. He now serves as assistant operations officer for the 108th Air Defense Artillery Brigade at Fort Bliss, Texas.

⁶Operation Iraqi Freedom: Theater Air and Missile Defense, 32nd Army Air and Missile Defense Command, Fort Bliss, Texas, September 2003, page 48.

SCANNING

Army Deployment Excellence Award

The Army’s 2007 Deployment Excellence Award competition is now open for active, Reserve or National Guard units and installations. To participate in the Deployment Excellence Award (DEA) program, a unit is required to have executed or supported a training or contingency deployment during the competition year.

The competition year begins on 1 Dec 05 and will run through 30 Nov 06. All units and installations are encouraged to plan now to compete in this elite competition.

What’s the prize? Two representatives in each winning and runner up units in each category will receive an all expense paid four-day trip to the Washington, D.C., area to accept the unit’s award (trip includes travel, per diem, lodging, ground transportation, time for shopping, tours of the Washington area and a photo with the Army’s chief of staff).

Significant dates for 2007 competition are:

- Competition year - 1 Dec through 30 Nov - Submit packets through command channels
- 31 Jan 07 - Major commands’ nomination packets are due to the DEA evaluation board
- 5-16 Feb 07 - DEA board screens major commands’ unit packets to select semifinalists
- 1-25 Mar 07 - DEA teams visits selected semifinalists and conducts on-site observation of deployment practices
- 9 Apr 07 - Army G-4 selects and announces winners via HQDA message
- 17 May 07 - DEA awards presented at the Chief of Staff Army Combined Logistics Excellence Award Ceremony/Banquet

Deployment Excellence Award guidance and evaluation criteria can be found on the Deployment Process Modernization Office web page at <http://www.deploy.eustis.army.mil>.



Mortars and unmanned aerial vehicles, like the Raven the Soldier at right is launching over downtown Baghdad, contribute to airspace congestion above the battlefield and to the challenges facing the ADAM cell officer-in-charge. (Raven photo by Private First Class William Servinski II.)

The ADAM Cell Officer-in-Charge

Four Critical Functions for Success in Tactical Operations

by Lieutenant Colonel Matt Michaelson

Twenty-first century warfare and Army transformation have pushed the air defense airspace management (ADAM) cell to the forefront of battlefield operations. Within the unit-of-action (brigade combat team or task force) commander's battlespace, surface-to-surface fires, close air support aircraft, rotary-wing aircraft and unmanned aerial vehicles now crowd an already congested airspace. As a result, the ADAM cell has become the center-of-gravity location for air and missile defense (AMD) planning and situational awareness, as well as Army airspace command and control (A²C²) planning, deconfliction and execution.¹

With the inevitable congestion of air assets overhead, the ADAM cell officer-in-charge (OIC) must master several critical functions to maximize effectiveness and minimize the constant risk of fratricide. These critical functions include: (1) ensure ergonomic common sense in the tactical operations center (TOC); (2) master all aspects of planning, deconfliction and A²C²; (3) persuade airspace key players to conduct AMD war games and rock drills; and (4) display and internalize a fervor to participate in combat planning and operations.

Ergonomic Tactical Operations Centers

Successful airspace operations at the unit-of-action level depend greatly upon consistent—and sometimes coerced—communication between airspace user representatives. An aggressive ADAM cell OIC should strongly recommend the close ergonomic positioning of critical air-

space players within the TOC. This positioning can prevent the stove-piping of information that results from the distant placement of personnel, systems and equipment. To maximize communication, the ADAM cell should be centrally located within a 25-square-foot work area among the fire-support element, air liaison officer, aviator/S-3 air, air and naval gunfire liaison company, and battle staff unmanned aerial vehicle officer or noncommissioned OIC.

Only within a tightly spaced area can critical planning and deconfliction take place on a consistent basis during continuous operations. Failures to ensure these cells operate in close proximity often lead to disjointed air operations across the battlespace. As an example, it could be disastrous if fire-support element operators receive a change to the air tasking and airspace control order as free text over the Advanced Field Artillery Tactical Data System, but fail to share this information with other airspace users across the TOC because of their distanced location.

Every Soldier in the TOC needs this vital information to properly plan and execute current and future operations. This includes the air liaison officer, who does his or her planning on the Air Force FalconView software, and the battle-staff's unmanned aerial vehicle OIC or noncommissioned officer-in-charge (NCOIC), who tracks and recommends which restricted operating zones (ROZs) need to be active, when, so that data can be collected in accordance with the intelligence, surveillance and reconnaissance plan. And, naturally, it includes the ADAM cell OIC, who by doctrinal responsibility, is required to "provide a

¹"ADAM Cell Training and Fielding Continues to Meet Transformation Requirements" by Captain Jay Kaji, *Air Defense Artillery* magazine, January-March 2005. Pages 21-22.

joint air picture” and “minimize the potential for fratricide.”

Clearly, a close knit airspace work area encourages communication and the timely sharing of vital information. It also facilitates the close scrutiny of graphics, the immediate reaction to the tactical needs of ground units (such as the imposition of lower ceilings for close-air sup-

An ADAM cell OIC who is fluent and fully proficient in A²C² operational planning can work with the ADAM cell aviation officer to manage all airspace users during current operations and provide solid recommendations on best procedural airspace control measures to meet the commander’s intent for future operations. Failure to un-

COMMONLY USED MULTI-SERVICE PROCEDURAL AIRSPACE CONTROL MEASURES

Minimum Risk Route (MRR)	Restricted Operations Zone (ROZ)
Standard Use Army Aircraft Flight Route (SAAFR) Air Corridor	High-Density Airspace Control Zone (HIDACZ)
Coordinating Altitude (CA)	Airspace Coordination Area (ACA)

port immediate engagements) and compliance with weapons control status. Close proximity also encourages airspace team preparation for battlefield update briefs, shared vision for airspace planning 48- to 96-hours out and full participation of airspace players in close-air support battle drills moments before action.

Placing critical airspace players close enough to ensure this constant communication is absolutely essential to maintaining the commander's accurate and current three-

derstand, speak and write the language of A²C² would make the ADAM cell OIC no more effective than an Infantry or Armor officer who does not understand the basics of maneuver graphics, forms of attack or small-unit command and control.

War Games and Rock Drills

Current doctrine specifies that an ADAM cell OIC “will participate with the brigade staff in the military de-

AIRSPACE USER-SERVICE WAR GAME/ROCK DRILL PARTICIPANTS

Brigade Combat Team (BCT) S-3 Representative	ADAM Cell OIC
ADAM Aviation Officer	Air Force Liaison Officer (ALO)
Air and Naval Gunfire LNO	Air and Naval Gunfire LNO
S-3 Air/Attack Aviator	Fire Support Coordination (FSCoord)

dimensional situational awareness. As a senior air and missile defense officer, the ADAM cell OIC can ensure this constant and critical communication exists by strongly recommending the close placement of airspace user representatives within the TOC.

Mastering Army Airspace Command and Control

No ADAM cell OIC can accomplish the mission without mastering A²C². The ADAM cell OIC must be fully conversant in A²C² doctrinal terminology and understand the rationale for A²C² measures and planning. He or she must understand where, from within the Theater Air Control System/Army Air Ground System, A²C² measures are synchronized and why. The OIC must also know how ground units, as well as airspace users, operate within the airspace control order and special instructions. These are absolute requirements if the ADAM cell OIC is to be able to maximize operational effectiveness and prevent interference among users within the unit-of-action footprint.²

cision-making process” and “provide AMD input while participating in the staff war games.”³ However, persuading airspace users to conduct a separate and specialized airspace user war game and/or rock drill is perhaps the most important—and most often neglected—contribution an ADAM cell OIC can make. Even when participating in a unit-of-action rock drill, the AMD officer and Air Force air liaison officer, too often, stand across the room from one another and fail to communicate. Each officer briefs his or her own part, with total disregard for required critical deconfliction. During staff war games, both the AMD officer and air liaison officer are often completely ambivalent to the fire-support coordinator’s action or counteraction and the affect impending mortar missions will have on airspace coordination area-coordinating altitudes so that both can operate simultaneously.

Typically, airspace user actions and requirements are simply not discussed in enough phase-by-phase detail during standard war games or rock drills to make them an

²Joint Firepower Controller Course, Student Workbook, Chapter C2-08, “Integrated Combat Airspace Command and Control,” pages 6, 8-13.

³Air Defense and Airspace Management Cell Tactics, Techniques, and Procedures, January 2005. Chapter 5, page 5-4.

effective staff process for synchronizing airspace used in support of a ground operation. Unit-of-action operations officers are focused, as they should be, on the operation as a whole. Unless due attention is given to airspace planning, deconfliction and prioritization based on current mission, enemy, terrain, troops, time available and civilian (METT-C) considerations, inconsistencies in planning will undoubtedly arise during the conduct of actual operations.

The ADAM cell OIC can significantly reduce potential disasters by forcibly persuading key players to conduct an airspace user war game and/or rock drill speci-

drive to facilitate and participate in combat planning and operations as a diehard member of the commander's battle staff. Historically and stereotypically, officers of "slice element" battlefield operating systems in the TOC—such as Air Defense Artillery—have had to fight extra hard to ensure their aspect of operations was planned and supported to the utmost degree. And on some staffs, certain battlefield operating systems are prioritized more so than others. This bias can affect everything from war game participation, annex extensiveness and even work space allocation in the TOC (or the folding field table at the exit

ASPECTS OF PENDING OPERATIONS	
Where each player plans to be in support of the ground plan and who should be prioritized during each phase of operations.	AMD, Air Force and rotary-wing forward air controller-airborne (FAC-A) identification, friend or foe (IFF), procedures and required responses to mitigate risk of fratricide.
How communications will be exchanged.	How systems capabilities nest or conflict.
The integration of unmanned aerial vehicle restricted operating zones and frequency spectrum details.	Rotary-wing air corridors versus counter-fire and counter-mortar operations. Reactions to changes in air actions and conditions.
Conduct of close air support battle drills and close air support operation altitudes.	

cally geared to detailing, picking apart and then synchronizing the air plan, planning secondary A²C² measures and forcing the communication between personnel and systems before the fight begins.

The ADAM cell OIC should strongly request that the brigade S-3, or designated representative, attend and talk through the tactical plan. The S-3 or representative should reemphasize the commander's priority for air and AMD coverage, and address ground unit placement and security concerns. Then each participant should take turns talking through each of their unit dispositions, priorities, tasks, procedural controls and constraints or issues phase by phase.

Benefits of Airspace User-Specific War Games and Rock Drills

Each player in an airspace user-specific war game or rock drill should come away with a deeper understanding and appreciation of the full spectrum of pending operations, including aspects listed in the table above. At the very least, an airspace user-specific war game or rock drill will reaffirm the details of the tactical plan, ensure all airspace players understand everyone else's systems, deployment plan, and address issues that can be identified and tasked for fix before the fight begins.

Fight to Become an Active Planner

Finally, in today's fast-paced and aggressive Global War on Terrorism, the ADAM cell OIC must live the "Warrior Ethos" by displaying and internalizing a fervent

by the coffee pot). While this is understandably based on the threat, available time and commander's direction in staff priorities, the ADAM cell OIC must understand and accept the fact that he or she is the commander's staff expert on the third dimension of battle space. He or she is also the field representative of the Air Defense Artillery branch and the steward of combat operations regarding A²C², enemy air and missile order of battle and related combat operations.

Ensuring all systems in the ADAM cell are fully operational, integrated and used in planning and execution is only one aspect of fulfilling one's responsibility to the commander. The ADAM cell OIC must also anticipate requirements and "lean forward," projecting what the enemy air will do next and aggressively offering recommendations on what ADAM cell systems and personnel can do to contribute to the fight. The bottom line is that nothing less than "face-paint mentality" will suffice. Our ADAM cell OICs must stay active, current and relevant in all aspects of AMD and ADAM cell operations. They must function as strong team members of the staff, working aggressively to ensure Air Defense Artillery does all that it can to support the commander and the Soldiers while facilitating the enemy's demise. With the inevitability of air and missile actions on tomorrow's battlefield, anything less is simply not an option.

Lieutenant Colonel Matt Michaelson is the senior ADA/ADAM cell trainer (Bronco 16) at the National Training Center, Fort Irwin, California. He can be reached at bronco16@irwin.army.mil.

Air Defense Artillery Officer Basic Course

Planting the Seed for Success

by First Lieutenant William W. Wood

The purpose of all Army training should be to produce combat-ready Soldiers and leaders. The Air Defense Artillery Officer Basic Course is no exception. While preparing for the course, I researched the curriculum and came upon an article in the *Air Defense Artillery Yearbook 2004* titled "Changing the Way We Live and Train at Fort Bliss" by Colonel Bryon E. Greenwald, then the garrison commander of Fort Bliss, Texas, and Colonel Kendal W. Cunningham, commander of the 6th Air Defense Artillery Brigade, which is responsible for institutional training, including officer basic, at the Air Defense Artillery School.

In their article, Colonel Greenwald and Colonel Cunningham described the incorporation of Operation Iraqi Freedom lessons learned into the ADA enlisted, noncommissioned and officer education system. "The Officer Basic Course Field Training Exercise has been revised to incorporate more Warrior Tasks and realism," they noted, "including scenarios involving improvised explosive devices, rocket-propelled grenades and civilians on the battlefield."

My officer basic experience as a member of Class 03-04 certainly reflected this new emphasis on the contemporary operational environment. As an Air Defense Artillery platoon leader assigned to the 2nd Battalion, 44th Air Defense Artillery, 101st Airborne Division, which is based at Fort Campbell, Kentucky, but currently deployed to Iraq, I can say that this change in curriculum definitely helped me and my fellow platoon leaders prepare for combat. The combination of combat-experienced instructors, realistic field problems and combat-focused lieutenants made the course a highly beneficial experience.

With the state of the world as it was during the summer of 2004, most lieutenants attending the officer basic course had an idea that they would be in Iraq or Afghanistan shortly after graduation. While interest in air and missile defense subjects ran the gamut, everyone was interested in learning how to lead a platoon in combat, doing whatever might be asked of them. Many expected to per-

form duties ranging from base defense and convoy security to cordon and searches. We discovered that the Air Defense Artillery School had put together a comprehensive curriculum that imparted basic knowledge on all of these subjects. We were not expected to be experts on any

of these subjects, but as most basic courses intend, we came away with a basic knowledge of correct tactics, techniques and procedures. Most importantly, we began to approach the sort of problems we would encounter in Iraq and Afghanistan as leaders.

To be a good leader, one must be tactically and technically proficient. New lieutenants must be willing to learn from experienced noncommissioned officers (NCOs). Most importantly,

they must become problem solvers. By giving us a basic understanding of improvised explosive devices; insurgent tactics, techniques and procedures; convoy security and base security operations; cordon and searches; and mounted land navigation, our instructors taught us to think about all aspects of the environment in which we would soon be asked to lead Soldiers. Sweltering in the 110 degree heat of the Fort Bliss desert environment didn't hurt our preparedness either.

Most of our NCO instructors during the short-range air defense track phase of officer basic were recent combat veterans. Besides sharing their war stories—and scaring the pants off new lieutenants—they tutored us in devising countermeasures to the constantly evolving tactics, techniques and procedures employed by insurgents. Besides being combat veterans, our NCO instructors came from a variety of units. Noncommissioned officers from mechanized units gave our soon-to-be-mechanized lieutenants combat perspective from the turret of a Bradley Linebacker. Noncommissioned officers from other types of units taught us how to employ Avenger systems in non-traditional roles.

The culminating core-phase field problem incorporated all of the skills we had learned in the classroom. We



A 2-44 ADA platoon of up-armored M1114 Humvees, led by First Lieutenant William W. Wood, rolls out of a forward operating base at the start of a convoy security mission inside Iraq.

began by setting up a camp defense complete with an entry control point, which we designed to encompass a vehicle and personnel search area. Next, we led convoys through the desert against an insurgent-type opposing force that employed improvised explosive devices and small-arms ambushes. We performed a battery-size foot patrol that included a cordon and search of a small building complex held by “ornery” opposing force tribal leaders. We trained in Kevlar helmets and flack vests and used Humvees and Bradleys for convoys. We lived in General Purpose Medium Tents and consumed Meals Ready to Eat (MREs). As most students and Soldiers are prone to do, we griped about the training.



First Lieutenant William W. Wood points out routes on a map table during a 2-44 ADA pre-mission briefing.

Since our deployment to Iraq, my battalion has conducted convoy security, route security, base security, and quick reaction force missions. We have encountered improvised explosive devices, vehicle-borne improvised explosive devices and small-arms ambushes, both complex and simple. We fight from up-armored M1114 Humvees and have been in ballistic vests and helmets since our arrival. Tents, sea huts and, for a very short time, prefabricated containers, have served as living quarters. We have eaten our share of MREs. Sound familiar? It probably does if you are a student enrolled in Air Defense Artillery officer basic.

After a few months in Iraq, I began to reflect on my officer basic training, and I realized that its relevance was astounding. Our tactics, techniques and procedures vary from those we learned at Fort Bliss because we constantly change them to adapt to a highly fluid enemy. The important point is that the very tactics, techniques and procedures that I continue to adapt and improve on got their beginning as a seed planted in officer basic. Our officer basic instructors confronted us with situations and problems they knew we would encounter once we were deployed, but left it to us, as future leaders, to work through the thought process that produces solutions.

As our battalion prepared for combat, we trained on weapon systems not organic to an Avenger unit at ranges and convoy live fires at Fort Campbell and in Kuwait. At every new level of training we were told to forget what we learned at the last level. I disagreed, and still disagree, with this approach. Instead of disregarding the knowledge imparted by your previous instructors, file it away or put it in your mental “tool box.” There is no one standard answer in combat. Our unit tactics, techniques and procedures changed drastically—sometimes in the midst of a mission—as we moved from one area of responsibility to another. For example, in most areas with improved roads,

staying in the middle of the hardtop and keeping a decent convoy speed prevented serious damage to our M1114s. In other areas with poor roads, the insurgents emplaced improvised pressure switches and, in some cases, anti-tank mines inside potholes. These areas required a more careful sweep, and moving fast was not an option. However, the hardest thing to adjust to was the never-ending array of “possible IED emplacements.” Before arriving in Iraq, we had been told at every level of training to be aware of tires, trash piles, dead animals, piles of rocks and dirt mounds. On my first “right seat ride” mission, I was awed to see these items every 10 to 15 meters. Iraqis literally “drive it till the wheels

fall off,” and they pile rocks up in the middle of the desert to mark turns to their homes.

The best thing I had going for me as a platoon leader was my assignment to a combat-experienced unit and, thanks to my officer basic instructors, a basic understanding of what I would be facing. Since 2-44 ADA had deployed for Operation Iraqi Freedom I, the battalion is blessed with combat-seasoned Soldiers and leaders to turn to for expert guidance and advice. In my platoon alone I had eight combat veterans, a category that included all my NCOs, one of whom was an Operation Iraqi Freedom as well as an Operation Enduring Freedom veteran. Between them and the combat-focused knowledge imparted by my officer basic instructors, I was certainly set up for success.

...you never know when you might have the right tool for the job...

There are two things I would like to impress upon new lieutenants entering the Air Defense Artillery Office Basic Course. Regardless of how “hokey” a training event may feel at the time, understand that as a leader you must derive every bit of knowledge from the training event. Second, never disregard your last block of instruction, thinking the next may yield more valuable knowledge; you never know when you might have the right tool for the job tucked away in your toolbox.

Finally, I would like to say “Thank you” to Air Defense Artillery Basic Course cadre and instructors for creating a relevant, combat-focused curriculum that pays off when lives are on the line.

First Lieutenant William W. Wood is a platoon leader assigned to the 2nd Battalion, 44th Air Defense Artillery, 101st Airborne Division. The battalion redeployed from its second tour in Iraq to Fort Campbell, Kentucky, in March 2006.

Convoy Security Escort

Down a Long and Perilous Road

by First Lieutenant David M. Foley

The noise from the engine and the air conditioner is deafening. I scan the horizon of the road in front of me, searching for anything that looks abnormal. I've been doing this everyday for the past month, and every time there are so many things that shouldn't be there, like trash scattered on the sides of the road. I take notice of places I would set a bomb if I were the enemy; there are so many, and as I pass I brace for the impact that does not come and then wonder why they haven't utilized these places. I drive by hoping they don't think like me; it would be devastating. My thoughts are momentarily interrupted by the crackle from the radio. It's just my platoon sergeant calling for a radio check. The up-armored Humvees respond in short order and in sequence to complete the radio check as quickly as possible.

The platoon has done well, remembering my instructions to minimize all radio traffic and to keep the line free. I continue to search and scan over the horizon, periodically breaking to check the distance we have remaining before our next turn. I know the route by heart now, and if I had to, I could tell you exactly how many minutes away we were just by noting specific piles of debris, a house, or other obscure landmarks along the way. This gives me the chance to give my eyes a break from the strain, but I do not rest long, in a moment I am looking again.

I tug at the collar on my IBA [Interceptor Body Armor]. The heat is unbearable and impossible not to notice. It is so unbelievably hot. I can feel the sweat cover my body. It is summer in Iraq, and it was 120 degrees today. I know that the air conditioning is on because it is so loud it is hard to talk to my driver. I like to put the sleeves of my DCUs [desert camouflage uniform] over the vent to capture all the air coming in. This is the only thing that seems to work; at least it helps a little. I twist my body so it creates a little nook where the air can flow through my DCU top, and I suck in my chest so I have an air pocket between me and my IBA. The cool air rushes in and it feels good. Then my driver says it looks like the vehicle is starting to overheat, so I order him to turn it off until the vehicle cools down. Instantly I feel the total loss of anything refreshing. It is just absurdly hot now and miserable. I ask the gunner to hand me another bottle of water from the cooler. It must be my fifth or sixth today. It is unbelievable how much we have to drink just to stay hydrated during the summer months.

I have to shift my body because I've been sitting in the same awkward position for hours. All I can feel is the heat from the engine rushing in by my left knee. It must be at least 140 degrees in the cab of the vehicle. The heat is constantly flowing in, but now with the air condition-

ing off, it just lingers around me with no relief.

I continue to search the side of the narrow road. It is barely wide enough for one Humvee. The road is elevated from the rest of the surroundings by a few feet in most places, but in a few spots it dips below into shallow valleys. For long stretches there are piles of dirt just dumped along side the road. Workers apparently left the dirt there while attempting to make the road wider. I wonder when they will resume work, because it seems like they haven't made any progress since I've been using this road.

We are in the middle of nowhere. The landscape is almost totally barren in this section of the road. It is just desert, dried up lakebeds and sand, lots and lots of sand. Occasionally, I see camels or a local national scraping salt out of the dried lakebeds to sell later at the markets. But for the most part there is nothing.

Sometimes, I chat with the driver or my gunner, but always we are watching the roads. I spend most of my time thinking of what I would do if I were the enemy, and I start to think about it again. There are so many places I could hit my own convoy along this route, if I were so inclined. It feels somewhat depressing knowing, at least initially, that we are relegated to being on the defense. But we know, in a firefight between us and any enemy, there would be no contest. We would crush anyone foolish enough to try to slug it out with us. The insurgents are no match for us, but that is not how they operate; not usually anyway. Now, I start to imagine what I should do if we did get hit. I break from this only to check on my convoy, ensuring they are all together, and to execute the random radio checks.

I look back through a bullet-resistant windshield into a small side mirror to see how the convoy looks. From what I can see it looks good, but I can see only a few vehicles. I will have to make sure the rest of the convoy is together by using the radio to call the rest of my teams. So I call the rest of my platoon and ask them, "How are we looking back there?" They all respond in sequence that we look "tight," and we press on. In some form or fashion this cycle continues for hours, mile after mile. The only real change comes when we have to slow down for intermittent dust storms, to block an intersection or perhaps to allow a herd of camels to cross the road.

Then out of the corner of my eye, I see it, what I hoped I never would. I see it in my small side mirror as clear as day. It looks like a mushroom cloud and reminds me of old World War II footage of atomic bombs being dropped. It's nowhere near that size, but that is exactly what it reminds me of—an atomic bomb. It looks huge to me, and it is black, maybe 100 meters high and spraying rocks and

debris in all directions. It will seem quite odd later, but even though I still haven't heard anything yet, I turn to my gunner and driver and ask, "Did you hear that?" Both of them give a negative reply. I say, "I think an IED [improvised explosive device] just went off!" Then I hear the explosion, and at the same time, I hear the crackle of the radio—"IED, IED, IED!" I quickly ask what the damage is, inquire if anyone is hurt, and follow that by asking, "Can you push through it?"

While waiting for the response, I begin to inform my own vehicle crew of the incident, while trying to search for additional attackers or IEDs and keeping an eye on the convoy to ensure the vehicles are sticking together behind me and are still following. They are, at least the few that I can see in the small side mirror. It seems like an eternity waiting for the response, but in reality, it probably isn't more than a few seconds. I use this time to take note of the time and grid coordinates of the attack, which I mark on my windshield with the grease pencil I had stashed for just such an occasion.

Finally I hear over the radio, "Everyone is okay; we can push through, and the convoy still looks tight." I make a quick check with the rest of my teams and with the KBR [Kellogg, Brown & Root] convoy commander, discovering that the convoy has slowed but pushed through and is still together.

So I give the order for my driver to continue on and order the gunner to search and scan, while trying to radio the closest "sheriff unit," as the convoy management teams located at forward operating bases are called. This particular area is relatively desolate and communications with anyone outside of the convoy, including any nearby units, is extremely poor, making it impossible for anyone from my convoy to reach any sheriff unit or friendly patrols.

I immediately try to contact the battery and the battalion over the MTS [Movement Tracking System], which in this area is my only effective means of communication back to the rear. As best and as quickly as I can, I send off the "Five Ws" (who, what, when, where, and why) of the attack. I can only send short messages, so I try to make the messages as concise as possible. I send them off in rapid succession, giving the time, date and location, action on contact, injuries and damage. I send them off and continue to reassess and gather more information from and about the damaged vehicle.

Then the damaged vehicle reports it has to slow down. It is having trouble keeping up. Also the turret is damaged and locked in the nine o'clock position. I order the convoy to slow, but continue movement, and direct the damaged vehicle to move up to my position where I can get eyes on their damage.

As they begin to make their way forward, the battery

responds to my initial messages and asks for more information. Apparently, not all of the messages I sent got through, and some had been received out of correct sequence. I attempt to resend the messages, this time pausing to ensure one is received before trying to send the next. This process is frustratingly slow because the messages that do go through take time, while often some don't go through at all. By now the damaged vehicle is at my position, and I can see that the damage is extensive. Most of the damage sustained is to the turret, tires and ballistic glass. It looks bad, but they can push on, even though they are running on a flat tire. I check to see how far it is to the closet friendly unit. We still have nearly 100 kilometers to go. The tire is quickly worsening, and I know we will have to change it eventually, because we are now moving at an unacceptably slow pace.



The 2-44 ADA up-armored Humvee above was crumpled by an improvised explosive device during a convoy security escort mission similar to the one described in this article.

I search for a good spot to stop the convoy, waiting for an area that is well away from the sand berms

and dunes normally found on our flanks. I pay close attention to keep from stopping where the enemy might likely be lying in wait to ambush us. I find a spot well away from the original attack site. It is relatively flat for a few kilometers, which is surprisingly hard to find on this route. I order the convoy to stop and direct the crew to change the tire and try fixing the gun turret.

The out-of-action turret gun is a major loss of our combat power, especially if there is going to be a fight. We need to get it fixed, if possible. However, my real priority is to get the convoy up and moving at full speed again. They do their best to make a speedy stop and rush to replace the damaged tire. While I continue trying to update my unit of the incident, and the crew is busy working on the vehicle, my driver and gunner keep a sharp eye out for anything out of the ordinary.

To my surprise, I see one of my teams race up beside the downed vehicle and begin helping with the repair efforts. Immediately I move to tell them to go back to their positions and take up security for the rest of the convoy. While their efforts are noble, understandable, and they have shown good instincts by rushing to the aid of their comrades, I find their response tactically unsound. When you hear a friend on the radio saying they are hit, your natural tendency is to want to go help. But there are too many vehicles bunched too close together, and my vehicle is already providing over-watch and security for the crew working on the damaged vehicle. I order the team to return to the center of the convoy and to provide security until we are ready to move out again.

The total time on ground is short, but to me it feels like we have been there forever. I alternate between sending messages on our progress, answering any questions from my unit and checking on the progress of the downed

vehicle. Quickly we get back underway and move the convoy toward our destination. Once all the questions from my unit are answered, I begin to alert other units. Once in range, I relay the message via radio. Upon arrival at our destination, we check in and give a full brief.

I conduct a quick but thorough AAR [after-action review] with my platoon. This is our first IED attack and emotions are high. I can see it on everyone's face. I know they need to talk about it, so I provide the opportunity. I give everyone a chance to "get it off their chest," and I am careful not to rush them, but I know that time is short, and I have to get my teams back on the road in only a few hours to make the return trip down the same road.

At the FOB [forward operating base] the repairs to our vehicle are finished quickly. It is there, at the motor pool, that I finally get a good look at the damage. The force of the IED was so great that it twisted the turret from roughly the two o'clock position and swung it around to the nine o'clock position. A large chunk of concrete, probably weighing 20 pounds, had been blown hundreds of feet into the air and had come crashing down on the shield of the .50-caliber machine gun, crushing it down below the level of the roof on the driver's side of the vehicle; thereby locking it in place. Miraculously, we got our repairs, and in only a few short hours, we began our return mission.

In actual time, the whole sequence of events happened in seconds and minutes, but it felt like it took hours. I am not sure I can adequately describe how members of our platoon felt that day. This was the first tough situation we faced; many more would follow.

Looking back, I can say, compared to subsequent experiences, this attack wasn't all that remarkable. My platoon would face a lot more difficult challenges, but there are a few things that I would take away from that first attack. Rely on your training and realize how important your training is. Nothing will ever prepare you for the first time someone shoots at you, but your training will at least give you a template to follow. It gives you a starting point to work from; each experience is different, so you have to use your training to fit you situation. You have to be flexible and adapt quickly to unexpected events. But your training will help you find your way through these tough times.

I've heard people say, "You don't so much think—you just react." While I don't totally agree with that, I understand it. Because you are always thinking and envisioning what to do, reacting just tends to come more naturally. In your mind, you have been there before, so the actions that you take come quickly.

You can train, but nothing will totally prepare you for the actual event; the important thing is to remain calm so you can think your way out of the situation rather than just reacting on emotions or fear. For example, the team that came to the aid of the damaged truck did the right thing by trying to help out, but they reacted emotionally to the situation instead of thinking it through. Once they saw that the individuals were okay and handling their situ-

ation, they should have returned to the more pressing duty of security for the rest of the convoy. It was an understandable reaction and was quickly resolved. Later, I made sure I discussed this issue with that crew and believe they understood my point.

The second thing I will remember is that people under stress seem to react very differently. During the AAR you could feel the tension in the air; that is why I thought it was so important to let them talk about the experience immediately and give them a chance to let it all out. I can say that was the toughest moment for me, trying to figure out how to deal with the emotions of the group at that point. I reminded them of our mission and our duty and that unfortunate and sometimes unavoidable hazards are associated with our job. Looking back, it seems kind of funny that I was more worried about how the team felt than about the actual bombs going off and people trying to kill us. All I could think of was how to get these guys back to a state of "normalcy" and back to the job.

I can't say enough about how proud I am of my platoon; each and everyone showed me, on multiple occasions, a seemingly endless amount of personal courage and intestinal fortitude. I feel privileged to serve my country with those I consider to be some of the bravest Soldiers I have ever met. It took great courage, after that incident, to turn around and go right back down that road, and even though I know some were shaken, they did return to their mission without complaint, simply because they are America's finest Soldiers.

I am sure some would question why, but we continued our mission that day down that same road, and I know that it was the best thing we could have done. It's not something that I will try to explain here, because either you understand it or you don't. I know that day changed my life and the way I look at things forever, and I am sure it did for a majority of the platoon as well. In some way I think it helped us come to terms with the reality of our situation, and for some, combat was no longer an abstract thought. These Soldiers realized they were at war with an enemy who was bound and determined to kill them. Nothing prepares you adequately for that moment. I know it is something difficult for others to understand, even through these simple words; however, there is no doubt in my mind that each member of our platoon understands what I am saying. All we have out there on the road is each other, and this experience made us bond closer together.

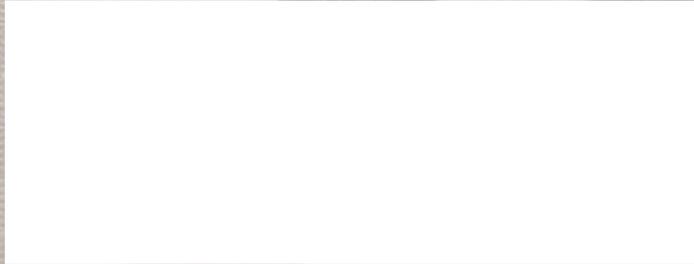
As I mentioned earlier, we would share many experiences like this over the course of our year in Iraq, and I could probably write a book on all of them, but somehow this one, even though it might not have been the worst, will always stick in my mind. Those moments will forever live in our hearts and minds. It was a moment when many of us changed the way we perceive our world.



First Lieutenant David M. Foley is a platoon leader assigned to the 2nd Battalion, 44th Air Defense Artillery.

Air Defense Artillery

2 Sheridan Road
ATTN: ATSA-ADA
Fort Bliss, TX
79916-3802



PRST. STD.
U.S. POSTAGE
PAID
SAN ANTONIO, TX
PERMIT NO. 4043

FIRST TO FIRE



Read past issues of *Air Defense Artillery* magazine online!
Go to <http://airdefense.bliss.army.mil/adamag>