

AIR DEFENSE ARTILLERY



A PUBLICATION OF THE AIR DEFENSE ARTILLERY ASSOCIATION • JANUARY-MARCH 2005



THESE FEATURES & MORE INSIDE:

- Special Theme Section: Air & Missile Defense Training Transformation Prepares Soldiers for Combat in the Contemporary Operational Environment
- Ambush at Holy Week • The Case for Missile Defense in the Arabian Gulf
- Multi-Billion Dollar Contract Award Moves MEADS Closer to Battlefield



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ADA MAGAZINE

A PUBLICATION OF THE ADA ASSOCIATION

JANUARY - MARCH • 2005

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Maj. Gen. (Ret.) John B. Oblinger
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Articles appearing in *ADA Magazine* do not necessarily reflect the opinion of the officers or members of the U.S. Army Air Defense Artillery School, the Department of the Army, or the Air Defense Artillery Association.

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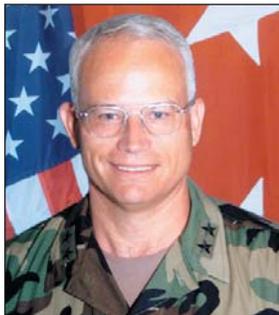
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On the Cover

Soldiers of the U.S. Army's 69th Air Defense Artillery Brigade dig fighting positions around a Patriot emplacement in Israel just prior to the start of Operation Iraqi Freedom.





INTERCEPT POINT

by Maj. Gen. Michael A. Vane

This, the first issue of the “new” *Air Defense Artillery* magazine, is an “early deployment” version of the robust “objective” branch journal we envision for the future. We hope to grow our branch journal into a periodical that rivals the best produced by the Army’s combat arms.

The magazine belongs not to the Air Defense Artillery School, Fort Bliss or the Air Defense Artillery Association—which serves as its publisher—but to air and missile defense Soldiers of all ranks and military occupational specialties. While the pages of the early, “start-up” issues of the magazine may be dominated by Air Defense Artillery School writers, I’ve directed the magazine’s editor to give top priority to articles by Soldiers serving in the field—especially to those with units deployed to theaters of operations—and to ADA Soldiers enrolled in Officer or Noncommissioned Officer Education System courses, in combined or joint service schools, and joint assignments.

Air Defense Artillery magazine will regularly feature special theme sections. The magazine is now soliciting articles to support an “Operation Iraqi Freedom and Operation Enduring Freedom Lesson Learned” section for its April-June 2005 issue and an “ADA Weapons of the Future” theme section for its July-September 2005 issue. See the “Writers’ Guide” on page 23 for instructions on submitting articles. The ADA School will continue to publish *ADA Magazine Online* in its current format, with daily updates, original articles and links to articles on other websites. Each issue of the print version of *Air Defense Artillery* magazine will also appear online in printer-friendly PDF format.

Copies of *Air Defense Artillery* magazine will be shipped free to ADA units, to air and missile defense program and project offices, and to strategic Army and Department of Defense leaders, but the number of copies will, at first, be relatively small. I urge officers and senior NCOs to purchase subscriptions, so that the free copies end up in the hands of our junior NCOs and enlisted Soldiers.

Air Defense Artillery magazine traces its lineage to the *Coast Artillery Journal*, which first appeared in 1890s. It was published as the *Antiaircraft Journal* during World War II and Korea. Legendary Soldiers such as Gen. George C. Marshall and Gen. George S. Patton published articles in our branch journal. Now the magazine offers you the same path to professional development. The magazine’s success depends on your willingness to write and submit articles that will help shape the future of Air Defense Artillery.

Those of us assigned to garrison duty at the U.S. Army Air Defense Artillery School dedicate this—the first issue of the 21st century—to ADA Soldiers bearing the brunt of combat in Iraq or Afghanistan. Our thoughts and prayers are with them . . . first, last and always.

First to Fire!

Michael A. Vane

Michael A. Vane,
MG, USA
Commanding



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Soldiers of Foxtrot Battery, 202nd ADA, interact with Iraqi civilians during momentary lulls in combat operations. At far right, Sgt. Maj. James Ross of 4-5 ADA was in the lead Humvee when a Foxtrot patrol was ambushed by Iraqi insurgents.

AMBUSH at HOLY WEEK

An ADA Sergeant Major Spends Longest Hours of His Life Trapped in Iraqi Ambush

by Sgt. Maj. James Ross

We depart Camp Blackjack, Baghdad International Airport, at 0530 hours. The patrol consists of 28 Soldiers from 2nd Platoon, Foxtrot Battery, 202nd Air Defense Artillery. The Illinois Army National Guard unit is deployed to Iraq to support my battalion, the 4th Battalion, 5th Air Defense Artillery, 1st Cavalry Division.

We are mounted in eight M114 "Up-Armor" Humvees. Each Humvee has three- or four-man crews and a crew-served weapon mounted in its rotating turret. The crew-served weapons are a mix of M240B Machine Guns (7.62mm), M249 Machine Guns (5.56mm Link) and MK-19 Grenade Launchers. The platoon is armed with M16A2 Rifles (5.56mm), M-9mm Pistols, M203 Grenade Launchers, and M4 Machine Guns (5.56mm). I have a 9mm strapped in my leg holster and a M16A2 Rifle.

It is Easter Sunday, but our main concern is that Easter falls right in the middle of an Islamic holy week. My air defense battalion is responsible for the approximately 300 kilometers of battle space surrounding Baghdad International Airport. Shi'a Muslims are inundating our zone of operations as they head south to Ramadi to visit a hallowed shrine. We are pretty sure insurgents are using the pilgrimage through Baghdad to infiltrate our zone.

As a senior noncommissioned leader, I am not obligated to go out on patrol. Because I like to be near the Soldiers, I pick different patrols at random and go out into the "zone" with them. I always try to make the platoon leader and the platoon sergeant feel at ease. I promise them that I will be "going along for the ride" and tell them not to worry about me trying to take charge. I am riding in the lead Humvee with a squad leader, driver and gunner.

At 0545 hours we pick up "J," our translator, at the Titan Company Headquarters. Everyone calls him J because his Arabic Name is too tough to pronounce.

We leave Entry Control Point (ECP) 7 at the southeast corner of the airport. We drive about a mile and turned north on an expressway that serves as military supply route (MSR). The route is one of the main supply routes leading into Baghdad. It carries the military and civilian convoys that carry supplies to coalition forces throughout Iraq. The route runs south all the way to Kuwait and northeast through Fallujah, about 30 kilometers from Baghdad, which makes it a popular road for insurgents.

The countryside along the MSR is primarily rural. Farmers live in the villages to our left and right. We head north on the MSR about eight kilometers, and we come across a large crater that has been blown in the road. The crater is about four-feet deep and stretches almost all the way across the right two lanes of the three-lane highway. Someone has blown an improvised explosive device. A civilian car is broken down in the crater. Obviously, the car's driver didn't see the crater and drove right into it.

The patrol positions its vehicles around the area and investigates the scene. We find the firing wire and the detonating device in the weeds east of the crater. A small irrigation pipe runs under all six lanes of the MSR. It's apparent that the main charge was stuffed in the pipe under the highway and detonated. A sergeant, a specialist and I follow the firing wire back to its point of origin. The three of us jump over a five-foot wide concrete culvert that holds about three-feet of water. About 30 meters further, the wire ends at the corner of a yard, about 200 meters northeast of the crater.

We contact the patrol leader, 1st Lt. Tracy W. Doubler, on our handheld radio and tell him what we found. He directs the Humvees off the MSR and moves them east onto a dirt road that flanks a small dirt road. Then the patrol leader, a platoon leader and a platoon sergeant move



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to the culvert to develop a plan of action. The platoon stays on the far side of the culvert. Since the sergeant, specialist and I don't want to jump back over the culvert, we stay on our side of the culvert.

An Iraqi farmer who lives in a nearby village comes up to us and tells our interpreter that for the last few weeks men have been showing up in the area and threatening the residents if anyone speaks of their activities. He says the men are very intimidating and basically have all of the locals scared. He says the all the insurgents have guns and threaten to kill anyone who talks.

We thank the man for the information, and Lieutenant Doubler decides to search the house. He tells the three of us to stand fast because the platoon is going to move its vehicles into position to conduct the cordon and search. He says he will bring the vehicles around the culvert so that we won't have to jump over again. The patrol leader also plans to question the residents of the houses to determine if their stories match the neighbors' stories.

The patrol leader and platoon leaders head back toward the Humvees while the three of us wait on the far side of the culvert. Before they reach the Humvees, we are ambushed by insurgents firing small-arms from about 400 meters away on the west side of the MSR. The platoon members rush to their Humvees and begin returning fire.

For the three of us trapped behind the culvert between the insurgents and the platoon, there are few options. As bullets fly all around us, we move backwards about 20 feet and take up prone fighting positions. The specialist tries to jump back over the culvert, but doesn't make it across and ends up waist deep in water. The patrol leader yells for him to start shooting with his M203 Grenade Launcher. Because the water is waist deep and the culvert walls are angled, the specialist can't get out of the culvert. He gives up trying, locks and loads his grenade launcher and starts firing controlled bursts about every 30 seconds while standing waist deep in water.

The specialist directs the grenade rounds into a ridgeline about 400 meters to the west where we believe the ambush is coming from. After about two minutes the sergeant and I grow tired of dodging bullets, which are zinging by so close that you can hear them snap. I looked at the sergeant and tell him that we need to get the *\$^%# outta here. We get on our feet and jump over the culvert. I help pull the specialist out of the culvert. Rounds are flying all around us, and we have no choice but to run for it. I yell to them, "Run for the vehicles."

We are completely exposed and in the open, so we run fast as we can toward the vehicles. Weighted down by our gear, we aren't able to run as fast as we'd like. It's a 150-meter sprint to the Humvees with no cover. I really don't like our chances. As we dash for the vehicles, bullets whiz by our heads and kick up dirt around us. It's a miracle none of us are hit.

We somehow make it to the vehicles safely. The specialist tells me later that, when I got to our Humvee, my eyes were so big with fright that they were filling up my

Eye Safety System goggles. It's surreal. I can't believe I am standing there without a scratch. Using the vehicles for cover, we fire back at the ambushers with all of our small arms and crew-served weapons. The platoon sergeant notifies the battalion command post that we were almost "black" on ammo and to have a resupply waiting at ECP 7.

Once the attackers stop firing, and we are convinced that the area is reasonably clear, the patrol leader has a team search the house and question the residents. The platoon forms a 360-degree perimeter to ensure we are safe. During the search, we start to receive mortar fire. The first round explodes about 300 meters to our east. The second round falls about 200 meters away and causes a very large explosion, probably by hitting a house or a car. The mortar fire is starting to get too close for comfort, and the lieutenant gives the order to line up on the MSR and return to ECP 7 for ammunition resupply. Simultaneously, the mortar crew adjusts fire and mortar rounds start landing all around us. It's obvious we need to get out of the area because we are sitting ducks. The patrol leader gets on the radio and tells everyone that we are moving back to ECP 7.

As we are pulling into ECP 7, we notice a convoy leaving Baghdad International. It consists of 20 fuel tankers and a couple of five-ton gun trucks. A sergeant in the lead vehicle tells us the convoy is headed away from the ambush site.

First Sergeant Paul Peterson of Foxtrot Battery meets us with the ammo at ECP 7, and resupply takes only about 10 minutes. We head back out towards the MSR and, almost immediately, we see black smoke coming from the northwest. As far as we can tell, the column of smoke is rising from the same general direction as the ambush site. I'm hoping that the smoke isn't due to an ambush of the fuel convoy.

...a textbook ambush waiting to happen...

As we travel one kilometer further, it becomes obvious that the convoy we saw leaving ECP 7 is under attack. The sergeant who told us the convoy was headed away from the ambush apparently had his directions mixed up. An ugly scenario unfolds in front of our eyes. The convoy had been attacked within the previous 10 minutes. Two fuel trucks had been completely destroyed and are blocking the three lanes of the northbound MSR. The convoy personnel—about 50 of them—are up ahead about 400 meters and are being attacked from both sides of the street. They are in big trouble. The only way we can get to them is by taking a dirt trail on the right side of the MSR. It's a textbook ambush waiting to happen and everyone knows it. We also know that we either run the gauntlet or the personnel in the convoy gets hammered.

I grab the radio hand-mike and notify the platoon to expect to get hit as soon as we pull off the MSR onto the



dirt road. The dirt road branches northeast about 200 meters and then turns back towards the highway. Running parallel to the dirt road is an eight-foot high patch of grass and reeds that mask the enemy location. I don't know how I know they are in there, but by looking at the burning fuel trucks, I can just envision insurgents waiting to spring an ambush. With our Humvee in the lead, we pull onto the dirt trail and, just as expected, we get ambushed. A rocket-propelled grenade streaks out of the weeds and misses by less than a foot. Rounds are flying everywhere. They are firing at us, and we are firing back. If one of the rocket-propelled grenades hits our Humvee, it will be a disaster. The entire platoon will be trapped on the dirt trail in the middle of the kill box.

We make it around the turn and, with the platoon in full throttle, we move back onto the MSR and position ourselves around the disabled fuel trucks. The convoy has taken many casualties, and one soldier with a head wound is in critical condition. Most of the other wounded are suffering from gunshot wounds to their extremities. Our medic immediately starts to consolidate the wounded and sets up a triage. Doubler gets on the radio and calls in a dust-off request. He's told that a medivac helicopter is on its way.

The platoon immediately takes charge of the scene and lets loose with all its weapons systems. On the radio, I call battalion and ask for air and armor support. The battalion commander, Lt. Col. Todd Morrow, tells me he's sending everything he has our way.

Small arms fire is flying at us from both sides of the highway and, periodically, mortar rounds are landing within 200 meters to our front. Two Apache Helicopters arrived and provide air cover for an inbound medivac Blackhawk. A Soldier tosses a red smoke grenade so the medevac knows where to land. The medevac picks up the wounded and is gone in three minutes max. The Apaches roll in and use their main guns to strafe the ridgeline. Everyone is cheering. Suddenly ground fire hits the tail of one of the Apaches, and the Apache plummets to the ground and explodes. The whole incident lasts about three seconds, and it's a horrible and helpless moment as we witness the deaths of two pilots who bravely gave their lives to protect us.

The Soldiers from the convoy are not very organized, and most of them are not even shooting back. Peterson and I move down the line of fuel trucks, yelling and screaming at the drivers and assistant drivers to get off their butts and get the fuel trucks turned around so that we can get them out of the kill zone. Many of the fuel trucks have blown-out tires, so we direct the drivers to start changing tires as we provide cover.

The Bradleys dispatched by battalion arrive and lay down covering fire. Some Bradleys cover the Apache crash site. MPs arrive and go to the crash site. It takes about 30 minutes for the convoy personnel to change tires and get their vehicles turned around. Again, my Humvee takes the lead and escorts them back to ECP 7. Foxtrot Battery's 3rd Platoon rolls out from Camp Blackjack to meet us

and assist in the movement back to ECP 7.

Once we arrive at ECP 7 we get the convoy personnel staged on the west side of the Hesco barriers. Suddenly, we come under attack again. Small-arms fire zips toward us from a house about 500 meters north of ECP 7. The platoon lines up all its crew-served weapons along the barriers and, with the tower guards along the western wall joining in, light up the house. The 4-5 ADA Bradley Linebackers at ECP 7 let loose with their 25mms. Once the house and the insurgents inside are destroyed, the convoy personnel get back in their vehicles and head home towards Camp Victory.

It is now about 1400 hours, and Doubler tells me that I don't need to go back out with the platoon. He says that I have seen enough action for one day. The platoon still has six more hours to go on their patrol. Although it's one of the hardest things I've ever done, I get back in the Humvee and complete the patrol with 2nd Platoon. It was one of the longest 12 hours of my life.

In June 2004, all members of the patrol receive Army Commendation Medals with "V" devices and Doubler receives a Bronze Star with "V" device. In my professional estimate, if not for our actions, it is very likely that all of the personnel in that convoy would have been killed or wounded.

Sergeant Major James Ross is assigned to 4th Battalion, 5th Air Defense Artillery, 1st Cavalry Division, Fort Hood, Texas. His first-person account won a "Stories From the Field" contest sponsored by Gameindustry.com. It is reprinted here with their kind permission.

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DO YOU HAVE A WAR STORY?

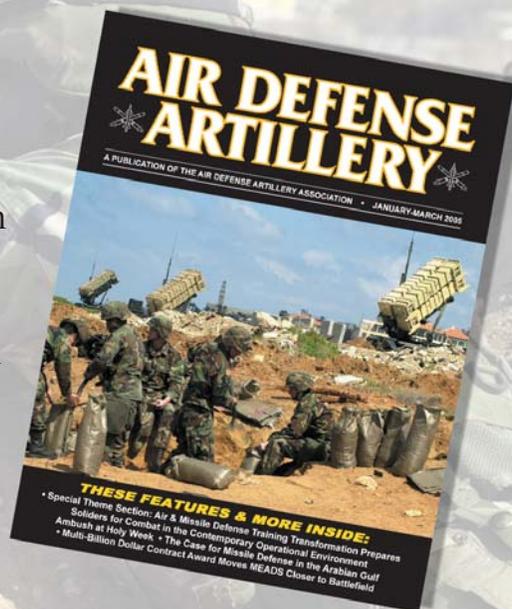
ADA Magazine Needs ADA War Stories!

ADA 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 define their combat experiences.

Vignettes chosen for publication will begin appearing in ADA Magazine's April-June 2005 issue, which will feature ADA lessons learned from the Global War on Terrorism. They also may be incorporated into the ADA Museum's "A Day in the Life of an ADA Soldier at War" exhibit.

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

* Photos should be Hi-Res at 300dpi or approximately 1914 X 1260 pixels (or larger) at 72dpi.



Army Transformation and the Global War on Terror Are Changing the Way ADA Soldiers Train As Well As the Way They Fight



Photo by Sgt. Matthew McRoberts

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ADA displays set up at West Point's Blaik Field entice cadets to select Air Defense Artillery as their branch of choice.

Army Officer Education System Transformation

New Basic Officer Leadership Course will change the way the Army and Air Defense Artillery trains newly commissioned ADA lieutenants

by Capt. Robert L. McCormick

Surprisingly enough, the Army Officer Education System has seen little change since the end of the Cold War, but it needs to change if it is to meet the needs of a fighting force caught in the throes of Army Transformation at the same time it is waging war in Iraq and Afghanistan. A 2001-2002 report submitted to the Army by the Army Training and Leader Development Panel-Officer Study concluded that the Officer Education System does not provide company grade officers (second lieutenants, first lieutenants and captains) the necessary skill sets for success in full-spectrum operations. The panel recommended that the Army change its Officer Education System for lieutenants from a two-phase design—pre-commissioning training followed by a branch-specific officer basic course—to a three-phased training approach.

Based upon that recommendation and in conjunction with Officer Education System Transformation, the U.S. Army Training and Doctrine Command (TRADOC) adopted the three-phase concept and created a model for a new Basic Officer Leader Course (BOLC). As a result, initial officer training, as we know it today, will transform from the old two-phase paradigm of commissioning lieutenants and sending them to branch-specific officer basic courses to three phases: BOLC I, II and III.

BOLC I

The BOLC I phase of future officer leadership development will begin, just as pre-commissioning training does today, at the U.S. Army Officer Candidate School, U.S. Military Academy and Reserve Officer Training Corps (ROTC) campuses, but newly commissioned gradu-

ates will not be channeled, as they are today, directly into branch-specific officer basic courses. Instead, newly commissioned lieutenants will attend a BOLC II initial entry course at one of four central locations. The initial entry course will provide basic small-unit combat training to all lieutenants, affording them a shared experience.

BOLC II

The BOLC II phase will implement Army Training and Leader Development Panel recommendations, such as providing a common training experience at the small-unit level and producing an Army-specific officer—every soldier a rifleman first mentality—rather than a branch-specific officer. The BOLC II phase will also encompass lessons learned from the Global War on Terrorism, the Warrior Ethos, 40 Warrior Tasks and the Nine Battle Drills. The BOLC II end goal is to produce a lieutenant who is trained in warrior tasks and warrior battle drills, who is self-aware and adaptable, who will not accept defeat and will never quit, and who will demonstrate the characteristics of an Army leader while living the Army values and embodying the Warrior Ethos.

The BOLC II phase will be a seven-week course that incorporates the common training experience mandated in the Army Training and Leader Development Panel recommendations. It will be conducted at four Training and Doctrine Command school sites: Fort Sill, Okla., Fort Bliss, Texas, Fort Knox, Ky. and Fort Benning, Ga. BOLC II tasks will teach lieutenants how to shoot, communicate, render medical aid, perform advanced land navigation, execute the 40 Warrior Tasks and conduct the Nine

Battle drills while participating in rigorous physical training.

“BOLC II will have a pilot course this year and will be introduced by the fourth quarter of 2006,” said Gen. Kevin P. Byrnes, TRADOC commander. “It is a six-week plus five days in-processing common-core instruction for all officers on combat leadership. Eighty percent of it will be conducted in a field environment. All officers will receive common instruction before going of to their branch technical courses. [This is a] major shift.”

Each BOLC II site and class will receive an even mixture of ROTC, Officer Candidate School and West Point graduates. In addition, all branches and service components (active Army, Army Reserve and Army National Guard, specialty branches and allied students) will be equally divided at each of the four sites, based on the numbers commissioned from each branch and service. The goal is to foster commonality of training across the junior officer ranks.

A BOLC II pilot course will be conducted at Fort Benning in the summer of 2005. More than 200 students from all branches will attend.

BOLC III

Following the second phase of BOLC, each proponent school (Military Intelligence, Air Defense Artillery, Armor, Field Artillery etc.) will provide BOLC III training on platoon-level, branch-specific technical and tactical skills, culminating in the award of a branch-specific military occupational specialty (MOS). The BOLC III phase will consist of branch-specific technical and tactical training conducted at each branch proponent school. Course length will vary by branch from five weeks, two days to 13 weeks, four days and will focus on preparing lieutenants for success as future platoon leaders.

Branch proponent commandants will control and implement the third phase of BOLC. As the U.S. Army Air Defense Artillery School commandant, Maj. Gen. Michael A. Vane, the Fort Bliss commanding general, is the approving authority for Air and Missile Defense

(AMD) BOLC III. Fort Bliss will receive 10 of the BOLC II pilot course graduates to participate in an AMD BOLC III pilot course during the summer of 2005, prior to full implementation in fiscal year 2006.

“AMD BOLC II training will provide the Air Defense Artillery School with junior officers prepared to prevail

in the contemporary environment and deal with the combat realities we face today in Iraq and Afghanistan,” said Vane. “BOLC III training will furnish ADA unit commanders with crossed-trained lieutenants capable of quickly achieving high levels of proficiency whether they are assigned to lead Patriot Soldiers or Avenger Soldiers, or Soldiers who will operate future systems soon to be added to the ADA arsenal.”

Although some current classroom instruction will be retained, many classes currently taught in ADA Officer Basic will be omitted from AMD BOLC III instruction, and the overall design will change considerably. While the ADA Officer Basic Course lasts 20 weeks, AMD BOLC III will have a single program of instruction focused on AMD battalion operations that will last 13 weeks and four days.

Every lieutenant attending AMD BOLC III will be assigned Military Occupational Specialty (MOS) 14A, Air and Missile Defense Officer (AMDO), upon graduation. This single MOS will replace

MOS 14B, Short-Range Air Defense Artillery, for maneuver air defense officers and MOS 14E, Patriot Missile Air Defense Artillery, for Patriot officers. This MOS design responds to the demands of the contemporary operational environment and AMD force restructuring initiatives that will create composite AMD battalions employing both Patriot and Avenger weapon systems.

Air and Missile Defense BOLC III classroom instruction will focus on communication, counseling, problem solving and training management skills in the contemporary operational environment. The AMD system training will consist of instruction on the handheld Global Positioning System, communications, Avenger/Stinger and

Basic Officer Leadership Course

BOLC I

Pre-commissioning training primarily at the U.S. Military Academy, Army ROTC campuses and Army Officer Candidate School

BOLC II

A seven-week instruction course conducted at four locations to provide common-core, small-unit combat training to newly commissioned lieutenants

AMD BOLC III

Replaces the current ADA Officer Basic Course, which is divided into weapon tracks, with a single program of instruction that will train ADA lieutenants to lead both Patriot and Avenger Soldiers in composite air and missile defense battalions

Sentinel, and joint operations with the main focus on Patriot. Lieutenants who complete the course are Table IV qualified on the Patriot system and ready for unit certification. Within 30 days of their arrival at their unit, they should be mission capable and ready to deploy.

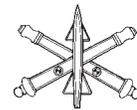
...BOLC III will provide new ADA lieutenants an opportunity to train with both the Patriot and Avenger at the same time...

The culminating event for AMD BOLC III will be a one-week situational training exercise that will incorporate contemporary operational environment lessons learned and will give the lieutenants a chance to demonstrate their adaptability and leadership styles. During the situational training exercise, lieutenants will operate from a forward operating base and will conduct a myriad of contemporary operational environment tasks, including—but not limited to—negotiations, traffic control point, convoy operations, and providing air defense using Patriot, Avenger, and Sentinel systems. For the first time, BOLC III will provide new ADA lieutenants an opportunity to

train with both the Patriot and Avenger at the same time in a field environment.

Air and Missile Defense BOLC III will be implemented Army-wide starting in the fourth quarter of 2006. This timeframe allows each branch to conduct a pilot course to test the new design before full implementation. Although there are obstacles that must be overcome before BOLC can be implemented, the BOLC concept will ensure that junior officer training stays relevant and meets the needs of its officers and the Army, today and into the future. The Air Defense Artillery School stands ready to ensure that newly commissioned ADA lieutenants receive the best possible training before leading ADA Soldiers onto 21st Century battlefields.

Captain Robert L. McCormick is Chief, Officer Basic Course, Directorate of Training, Doctrine and Leader Development, U.S. Army Air Defense Artillery School, Fort Bliss, Texas.



Patriot Top Gun Pilot Course Graduates First Class

**Patriot Top Guns Provide Enhanced
System and Tactical Expertise**

by Capt. James C. Park & Spc. Steve Baack

The U.S. Army Air Defense Artillery School, Fort Bliss, Texas, created the Patriot Top Gun Course in response to lessons learned during Operation Iraqi Freedom. As coalition forces advanced on Baghdad, the U.S. Patriot force performed heroically, intercepting and destroying every Iraqi ballistic missile that threatened coalition forces. However, the complex and highly fluid Operation Iraqi Freedom battlefield—fraught with a high risk of fratricide—illuminated the requirement for increased Patriot system and tactical expertise. The world's best-equipped and best-trained air and missile defense (AMD) force needs to improve its skill sets to optimize Patriot's capabilities, ensure that the potential of fratricide is minimized and provide the joint force a comprehensive defense.



A Patriot Soldier reenlists during Operation Iraqi Freedom. Today, Patriot Top Gun Course graduates are infusing Patriot units with enhanced system and tactical expertise.

Before the creation of the Patriot Top Gun Course, the only opportunity for formal, institutional Patriot systems training was during the Patriot Track Phase within the Air Defense Artillery Officer Basic Course. Other than on-the-job-training, there was no other formal opportunity to instruct officers in the “graduate-level” skills associated with the Patriot system knowledge, AMD tactics

and joint operations.

As a result of these findings, the Air Defense Artillery Schools' Directorate of Training, Doctrine and Leader Development developed the Patriot Top Gun Course program of instruction to remedy the operational deficiencies identified during recent combat operations. The overall goal of the Patriot Top Gun Course is to instill in key air defense personnel the skills they need to help units thrive in an adaptive, joint/combined AMD environment. Course graduates will serve as master operators and planners, providing mission-enhancing expertise in the areas of defense design, joint/combined operations, and Patriot capabilities, limitations and training.

"Whenever we formally educate lieutenants and captains, we train them predominantly to be a leader," said Maj. William Brooks, chief, Professional Military Education Chief, Leader Division, Directorate of Training, Doctrine and Leader Development. "When lieutenants come in for the officer basic course, the expectation is that their first duty assignment is going to be as a platoon leader – and that's what we train them for. There was no formal process to train the best of the best – for the trainers to go back to the unit and train their battalions and their brigades."

On Nov. 24, 2004, the Patriot Top Gun Course pilot class recognized its very first "Top Gun." During the graduation ceremony, CW3 Lloyd Chaffee, an electronic missile maintenance officer assigned to the 5th Battalion, 7th Air Defense Artillery, Hanau, Germany, received the initial "Top Gun" award as the graduate with the highest overall academic average. Although this class was the first group of students to undergo the course training and instruction, all of the students benefited greatly from "graduate-level" instruction focused on Patriot AMD topics and taught by highly knowledgeable instructors.

Fourteen officers (five captains, two lieutenants and seven warrant officers) attended the pilot course. These officers represented all six active component ADA brigades and more than 80 percent of active component Patriot battalions. Their experience and high level of expertise made them worthy of the Top Gun "Best of the Best" moniker.

The course lasted more than five weeks and consisted of 228 hours of training, including classroom instruction and hands-on training at Fort Bliss' Drive-up Systems Trainer Facility. The instructors came from AMD agencies and defense contractors, including the U.S. Army Training and Doctrine Command System Manager-Lower Tier; the Air Defense Artillery School's Directorate of Combat Developments and Directorate of Training, Doctrine and Leader Development; Raytheon; and CAS Inc.

"Patriot commanders welcomed the return of Top Gun graduates armed with graduate-level knowledge, and Top Gun graduates are now implementing their new skills, concepts and ideas within their units," said Col. Robert T.

Burns, Director, Directorate of Training, Doctrine, and Leader Development. "Assuredly, Air Defense Artillery has taken one more step in the direction of what 'right' looks like."

The next Patriot Top Gun Course will commence in early April 2005 after Exercise Roving Sands 2005. Prospective students should be well versed in the 32nd Army Air and Missile Defense Command's Tactical Standing Operating Procedures; Patriot operations, tactics, system capabilities and limitations; the Patriot tactical planner;



Patriot Top Gun Course Class 001 Graduates

Top Gun

CW3 Lloyd Chaffee

5-7 ADA, 69th ADA Brigade

Honor Graduate

CPT Chad Wallet

5-52 ADA, 11th ADA Brigade

Graduates

CW3 Jeffrey Fisher

HHB / 1-7 ADA, 108th ADA Brigade

CW3 Trephya Sumpter

A / 3-6 ADA, 6th ADA Brigade

CW3 Jody White

HHB / 1-1 ADA, 31st ADA Brigade

CPT Seth Barrett

HHB / 31st ADA Brigade

1LT Robert Medina

HHB / 1-1 ADA, 31st ADA Brigade

CW3 Keith Dailey

HHB / 5-52 ADA, 11th ADA Brigade

CW3 Gregory Talbott

HHB / 11th ADA Brigade

CPT Jennifer Uyeshiro

HHB / 2-1 ADA, 35th ADA Brigade

CPT Ally Ip

HHB / 35th ADA Brigade

and the military decision-making process. Prerequisites for students include a recommendation from their battalion or brigade commanders, Table VIII or Table XII certification as either a tactical control officer or a tactical director and, ideally, a minimum of one-year unit retainability from the date of course graduation. The overall goal is to populate all Patriot brigades, battalions and batteries with at least one Patriot Top Gun officer and warrant officer.

Students not only encountered real-world scenarios during training but also studied in detailed engineering-level radar theory how the Patriot radar operates, how it interfaces and how it manages its data.

The idea for this class was to have the students understand the Patriot weapon system functions. It crossed the line of true rocket science, ranging from advanced physics to sine curves through Doppler curves to almost quantum mechanics as far as how subatomic particles react to certain energy waves. The student's expertise allowed them to interact effectively with the instructors and ask pertinent questions. Students could tailor how the weapon system was employed and how to correctly initialize the system based on those functions.

'Because of this course, there is a higher level of knowledge in the field.'

"I think the Top Gun Course is something the branch has needed for quite some time," said Chaffey, the Top Gun of Class 001. "It's an excellent course. Because of the course, there is a higher level of knowledge in the field. The level of expertise here is phenomenal."



"The bottom line is that the field commanders are our customers. We want to give them the right personnel with the right skill sets and the right knowledge to alleviate some of the pain and to correct some of the mistakes we've made in training and doctrine, and how we analyze tactics, doctrine and tactics."

"Daily after-action reviews determined what we could tweak to improve the course," said Brooks. "We cut some things that weren't as relevant as we initially thought, and we beefed up other areas to make it more relevant, or allow more time."

Top Gun students who attended the pilot course gave course instructors excellent feedback. This allowed the instructors to make adjustments, tailoring the course to maximize benefits for the next Top Gun class.

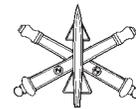
Throughout the course design—and redesign—the Top Gun instructors always kept in mind the field commanders are the customers. Top Gun instructors are committed to giving ADA command-

ers the right personnel with the right skill sets and the right knowledge to alleviate some of the pain and to correct some of the mistakes we've made in training and doctrine, and how we analyze tactics.

The next Top Gun Course is scheduled for April 2005 following the annual Roving Sands exercise.

For answers to questions regarding the Patriot Top Gun Course, contact Capt. James C. Park, Top Gun Course Manager, at james.c.park@us.army.mil or Maj. Toby Brooks, Chief, Professional Military Education, at william.brooks7@us.army.mil.

Captain James C. Park, is the Top Gun Course Manager, Directorate of Training, Doctrine and Leader Development, U.S. Army Air Defense Artillery School, Fort Bliss, Texas. Spc. Steve Baack is assigned to the Fort Bliss Public Affairs Office.



SCANNING

Patriot Goes Nine for Nine

The U.S. Army announced today its investigation into the Patriot Missile System's performance in Operation Iraqi Freedom (OIF), which found the system was successful in performing its mission protecting troops and assets against enemy tactical ballistic missiles (TBM). Patriot systems intercepted all nine Iraqi TBM missiles they engaged, with nine of nine intercepts resulting in destruction of the incoming enemy missile. The Patriot system undoubtedly saved many lives and prevented significant damage or destruction of millions of dollars to coalition property or to neighboring countries.

Patriot missile operations were conducted on an extremely dense and complex battlefield where more than 41,000 sorties were flown by coalition air forces. Forty-one active duty Army and 13 coalition Patriot batteries were deployed to OIF, serving in eight countries. — Army Public Affairs Office, Dec. 10, 2004



ADA Combat Vets Reshape ADA ANCOC & BNCOC

by Jim Kumm

Air and Missile Defense (AMD) Transformation, "Been There, Done That" Soldiers redeployed from Iraq and Afghanistan, and the challenge of adapting training to the contemporary operational environment are reshaping the Noncommissioned Officer Education System (NCOES) at the U.S. Army Air Defense Artillery School, Fort Bliss, Texas.

The Army is merging Patriot battalions with Maneuver Air and Missile Defense (MAMD) battalions into composite Air and Missile Defense (AMD) battalions. Accordingly, Patriot Soldiers and MAMD soldiers attending ADA Advanced or Basic Noncommissioned Officer Course (ANCOC and BNCOC) now share the same classrooms, a transformation that required extensive course revisions but eliminated redundancy and track training geared to specific weapon systems.

The ADA ANCOC remains an intensive, five-week, two-day combat leader course. New lessons topics include Platoon Leader/Platoon Sergeant Relationships, Now You Are a First Sergeant, Prevention of Fratricide, Route Reconnaissance, Mine Fields and Wire Obstacles, AMD Operations, Military Decision Making Process, AMD Annexes, Courses of Action, and Plans, Platoon Defense/Force Protection. The course includes two written examinations and concludes in an 84-hour situational training exercise.

The five-week ADA BNCOC is taught at the squad leader level and doubles as an AMD combat leader course. Topics include AMD Reconnaissance, Selection, and Occupation of Position/Tactical Convoy Operations, Now You Are a Platoon Sergeant, AMD Command and Control, Troop Leading Procedures, Deployment and Movement Procedures, AMD Defense Design, AMD Plans and Courses of Action, Survival Procedures, and Stability and Support Operations. The course incorporates three written examinations and concludes with an 84-hour field training exercise. Force XXI Battle Command Brigade and Below Operations will be added in fiscal year 2006 or 2007.

Both ANCOC and BNCOC introduce Soldiers to the critical variables of the contemporary operational environment: terrorists, civilian noncombatants, paramilitary organizations, improvised explosive devices, and nonlinear battlefield simulations for units of action.

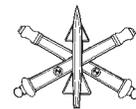
The U.S. Army Training and Doctrine Command (TRADOC) may shift NCOES courses from the traditional four-tier system to a new three-tier system. The U.S. Army Sergeant Major Academy (USASMA) eliminated Phase I ANCOC effective Oct. 1, 2004. Soldiers will now attend Phase II only for ADA ANCOC.

Air Defense Artillery NCOES continues to employ technologies and delivery techniques to distribute instruc-

tion to active and reserve component leaders at their units or at regional training institutions. Interactive multimedia instruction (IMI) is learner-centered, performance-based training that requires learners to practice what they learn, receive immediate feedback on their performance, and test on the material. Students progress through the materials at their own pace, repeating lessons and/or topics until they achieve the established performance standards. Scheduled for delivery as IMI courseware via web-base training and CD-ROM in fiscal year 2005 or 2006 are the following lessons: Global Positioning System; Identification, Friend or Foe; Operation Overlay Preparation; Aiming Circle; Land Navigation; Single Channel Ground and Airborne Radio System; Prevention of Fratricide; Introduction to Manportable Air Defense Systems; Short-Range Air Defense System Destruction; and Denial and Destruction of Patriot Weapon System.

"Doctrine can no longer show NCOs the set steps for reacting to a given scenario," said Gen. Kevin P. Byrnes, TRADOC commander. "It must teach [Soldiers] how to think on their feet, not what to think, while encouraging creativity and adaptability." The new ADA ANCOC and BNCOC strives to do just that.

Jim Kumm, is a senior training specialist assigned to Institutional and Distributed Learning Training Division, Directorate of Training, Doctrine and Leader Development, U.S. Army Air Defense Artillery School, Fort Bliss, Texas.



SCANNING

The Legend Grows

*During the early days of Operation Iraqi Freedom, Patriot batteries intercepted three missiles headed for Camp Doha, Kuwait, and Patriot Soldiers were treated like minor celebrities. One day, as we sat in the Camp Doha chow hall, an Army Aviation major noticed our ADA insignia. He thanked us for defending Camp Doha. We admitted we personally hadn't been involved in an intercept, but said we were proud of our system's accomplishments. In the middle of the conversation, an ADA officer reached up and snagged a fly in mid-flight. It was a perfect two-finger intercept above the food no-fly zone. The Aviation officer looked at him with wide-eyed amazement and said, "The Legend grows."
— 1-1 ADA*



Air Defense Artillery Advanced Individual Training combines rigorous classroom instruction with tough, realistic hands-on field training. (Fort Bliss Public Affairs Office photos.)

Air and Missile Defense Transformation Revolutionizes Advanced Individual Training

40/9 Warrior Core Tasks and Drills Prepare ADA Soldiers to Survive and Prevail in the Contemporary Operational Environment

by Capt. Hansen L. Mak

In the past year, most Soldiers have heard the terms "Warrior Ethos" and "Soldier's Creed" innumerable times. At the U.S. Army Air Defense Artillery Center, Fort Bliss, Texas, we recite the ethos and creed every morning at the start of each Advanced Individual Training (AIT) program of instruction and at every graduation ceremony that sends AIT graduates on their way to air and missile defense units in the field. But Air and Missile Defense Training Transformation is more than merely reciting slogans. At Fort Bliss, we are transforming the training landscape to match the contemporary operational environment.

Prior to Operations Iraqi Freedom and Enduring Freedom, we sent ADA commanders Soldiers prepared to further develop their skills in a peacetime environment. Today, our goal is to send ADA commanders Soldiers prepared to function in a combat environment. As a result, ADA commanders can raise the bar on what they can expect from AIT graduates the day they report for duty.

The younger generation of Soldiers entering the Army today may not recognize the Warrior Ethos and Soldier's Creed as indicators that the Army has adopted a new approach toward preparing Soldiers for combat in the contemporary operational environment. They don't realize that the Army's warrior mentality and culture somehow got buried between wars amid the stack of papers sitting on staff officer desks.

Today, Initial Entry Training has been transformed to instill recruits with the Warrior Ethos, the notion that someday—no matter what their military occupational specialty

(MOS)—they may be called upon to fight and die in the sand and mud. The Army has amplified the Initial Entry Training emphasis on the Soldier's Creed—a lifestyle of commitment to duty, honor and country rather than selfish careerism—tenfold. Basic training is no longer just a matter of learning the basic skills of basic rifle marksmanship, first aid, land navigation, or any of the other Basic Combat Training requirements.

Air Defense Artillery AIT reinforces Warrior Ethos and Soldier's Creed training received at IET and provides Soldiers the MOS skills they need to fight, survive and prevail in the contemporary operational environment. The goal, in keeping with Army chief of staff guidance is to provide air and missile defense commanders with "flexible, adaptive and competent Soldiers comprising the Army's warrior culture." It's not just a matter of concocting new slogans.

The Army's fix is the "Forty & Nine." Forty represents the Warrior Core Tasks and nine represents the Warrior Battle Drills (<http://www.armystudyguide.com/Warrior-Ethos>). They comprise the tasks each individual Soldier should know how to perform to operate and survive on today's battlefield. These are not new tasks that someone "just thought up," but correlate directly to the jobs we expect Soldiers to perform in the ever-changing contemporary operational environment. They are the basic skills every Soldier—regardless of his or her MOS—must know to fight, win and survive on 21st century battlefields.

The Army's pre-transformation training methodology

AIR & MISSILE DEFENSE TRAINING TRANSFORMATION

and priorities placed more emphasis on preparing Soldiers for their assigned MOS than on preparing them for the eventualities of the contemporary operational environment. Today, Soldiers coming out of Basic Combat Training and AIT arrive at their units fully trained to perform the 40/9 Warrior Core Tasks and Warrior Battle Drills. They can contribute to the unit immediately upon arrival.

In future Operations Iraqi Freedom and Enduring Freedom rotations, ADA Soldiers will most likely perform security and stabilization missions instead of classic air and missile defense missions. Riding in Avengers or Bradley Linebackers while conducting route security for convoys could still be part of the mission, but more often than not, ADA Soldiers will fight dismounted. They will operate checkpoints, search vehicles, clear buildings and rooms, and conduct foot patrols in hostile territory. They will earn—but never be awarded—Combat Infantryman Badges.

The Air Defense Artillery AIT cadre realizes that air and missile defense units do not have time to retrain Soldiers in basic individual Soldier skills. They have to be ready to pack their bags and deploy from the moment they "hit the ground." Our job is to teach Soldiers to "shoot, move and communicate" while performing the technical duties of their MOS. In AIT, we provide realistic and challenging training to prepare Soldiers to (No.1) fight and (No.2) perform their MOSs—training that begins in the training base, but must be sustained in units. At Fort Bliss, we focus on 40/9 Warrior Tasks and Warrior Battle Drills executed under stressful conditions. Additionally, AIT units observe a monthly Warrior Training Day during which all programs of instruction stop and drill sergeants train Soldiers to perform the same tasks their future units of assignment are performing in theaters of operations.

To prepare ADA Soldiers bound for combat zones, we put a heavy emphasis on Field Manual 7-8, Infantry Rifle Platoon and Squad, battle drills and patrols, tailoring them to the contemporary operational environment by applying feedback from field units and the Center for Army Lessons Learned. A one-day, scaled-down version of the Air Assault Course includes rappelling, obstacle course and pugil sticks. Building basic confidence, determination, teamwork, mental and physical toughness is a key element of the "never leave a fallen comrade" mentality.

Next, we train Soldiers on Military Operations in Ur-

ban Terrain (MOUT). Soldiers receive an operations order to clear a mock village of insurgents. Applying terms such as FOB (Forward Operating Base), TAA (Tactical Assembly Area), and LSA (Logistics Support Area) to the



The Engagement Skills Trainer trains Soldiers in fundamental engagement skills, including marksmanship and collective and judgemental firing skills.

training topography helps them anticipate and comprehend the landscape of contemporary war. Squad- and platoon-size patrols conducted with Multiple Integrated Laser Engagement Systems teach Soldiers the importance of paying attention to detail, patrol techniques, room-clearing procedures, and hand-to-hand combat. During this operation, they also learn basic rules of engagement, checkpoint procedures, how to search vehicles, how to handle civilians on the battlefield, and how to de-

tect and protect themselves from improvised explosive devices (IEDs.)

During AIT, Soldiers start learning to be leaders. The Leadership Reactionary Course helps them practice leadership skills and learn to trust and depend on each other. Soldiers learn that when a squad leader goes down a private first class needs to step up and take charge.

The Engagement Skills Trainer trains Soldiers in marksmanship and collective and judgmental firing skills. Squads of Soldiers engage proportionally correct targets on a virtual simulation screen with a variety of laser-fitted weapons, including, but not limited to, the M-2 .50-caliber machine gun, MK-19 40mm grenade machine gun, M-4 carbine, and M-16 rifle. They hone their weapon skills while learning fundamental tactical engagement skills.

Convoy strikes using rocket-propelled grenades, IEDs and other weapons account for about one-third of U.S. combat deaths in Iraq. The Convoy Skills Trainer trains AIT Soldiers to recognize and respond to potential convoy threats. Mounted in a convoy of four mock Humvees, squads practice missions, learn crew discipline, develop muzzle awareness, rehearse route security and identify choke points while scanning rooftops and searching out and engaging hostile targets. "Shoot/Don't Shoot" situations displayed on the Convoy Skills Trainer's virtual simulation screen help prepare Soldiers for combat in the contemporary operational environment.

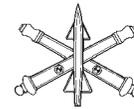
Sustaining the Warrior Core Skills that Soldiers bring with them from Basic Combat Training is a critical part of AIT at Fort Bliss. We are incorporating field-training exercises into all MOS courses to evaluate Soldiers as they perform Warrior Core Tasks under simulated but stressful combat conditions.

I entered IET and AIT in the late 1970s en route to Officer Candidate School, and I can assure you that the transformation is near total. Tasks, conditions, and standards have changed. All training is geared to reinforce the Warrior Ethos and Soldier's Creed. We replicate combat conditions early and often, incorporating the violent, complex and ambiguous situations that Soldiers will encounter in Iraq and Afghanistan. We no longer conduct MOS training in "pristine" conditions that bear little resemblance to 21st century battlefield realities; the training emphasis is always on tactical authenticity. We incrementally toughen conditions throughout training cycles, and we test and evaluate Soldiers under realistic conditions.

Air and Missile Defense Transformation is producing

Soldiers imbued with combat skills as well as MOS skills—Soldiers unit commanders can trust to start performing at high levels of proficiency the moment they walk through the orderly room door. Remember that in AIT, Soldier's don't pass . . . they achieve.

Captain Hansen L. Mak is the commander of C Battery, 1-56 ADA, 6th ADA Brigade, U.S. Army Air Defense Artillery School, Fort Bliss, Texas.



Patriot Master Gunner Course

by Capt. Ahmad H. Yassin and CW4 Keith R. Hankins

During Operation Iraqi Freedom, the U.S. Army deployed 41 Patriot batteries to eight different countries. Patriot Soldiers operating one of the Army's most complex systems, under constant threat of ground and indirect fire attack, fought on an extremely dense and complex battlefield where more than 41,000 sorties were flown by coalition air forces. According to an Army press release issued Dec. 10, 2004, "Patriot systems intercepted all nine Iraqi TBM missiles they engaged, with nine of nine intercepts resulting in destruction of the incoming enemy missile. The Patriot system undoubtedly saved many lives and prevented significant damage or destruction of millions of dollars of coalition property or to neighboring countries."

Patriot's performance in Operation Iraqi Freedom put to rest any doubts that lingered from the first Gulf War about the system's effectiveness against tactical ballistic missiles, but the Army continues to explore, evaluate and activate new initiatives to improve performance, including the creation of the Patriot Master Gunner Course.

The U.S. Army Air Defense Artillery School, Fort Bliss, Texas, developed the Patriot Master Gunner Course in the spring of 2003 to instruct noncommissioned officers on Patriot system gunnery skills and developing unit Combined Arms Training Strategy (CATS) training plans. The target audience for the Patriot Master Gunnery course is battery-, battalion- and brigade-level staff sergeants, sergeants first class and master sergeants with Military Oc-

cupation Speciality 14T, Patriot Launching Station Enhanced Operator/Maintainer, and 14E, Patriot Fire Control Enhanced Operator/Maintainer. The goal of the Master Gunner Course is to make selected NCOs knowledgeable on all Patriot operations, command post operations, and battery and battalion employment.

At brigade level, the master gunner will enforce unified Patriot Gunnery Standards in accordance with Department of the Army Pamphlet 350-38 (STRAC FY05) and Field Manual 3-01.86, Air Defense Artillery Patriot Brigade Gunnery Program, which was published September 2004.

The six-week and four-day course combines hands-on training with tactical equipment and training devices with lectures that focus on capabilities, limitations,

threat doctrine and planning. Students receive an overview of joint interoperability and the role Patriot plays in the joint arena, including a basic overview of sensor platform capabilities and constraints, such as the Joint Land Attack Cruise Missile Defense Elevated Netted Sensor System (JLENS), the Naval Air and Surface AN/SPY1 radar and the Airborne Warning and Control System. The Battery Command Post, Air and Missile Defense Work Station, Joint Tactical Information Distribution System/Multifunction Information Distribution System (JTIDS/MIDS), and Tactical Planner Workstation are part of the curriculum. Soldiers learn how these components interact with Patriot's integral situational awareness, planning and command and control systems. The course also teaches



The Patriot Master Gunner Course instructs non-commissioned officers on Patriot system gunnery skills and Combined Arms Training Strategy training plans. (Fort Bliss Public Affair Office)



students how to design networks for JTIDS/MIDS and Single Multi-Channel Units, and how to design air and missile defenses on the Tactical Planner Workstation.

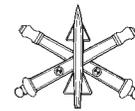
Upon graduation, students will receive an additional skill identifier of T4. They will return to their units fully trained to effectively use the above-mentioned systems to serve their commander and his battle staff in the analysis phase of the military decision-making process.

Future classes also will include ADA fire control officer duties and responsibilities, Patriot integration with combined arms units, NATO multi-force operations, and ground-based missile defense upper-tier elements, such as the Terminal High Altitude Air Defense system. As air and missile defense systems and operations evolve, the course will continue to change and remain on the cutting edge of technology.

Candidates interested in attending the Patriot Master Gunner Course should meet the following minimum requirements: Table VIII qualified; be well versed in Pa-

triot tactical operations (32nd Army Air and Missile Defense Command Tactical Standing Operating Procedures); have a strong knowledge of Patriot doctrine; be prepared to undergo a prerequisite examination to test Patriot knowledge; and have an aspiration to be part of the future of air and missile defense. To address questions regarding the Patriot Master Gunner Course, contact Master Sgt. Michael Seaton (Michael.Seaton@bliss.army.mil) at Headquarters, Alpha Battery, 3rd Battalion, 6th Air Defense Artillery, DSN 978-4937.

Captain Ahmad H. Yassin and CW4 Keith R. Hankins are assigned to the 3-6 ADA, 6th ADA Brigade, U.S. Army Air Defense Artillery School, Fort Bliss, Texas.



Training ADA Soldiers for Military Operations on Urban Terrain

Fort Bliss Advanced Individual Training Instructors and Combat Vets Turn Air and Missile Defense Soldiers into Street Fighters

by Capt. Fernando Castillo

Combat in the contemporary operational environment has made Military Operations on Urban Terrain (MOUT) an integral part of Air Defense Artillery Advanced Individual Training (AIT) at Fort Bliss, Texas. Soldiers training today on our desert ranges might be in Iraq or Afghanistan within 30 days of graduation. As you might imagine, the video clips of detonating improvised explosive devices (IEDs), house-to-house fighting and ambushed convoys that appear nightly on network news lend a sense of urgency to MOUT training.

As commander of an AIT battery that trains Soldiers making the transition from one air and missile defense military occupational specialty (MOS) to another, I'm uniquely blessed. Forty-six of the 97 students currently assigned to our battery are NCOs, and more than 30 of them have redeployed from Operations Iraqi Freedom and Enduring Freedom within the past six

months. Fifty percent of my lower-grade enlisted Soldiers have experienced combat operations in Iraq and/or Afghanistan. The impact these seasoned NCOs and combat veterans have on privates new to Air Defense Artillery and strangers to the contemporary operational environment is tremendous, and the benefits they bring to MOUT training are beyond exaggeration. They "train the instructors" by critiquing the training regimen to ensure it is up to date and accurately reflects the realities of the battlefield. They serve as role models, teachers and mentors to Soldiers who have yet to experience the sting of battle.

Military Operations in Urban Terrain is defined as all military actions that are planned and conducted on a terrain complex where man-made construction affects the tactical options available to the commander. It's nothing new or mysterious to the U.S. Army, as some network



ADA soldiers practice house-clearing procedures as part of Air Defense Artillery Advanced Individual Training (AIT) at Ft. Bliss, Texas. Photo by Sgt. Matthew McRoberts.

AIR & MISSILE DEFENSE TRAINING TRANSFORMATION

anchors and newspaper reporters would have you believe. We've been doing it since 1776 when Revolutionary Army Soldiers drove the Hessians through the cobblestone streets of Trenton, New Jersey. Throughout its history, the Army has fought the enemy on urban terrain, and no conventional or unconventional force does it better. What is new is that urban areas and urban populations have grown significantly during the late 20th century and have begun to exert a much greater influence on military operations. It is estimated that by the year 2010, 75 percent of the world's population will live in urban areas. Increasing population and accelerated urban sprawl have made combat in built-up areas a pressing priority. Urban areas are the battlefields of the future, and combat in urban areas cannot be avoided.

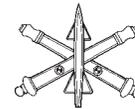
When first learning about MOUT training, my initial thoughts were that this type of training was mostly for infantrymen, special operation soldiers, or the Military Police. However, as the Global War on Terrorism evolved with the rebuilding of Iraq and Afghanistan, air defenders throughout the Army began routinely conducting MOUT operations.

My executive officer, 1st Lt. William D. Marshall, who completed a one-year tour in Iraq with 1-4 ADA last April,

is glad to see MOUT training at Fort Bliss. "Facilities for MOUT training at other duty stations are quite limited and the priority goes to Infantry, Armor, Corps of Engineers, and Field Artillery. The air defenders receive little or no MOUT training prior to deployment. Air Defense Artillery units have access to this type of training and need to use it as much as possible. While deployed to Baghdad, when conducting cordon and search operations, we usually used our Stinger platoon as the MOUT team while Bradley platoons conducted the outer and inner cordons."

Soldiers will not become experts in MOUT tactics at during AIT, but they will arrive at their units with a solid foundation of fundamental MOUT skills. Unit commanders will be able to mold these Soldiers into expert street fighters as they deploy overseas and take on real-world missions where their ability to learn and integrate quickly into their new unit will be paramount.

Captain Fernando Castillo is the commander of Headquarters and Headquarters Battery, 1-56 ADA, 6th ADA Brigade, Fort Bliss, Texas.



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ADAM Cell Training and Fielding Continues to Meet Transformation Requirements

by Capt. Jay Kaji

The Army is transforming at an accelerated rate while our nation is at war, and Air Defense Artillery is keeping pace with transformation. The threat has changed significantly over the past 10 years and new capabilities have entered the ADA inventory, some of which have made old capabilities no longer critical or relevant. The increasing range and lethality of our maneuver air and missile defense (MAMD) systems—both current and future—has permitted us to

withdraw AMD firepower from the divisions and group it at higher echelons in composite air and missile defense (AMD) battalions that comprise both Patriot and Avenger firing batteries. However, Air and Missile Defense Work Stations (AMDWS) and Sentinel radars are departing the divisions along with the MAMD battalions' Avengers and Bradley Linebackers. Their departure leaves lower-echelon commanders without a critical airspace management tool—a real-time picture of where air assets are located. To restore lower-echelon commanders their third-dimensional vision, Air Defense Artillery is rapidly fielding Air Defense Airspace Management (ADAM) cells to serve as the AMD centerpiece in the lower echelons of our transforming Army.

ADAM cells will reside within brigade combat teams (BCTs) and units of employment (UE) at division (UEX) and at corps (UEY). The U.S. Army Air Defense Artillery School, Fort Bliss, Texas, is training and assigning ADAM cell personnel to provide the necessary combat functions.

Transformation offers all ADA officers and noncommissioned officers a chance to play pivotal roles in the War on Terrorism as members of an ADAM cell. Warrant officers with Military Occupational Specialty (MOS) 140A, Command and Control System Technician, and enlisted soldiers with MOS 14J, Air Defense Tactical Operations Central Operator, supply the crucial technical skills that make ADAM cells a combat multiplier. Soldiers assigned to ADAM cells will represent Air Defense Artillery to the combined arms team while training and preparing to execute real-world contingency missions.



CW3 Robert Gibbs, B/2-6 ADA, instructs ADAM cell students at Fort Bliss, Texas.

They will be at the tip of the spear during rotations to Iraq or Afghanistan. Air Defense Artillery is selecting only the best and brightest to fill these challenging new ADAM cell positions.

The ADAM cell enlisted force consists solely of 14J Soldiers, and 140A Warrant Officers are integrated wherever ADAM cells have a direct, joint networking (Link 16) requirement. Officer positions range from captain to lieutenant colonel,

with a colonel requirement at the UEY (corps) level.

A common flaw in thinking concerning the ADAM cell is that it is a fixed personnel and equipment solution. ADAM cells share similar equipment and personnel requirements, but there are differences depending on where ADAM cells reside. A more robust ADAM cell capability exists at UE (division and corps) levels to conduct planning, contribute to Army Airspace Command and Control and link to a joint network. Stryker BCTs characteristically fight independently, and their ADAM cells must have the required equipment to link into the joint network. Located within each BCT and UE-level command and control node, ADAM cells perform the major functions listed in the table below.

ADA CELL MAJOR FUNCTIONS

- Provide a joint air picture.
- Provide early warning of air and missile threats.
- Contribute to Army Airspace Command and Control to maximize airspace and minimize the potential for fratricide.
- Conduct AMD planning, with the majority of the planning capability at the UE level.
- Assist in integrating any potential ADA unit assigned the mission of providing the BCT or UE air defense protection.

In concept, the ADAM cell is merely a means of combining all the air and missile defense command and con-

AIR & MISSILE DEFENSE TRAINING TRANSFORMATION

trol functions previously conducted by the network of command and control nodes that existed in the divisional ADA battalions. Army Aviation Soldiers and equipment will likely collocate with the ADAM cell at the UE level to give the commander a single source for all his third-dimensional information. In any configuration, the ADAM cell can provide the combatant commander with critical near real-time and historical data regarding all air and missile activities in his or her area of responsibility.

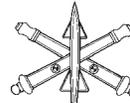
Challenges inherent in providing the necessary equipment, training and personnel for newly formed ADAM cells abound. Sending divisions poorly equipped and understaffed ADAM cells operated by under-trained Soldiers is unacceptable. Filling ADAM cells with the appropriate equipment and Soldiers armed with the right skills and training, while fighting a two-theater war and accommodating Army transformation initiatives, requires prioritized emphasis. Until recently, ADAM cell Soldiers assigned to prioritized divisions and Stryker BCTs received their equipment training onsite from a new equipment training team provided by the product manager. ADAM cell equipment training at the Air Defense Artillery School has experienced limitations due to a lack of certain networking equipment, but discussions are underway to expedite the delivery of necessary equipment.

Another challenge facing the emerging ADAM cells is developing tactics, techniques and procedures and doctrine that incorporate the constant flow of lessons learned from Iraq and Afghanistan. The roles and responsibilities assigned to ADAM cell Soldiers within BCT and UE command and control nodes are in constant flux. To keep up, a team of subject matter experts from the 6th ADA Brigade and the Air Defense Artillery School's Directorate of Training, Doctrine and Leader Development, traveled from Fort Bliss to the prioritized divisions (3rd Infantry Division, Fort Stewart, Ga., and the 101st Airborne Division at Fort Campbell, Ky.) to conduct onsite operational and tactical training. Meanwhile, the Air Defense Artillery School developed the ADA Airspace Coordination Digital Training Course. The course is currently three weeks in length. It includes a series of lectures on ADAM cell tactical requirements and a considerable amount of hands-on training on Version 12 of the Air Defense Systems Integrator, the Air and Missile Defense Work Station, Forward Area Air Defense Engagement Operations, and an introduction to the Tactical Airspace Integration System. Additionally, attendees learn how to integrate the Sentinel radar and other joint sys-

tems into the Air Defense Systems Integrator. Five ADA Airspace Coordination Digital Training Courses are scheduled for fiscal year 2005.

As the ADAM cell evolves into its full potential, ADA Soldiers need to remember that transformation at any level is a challenging task. Despite the challenges of changing divisional configurations and changes to the way we do business in a division and within a BCT, our best and brightest will employ ADAM cell tactics, techniques and procedures and doctrine to contribute to the fight. As more units field and deploy with ADAM cells, Air Defense Artillery will continue to devote increasing resources to ensure that ADAM cell Soldiers have the knowledge and skills to succeed on the battlefield. Information and, more specifically, third-dimension situational awareness are critical to a combatant commander. Our functional ADAM cells have the unique ability to provide that awareness.

Captain Jay Kaji is the commander of B/2-6 ADA, Fort Bliss, Texas.



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Air Defense Artillery Magazine WRITER'S GUIDE

Air Defense Artillery magazine relies on ADA Soldiers of all ranks to fill its pages with photos and articles of specific interest to ADA Soldiers. You don't have to write only about ADA weapon systems, doctrine, tactics or deployments. We also are hungry for "human interest" stories, as long as they feature ADA Soldiers.

Query First, Write Second

Before starting work on a manuscript, call us at (915) 568-5603 or email us at adamag@bliss.army.mil and describe your story idea.

This gives us a chance to let you know if we've recently published an article on the same topic, or if another author is already at work on a similar project.

What's The Chances of Your Story Getting Published?

You'll improve your chances by writing short, concise articles that get straight to the heart of the story. The place to begin an article about a combat deployment is not the morning your unit received the warning order. Start at the instant the first tactical ballistic missiles appeared on your radar or the split second you noticed a rocket-propelled grenade streaking toward your Avenger or Bradley Linebacker. Air Defense Artillery is the only combat arm that has an entirely separate Internet magazine—*ADA Magazine Online*. If your article doesn't make the print magazine, it may be published in *ADA Magazine Online*. Articles should range from 500 to 1,200 words. We will seldom publish articles that exceed 1,500 words in the print version of the branch journal; however, *ADA Magazine Online* accepts even book-length manuscripts.

Clear Your Article Prior to Submission

Army regulations require Soldiers to clear articles through their public affairs officer or public affairs office before submitting them to periodicals. We feel a lot more comfortable about publishing articles when we see notes attached to manuscripts telling us that a public affairs officer has cleared the manuscript for publication.

Photographs

We can't process negatives or undeveloped film. If you're sending us digital images, set your camera on the largest image size and the highest quality resolution settings that your camera will allow. Shooting photos on a low-resolution setting allows you to take more photos, but we won't be able to publish any of them. If your camera gives you the option, shoot the photo as a TIFF file. We also accept JPEG files, but low-resolution JPEG files that work for Internet publications won't work in print publications. When downloading an image file from your camera or its removable storage card to another drive, save the image as raw data, or as it comes off the camera. The best way to get digital images to us is to burn them to a CD and mail them to us. As a general rule, image files that are easy to email in batches are too low resolution for print reproduction. Email very large image files one at a time over consecutive days to avoid crashing our email.

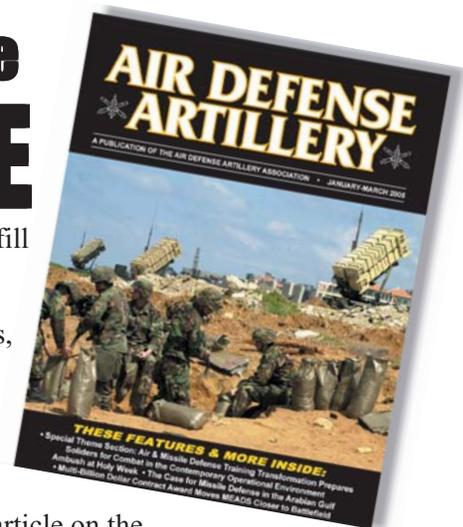
Provide complete caption information: full names and ranks of everyone who can be identified in the picture, their unit, location and a brief description of the action. Attach the captions to the photos, or number everything so captions and photos can be matched.

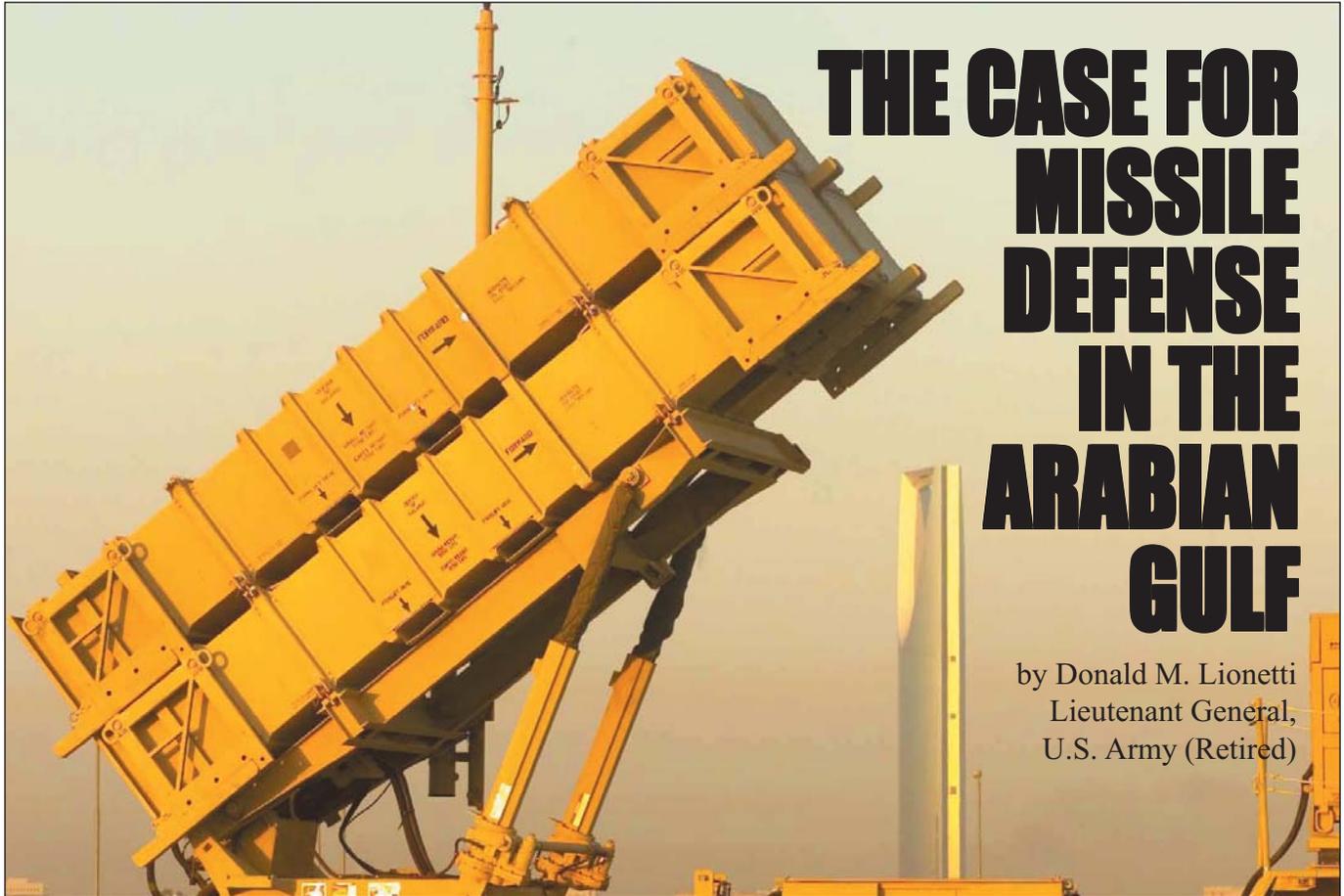
Submitting Your Article

Email your story to adamag@bliss.army.mil or send it on a 3.5-inch floppy disk as a Microsoft Word or ASCII file. If you don't have an Internet connection, mail a printout or typewritten manuscript to ADA Magazine, No. 2 Sheridan Road, Fort Bliss, TX, 79916.

Deadlines

Air Defense Artillery magazine is a quarterly publication. There's a January-March, April-June, July-September and October-December issue. The deadline for submissions is 45 days prior to the first day of the month in which the next issue is to appear.





THE CASE FOR MISSILE DEFENSE IN THE ARABIAN GULF

by Donald M. Lionetti
Lieutenant General,
U.S. Army (Retired)

A U.S. Patriot launcher provides tactical ballistic missile defense with Saudi Arabia's Kingdom Tower as a backdrop.

A risk analysis published by Kroll Associates of London in September 2004 examines the range of threats facing the six member-states of the Gulf Cooperation Council (GCC)—Bahrain, Kuwait, Oman, Qatar, Saudi Arabia and the United Arab Emirates. While their analysis is a valuable overview of the main political, business and security challenges, I would like to provide some general reflections on the region and to comment more specifically than Kroll about the potential for missile attack.

The GCC: Risks and Rewards

The GCC is blessed with over 39 percent of the known global oil reserves. All the member states have, to a greater or lesser extent, embarked in recent years on a course of economic reform and liberalization. With the current upsurge in oil prices, the region should now be set for a period of renewed economic expansion, offering prosperity for its citizens and exciting opportunities for external business investors.

However, as the Kroll Analysis reminds us, the Gulf is also a region of high and growing risks. Iran and Iraq are sources of potential instability right on the GCC's doorstep. The wider Middle East region remains far from settled. The internal threat from extremist militants poses a mounting challenge to all the GCC monarchies. There is a danger that the uncertain regional security environ-

ment could discourage western companies otherwise eager to participate in the economic upturn.

U.S. Policy in the Gulf Region

Iraq is in disarray and struggling to establish stability in a post-Saddam environment. The world is watching an interim government, representative of particular factional interests, seeking to secure popular support while preparing the way for elections in January 2005. Meanwhile various opposition groups pursue a violent insurgency to disrupt the initiative. It is impossible today to predict the outcome of this struggle.

Within this context, the 2004 U.S. presidential elections in our open democracy generated enormous self-criticism and, with it, abundant ammunition for those seeking premature U.S. disengagement from Iraq and the wider Gulf region. In making their case, the opposition was particularly vitriolic and harshly critical of U.S. policy execution in the region.

Despite a decisive victory and a renewed mandate supporting the current Iraq policy, President George W. Bush understands the divisive effect these elections have had and has stated his commitment to reunify the nation. In doing so, he will consider carefully popular impatience to see progress, to see evidence that the conflict in Iraq is not endless.



In the near term, the best evidence of progress will be a successful election in Iraq, delivering a democratically representative government that has the potential to unite the several competing factions. Most importantly, the resulting stability would permit gradual disengagement and return to the United States of military forces. This "best case" scenario would also permit a reduction in U.S. military presence throughout the region, a situation that would be widely applauded within the GCC. But, regardless of whether eventual disengagement of U.S. military forces comes through the above scenario or over a longer period in a less stable environment, the regional players will be required to shoulder a heavier burden of responsibility for their own security.

Threats to the Gulf Region

The Kroll report sets out the main internal and external threats that the GCC states currently face. The internal challenge posed by fundamentalist terrorism tops the list. However, successes observed in recent months suggest the terrorists can be defeated. In July the Kuwaiti authorities broke up and arrested a cell of militant Islamists, and the Saudis at last seem to be realizing the need for resolute action against their indigenous extremists. With local resolve, supported by U.S. and European assistance with intelligence and training, this conflict is winnable.

External factors also may pose less immediate threats to the GCC. The instability in Iraq does not seem likely in the short term to spill over the borders to impinge directly on her southern neighbors. Of more concern is the growing tension between Iran and the West over nuclear proliferation. While there is little appetite to see the dispute degenerate into open conflict, radical elements in Tehran have proven to be unpredictable and willing to hijack issues that can escalate tensions. The GCC states, dependent to a large extent on freedom of navigation in the Gulf, with vulnerable oil and gas assets close to Iranian waters, or even (like the United Arab Emirates) with unresolved territorial disputes with Iran, could find themselves the unwitting victims of a confrontation between Iran and the international community. Indeed, a more confident Iran, harboring nuclear ambitions, with deployed short- and medium-range ballistic missiles, poses a potential security risk to all the countries in the Gulf region.

A New Threat to Regional Stability

But in the age of remote weaponry, it is not just immediate neighbors or terrorist organizations operating internally that pose a threat to a state's security. Another threat with an equal potential to disrupt stability and economic growth remains largely unaddressed. Ballistic and cruise missiles are no longer the preserve of sophisticated military powers. They are increasingly available to any government or organization that can afford them. About three dozen countries have been publicly identified as possessing ballistic missiles, and around half of those are in Asia or the Middle East. Many of these, including Iran,

Iraq, Yemen, Pakistan and Israel, can directly threaten the territory of GCC states.

Fourteen countries, excluding the United States, Europe and Russia, have the ability to produce ballistic missiles. Some of these states, notably North Korea, show few scruples about to whom they sell missiles or missile technology. Nineteen countries, including Iran and Syria, have cruise missile programs. The joint Indian-Russian supersonic BrahMos cruise missile passed its last pre-deployment test in December 2004. The Indian and Russian governments have reportedly stated their intent to export this sophisticated new system to Third World countries. Beyond the danger of missile sales by producer states, there is also the threat of uncontrolled leakage from areas such as Afghanistan, Iran and the former Soviet Union.

The proliferation of available missiles is leading to an increased danger that some weapons may fall into the hands not just of hostile governments, but of rogue organizations. Such organizations can be ruthless, difficult to trace and unaccountable. Armed with ballistic or cruise missiles they could pose a formidable challenge to legitimate states unprepared to face them.

States that possess ballistic and cruise missiles can exert political leverage on neighbors without the ability to defend against them. Indeed, when a state is vulnerable to attack by ballistic or cruise missiles, then such attacks are more probable. As progress is made in countering agents of terror on the ground, hostile elements may revert to other methods to strike at targets . . . with potentially catastrophic results. Weakness can in itself be provocative.

Most GCC member states are unusually vulnerable to the missile threat. The GCC economies rely on easily targeted economic installations, notably oil-related infrastructure, to generate a large proportion of their wealth. They also rely on an expatriate labor force to perform key economic functions. A missile threat, whether used in a strategic role to destroy assets or as a means to sow terror among the civilian population, causing expatriate workers to leave, could severely damage the GCC economies. Combined with weapons of mass destruction concerns, the effect could be devastating.

A GCC Anti-Missile Defense Capability

Given the uncertain U.S. political situation described above, and its implications for American policy towards the Gulf, it would be unwise for the GCC states to count on the deployment of U.S. air and missile defense systems to the region in the long-term. The region may have to rely on its own resources in the future. Is this realistic? Absolutely! Nine Iraqi missiles were targeted against coalition forces during the recent Gulf conflict. All were intercepted and destroyed, one of them by a Kuwaiti Patriot battery. It would be foolish to believe that missiles will not fly again in the Gulf region. An early investment in missile defense against such a contingency would be prudent.

Defense systems capable of countering short and medium range ballistic missiles are available today. The United States and Russia have credible offerings and France is developing one. Only Patriot, however, has been proved effective in combat operations. Moreover, next generation improvements are ready for deployment. The United States is also working on systems to counter the elusive cruise missile threat. The new Surface-Launched Advanced Medium Range Air-to-Air Missile (SLAMRAM) system is likely to be deployed in the next two years and will be fully integrated with Patriot.

Investment by the GCC states in a comprehensive air and missile defense system will not be cheap, but it can be staged in order to spread the cost over time. The most immediate threats can be addressed first by each member state in national systems. This initial capability could later be augmented as necessary to counter more sophisticated threats, such as cruise missiles, and to develop beyond national to regional coverage to provide an integrated anti-missile network across the whole GCC area.

Each of the GCC states is unique, and each has different security needs. Geography, number and size of critical economic assets, as well as existing defense infrastructure will dictate their varying antimissile requirements. Kuwait and Saudi Arabia already possess Patriot batteries. Qatar and Bahrain can rely in the short term on the Fifth Fleet and U.S. Army Central Command for ballistic missile defense, so long as a U.S. commitment to forward deployment in the region remains, and so long as U.S. bases there remain acceptable to domestic opinion and so long as other out-of-region requirements don't affect current deployments. The United Arab Emirates and Oman currently have no anti-missile defense coverage.

At the very least, each of the GCC members should undertake a survey leading to the development of a time-phased plan to establish an effective air and missile defense capability. Investment in missile defense assets could start modestly, growing into a comprehensive system as new elements are added. The key will be proper integration to ensure interoperability, underscoring the need for a comprehensive assessment. The development by adjacent GCC states of interoperable air and missile defenses would present opportunities for further integration. The benefits are obvious; mutual support and potential economies of scale.

A Shield for Economic Development

Politically, missile defenses are benign. They threaten no one. They can be used only for self-defense, enabling every state to protect its sovereignty, its people and its economic assets.

With the return of high oil prices and an upsurge in business confidence, the Gulf states are expected to enjoy the benefits of a booming economy over the next several years. The aggregate gross domestic product of the six GCC members was predicted to breach \$400 billion in 2004, and oil exports to exceed \$180 billion. GCC spending on civil projects over the next three years alone is ex-

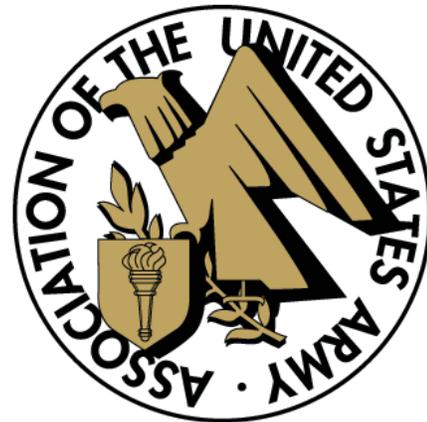
pected to reach \$220 billion.

The main brake on such economic performance will be a perception of continuing risk, whether driven internally or externally, which will limit the willingness of foreign companies to invest or operate in the Gulf and of qualified expatriate personnel to work there. Saudi Arabia is already facing difficulties in securing foreign expertise.

While the missile threat may not at present appear at the top of the risk agenda, it is real and likely to grow. It is also a threat that can be directly confronted and addressed. Compared to projections for GCC economies cited above, the investment required to establish an effective air and missile defense is relatively modest. It is a small price to pay for providing a secure environment that will underpin growth and encourage foreign participation in the GCC economies.

Lieutenant General (Ret.) Donald M. Lionetti served as commanding general, U.S. Army Space and Strategic Defense Command and as chief of staff, U.S. Army Training and Doctrine Command. He was commanding general of the U.S. Army Air Defense Artillery Center, Fort Bliss, Texas, during the first Gulf War. Following his retirement from the Army, he became vice president of Air and Missile Defense Systems, Lockheed Martin Missiles and Fire Control. For two years he served as chairman of the Medium Extended Air Defense System International Board of Directors. Today, Lionetti is a national security consultant and resides in Florida.

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U.S. Army Air Defense Artillery School

Office, Chief of Air Defense Artillery

ADA Warrant Officer & Enlisted Soldier Military Occupational Skills (MOSs)

140A	Command & Control System Technician	14R	Bradley Linebacker Crewmember
140E	Patriot System Technician	14S	Avenger Crewmember
14J	Air Defense Tactical Operations Central Operator	14T	Patriot Launching Station Enhanced Operator/Maintainer

Engagement Operations

Air Defense Artillery continues to contribute to the Global War on Terrorism and other expeditionary requirements, with 5,300 ADA deployed in the past 12 months, 1,900 ADA Soldiers currently deployed and 350 ADA Soldiers preparing to deploy within the next six months. Our thoughts and prayers go out to all Soldiers deployed in harm's way and away from their families—either in Iraq, Afghanistan, Korea, or other remote locations around the globe. Our thoughts and prayers also go out to those Soldiers who have lost their lives or been injured during the Global War on Terror, and to their families. Our Soldiers and leaders continue to press the fight and represent the "First to Fire" branch to all members of the combined arms team. Hats off to our ADA heroes!

Green to Gold Opportunities and Scholarships

The Green to Gold program offers our best enlisted Soldiers a pathway to careers as commissioned officers and remains one of the best ways to grow ADA officers. The Army ROTC Green to Gold Hip Pocket Scholarship Program will provide three selected active duty Soldiers the opportunity to complete their baccalaureate degree requirements and obtain a commission through participation in the ROTC Scholarship program. This year Maj. Gen. Michael A Vane, the chief of Air Defense Artillery, will nominate three deserving Soldiers for two-year Green to Gold scholarships, which will begin in school year 2005-2006. We encourage units to nominate Soldiers under their command who have exhibited the potential for further outstanding service to America and our Army as commissioned officers. The best way to ensure your deserving Soldiers have this opportunity is to encourage them to apply now! Interested Soldiers are encouraged to follow-up with their chain of command. Packets must be received at the Office, Chief of Air Defense Artillery (OCADA), U.S. Army Air Defense Artillery School, Fort Bliss, Texas, by Jan. 31, 2005. Contact Ms. Lisa Henry at lisa.henry@bliss.army.mil, DSN: 978-4133 or (915) 568-4133.

ADA Warrant Officer Opportunities (140A and 140E)

We've had a very positive response from ADA Soldiers asking about warrant officer opportunities. During unit visits, we provide information on growing opportunities within the branch for our warrant officers and encourage our best 14Js, 14Rs, and 14Ss to put in application packets. Other MOSs open to these opportunities include 14T, 14E, 31 series, 35 series, and others. We'd be happy to answer any questions you have in preparing packets for upcoming accessions boards. Contact CW4 Robert Reed (Robert.reed@emh10.bliss.army.mil) or CW5 Esteban Fernandezlopez (esteban.fernandezlopez@emh10.bliss.army.mil) at DSN: 978-6157/1300 or (915) 568-6157/1300.

14J Opportunities.

Bradley Linebacker and Avenger crewmembers have been at the tip of the spear in Iraqi and Afghanistan, only to be told upon redeployment that 14R is going away and the 14S population is shrinking as a result of Air and Missile Defense Transformation. We want to keep these great Soldiers in the branch and in the Army. We hope all our best Bradley Linebacker and Avenger Soldiers will consider making MOS 14J their first choice when putting in their reclassification packets. We are going to need a lot more air defense tactical operation center operators in the future than we have now. This makes MOS 14J a fast growing career field with a long-term life expectancy and healthy promotion potential. Bradley Linebacker and Avenger Soldiers who make the switch to 14J can look forward to full and successful careers.

ROTC Visits by ADA Alumni

Air Defense Artillery officers traveling on annual leave or temporary duty assignments frequently pass close by their alma maters. We encourage officers, whenever possible, to stop at their university and tell ROTC cadets about ADA transformation and the opportunities available to those who select Air Defense Artillery as their branch of choice. The Office, Chief of Air Defense Artillery, will serve as your "front man," scheduling the visit for you and supplying you with ADA videos and branch marketing items. Contact Ms. Lisa Henry at lisa.henry@bliss.army.mil, DSN: 978-4133 or (915) 568-4133.

Air and Missile Defense Transformation

• **ADAM Cells.** The ADA Branch is well on its way to filling personnel in our Air Defense and Airspace Management (ADAM) cells in our transforming divisions (Units of Employment-x). We've already filled ADAM cell slots in the 3rd Infantry Division and our Stryker brigade combat teams. The 10th Mountain Division and 101st Airborne Division (Air Assault) are well on their way to staffing their ADAM cells at 100 percent. The next priority is the 4th Infantry Division. The shortage of 140As remains an impediment, but the branch is aggressively working to resolve all personnel, training, and equipment issues to ensure these cells are capable of performing their mission. Like the rest of the Army, we are making high-velocity transformational changes while fighting a war. Soldiers accepting challenging ADAM cells assignments are our first line of defense. They represent Air Defense Artillery to combat arms team. Staffing ADAM cells with our best and brightest will remain a top priority.

• **Composite Battalions.** Air Defense Artillery is standing up four composite ADA battalions—battalions that employ both High- to Medium-Altitude Air Defense and Maneuver Air and Missile Defense (MAMD) weapon systems—during fiscal year 2005. The four MAMD battalions scheduled to merge this year with Patriot battalions are 1-44, 2-43, 3-4, and 4-5 ADA. The 32nd Army Air and Missile Defense Command and 11th ADA Brigade have the lead for 1-44 ADA, the first battalion to make the transformation. This action, the first big step in reconfiguring the air and missile defense force, is well underway with 1-44 ADA Soldiers already on the ground at Fort Bliss.



Points of Contact for MOS/Personnel Issues

Office, Chief of Air Defense Artillery, U.S. Army Air Defense Artillery School

Director, LTC Rick Starkey (richard.starkey@bliss.army.mil), DSN 978-3022 or (915) 568-3022

Air Defense Branch, Human Resources Command (DSN 221+Ext or (703) 325+-Ext)

Officer Branch Chief, LTC (P) Dave Bagnati, david.bagnati@hoffman.army.mil, ext. 0025

Enlisted Branch Chief, MAJ (P) McIntire, randy.mcIntire@hoffman.army.mil, ext.4957

Senior Career Advisor - MSG Herbert - Edward.Herbert@hoffman.army.mil, ext. 8867

14E/T Career Advisor - SFC McNeish - chad.mcneish@hoffman.army.mil, ext 8785

14J/R Career Advisor - SFC Cantrell - Douglas.Cantrell@hoffman.army.mil, ext 8911

14S Career Advisor - SFC Clark - clarka2@hoffman.army.mil, ext 8909





U.S. Army Air Defense Artillery School

Directorate of Training, Doctrine & Leader Development

ADA Schools Creates ADA Lessons Learned Branch

The Directorate of Training, Doctrine and Leader Development, U.S. Army Air Defense Artillery School, has created the ADA Lessons-Learned Branch to collect lessons learned from ADA units. Starting late in the second quarter of fiscal year 2005, the ADA Lessons-Learned Branch will have a website (both secure and non-secure) to collect and share information with all units. The branch, at first, will focus on Operation Iraqi Freedom and Enduring Freedom, but welcomes lessons learned from across the air and missile defense spectrum.

Email unclassified lessons learn to ada.lessonslearned@u.s.army.mil. Email classified lessons learned to adalessonslearned@u.s.army.smil. ADA Lessons Learned points of contact are Dave Barron, DSN: 978-5006/(915) 568-5006, or CW2 John Fallin (john.fallin@bliss.army.mil), DSN: 978-1882 or (915) 568-1882.

ADA Branch Historian Wants Your Combat Stories

The ADA Branch Historian's Office, Directorate of Training, Doctrine and Leader Development, U.S. Army Air Defense Artillery School, is collecting ADA unit histories from the war zones of the Global War on Terrorism. Forward your Operation Iraqi Freedom, Enduring Freedom and Noble Eagle narratives to John Hamilton at john.hamilton@bliss.army.mil or DSN: 978-6906/(915) 568-6906

NCO and Officer Education

The Directorate of Training, Doctrine, and Leader Development is adapting all programs of instruction (POI) to meet the ever changing needs of the contemporary operational environment. Lessons learned from various theaters are immediately brought into the classroom, and returning veterans are rewriting doctrine and serving as instructors at all levels. These changes are significant enough, but we face many structural changes that may be more revolutionary than the changes generated by the Global War on Terrorism.

NCO Education System

Phase 1 of the Advanced Noncommissioned Officer Course (ANCOC) has already been deleted from the POI. The NCO Corps is looking at new ways to leverage the experiences our mid-level NCOs are gaining and are strongly considering a three-tier system of education by migrating tasks now taught at the Basic Noncommissioned Officer Course and ANOC level into one course and pushing some tasks down into the Primary Leadership Development Course. (See Jim Kumm's article, "ADA Combat Vets Reshape ADA ANCOC and BNCOC," page 15 for details.)

Officer Education System

Many structural changes face ADA officers. As field grade education completes the transition to Universal Missile Essential Task List 4, company grade instruction is changing to meet stabilization policies and the current demands on the force. The Army has terminated the Combined Arms and Service Staff School (CAS3) at Fort Leavenworth, Kan. The Captains Career Course (CCC) now incorporates CAS3 learning objectives and has become a 20-week course. In the future, officers will attend CCC as a temporary duty assignment rather than a permanent change of station and will return to their units once they complete the course. The course now includes a combined arms exercise and a Corps Battle Simulation-driven air defense exercise. Future ADA lieutenants will attend the Basic Officer Leadership Course II (BOLC II) before reporting to Fort Bliss, Texas, for BOLC III, which is replacing the ADA Basic Officer Course as we know it today. (See Captain Robert McCormick's article, "Army Officer Education System Transformation," on page 10 for details.)

Warrant Officer Education

The warrants may face the biggest change of all. The Air Defense Artillery School is already contemplating designing an intermediate course or functional course for Patriot warrants to pick-up battery-level tactical control officer skills and responsibilities. In addition, the Center for Army Leadership has tasked all schools to help design one integrated Officer Education System to allow appropriate shared education to occur at all levels. Warrants would attend selected course with commissioned officers. The one Officer Education System is scheduled for implementation across the force by the first quarter of fiscal year 2007.

**'The Day Air Defenders Have Been
Waiting For Has Arrived'**

NATO Awards \$3 Billion MEADS Contract

A multi-billion dollar NATO contract award has moved the international Medium Extended Air Defense System (MEADS), which will eventually replace the U.S. Patriot air and missile defense system, into its design and development phase. MEADS International received the \$3 billion contract, awarded by the NATO MEADS Management Agency, in September 2004.

The contract award followed a series of successful system demonstrations and signing of a memorandum of understanding between the United States and Italy. Germany later signed the agreement following parliamentary action.

"The day that air defenders have been waiting for has arrived," said Maj. Gen. (Ret.) Jim Cravens, MEADS International president. "This contract commits the partner nations to a significant new generation of air and missile defense that will cost far less to own and maintain, quickly moves to the areas it must protect and provides complete 360-degree defense with netted-distributed communication. Through plug-and-fight capabilities, MEADS will also provide command and control over existing shooters and sensors from other weapon systems.

"We've listened to our customers and users, and now we'll build the air and missile defense solution they've asked us for," added Cravens, who served as commanding general of the U.S. Army Air Defense Artillery Center and Fort Bliss, Texas, from 1993 to 1995.

The MEADS will replace Patriot systems in the United States, Patriot and Hawk systems in Germany, and Nike Hercules systems in Italy. The system, which incorporates the combat-proven Patriot Advanced Capabilities-3 (PAC-3) missile, will protect maneuver forces and provide homeland defense against tactical ballistic missiles, cruise missiles, unmanned aerial vehicles, and aircraft.

In May 2004, Meads International successfully demonstrated technical progress of the MEADS prototype hardware and software under control of the system's battle management prototype. MEADS successfully demonstrated its ability to acquire, track and intercept live targets using simulated PAC-3 hit-to-kill missiles. The demonstration fulfilled expectations that system development issues had been addressed and cleared the way for the contract award.



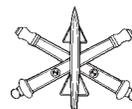
Lockheed Martin's Maritime Systems & Sensors will develop MEADS surveillance radars.

After system simulation and hardware-in-the-loop testing, MEADS will begin flight tests in the fourth year with 10 test missions including intercepts, half of them multiple intercepts. The series of flight and ground system development tests will run through the sixth year. The military will conduct operational testing, including three flight missions, during the program's last six months.

MEADS Radar Development

Following the MEADS design and development contract award, MEADS International and its constituent organizations awarded Lockheed Martin's Maritime Systems & Sensors contracts collectively valued at \$625 million for MEADS surveillance radar development. The Lockheed Martin company also will contribute significant software and hardware components of the MEADS Multifunction Fire Control Radar.

"MEADS will be the largest radar program this site has ever undertaken," said Dr. Dennis Beres, vice president for airborne and land-based radars at Lockheed Martin's Syracuse, N.Y., facility. "When the design and development phase is complete, the full-scale radar production that follows is expected to continue for decades."



Florida Guardsmen Return From Air Defense Mission

by Senior Airman Thomas Kielbasa,
Florida National Guard Public Affairs

ST. AUGUSTINE, Fla. (Dec. 21)—More than 170 Florida National Guard Soldiers who helped provide air defense in the United States for the past year, returned home just before Christmas to their armories in six cities throughout Florida.

Soldiers from the Florida Army National Guard's 265th Air Defense Artillery (ADA), returned by bus to Fort Myers, Daytona Beach, Palmetto, Sarasota, West Palm Beach and Bradenton following a year-long mission in an undisclosed location within the United States. The mission under Operation Noble Eagle consisted of ground-based missile defense using the Avenger missile system.

The majority of the Soldiers were from the Sarasota-based 3rd Battalion, 265th ADA, while smaller contingents were from the Daytona Beach-based 1st Battalion and the West Palm Beach-based 2nd Battalion, 265 ADA. The group arrived at Fort Stewart, Ga., on Dec. 16 for five days of out-processing before returning to Florida.

"You've done a very difficult mission, and you've done it very well," Brig. Gen. Stephen Villacorta, commander of the 164th ADA Brigade, said to the Soldiers on Dec. 16 at Fort Stewart. The 164th ADA Brigade is the parent unit of the 265th ADA. Villacorta noted that the recent air defense mission helped prove the effectiveness and skills of the Florida National Guard's Air Defense Artillery.

"This was extremely important," the general said. "We were performing the same mission that an active duty component performed to the same standards. Our personnel from this battalion introduced a lot of new equipment and were testing a lot of new communications concepts for air defense."

Many of the soldiers who volunteered for this mission also served previously on a year-long security mis-



Brig. Gen. Stephen Villacorta, commander of the 164th ADA Brigade, welcomes Florida National Guard air defense soldiers upon their return to Fort Stewart, Ga. Photo by Senior Airman Thomas Kielbasa.

sion at Air Force bases throughout Florida, according to Villacorta. He said these most recent air defense missions, coupled with a simultaneous security mission in Afghanistan for nearly 400 members of the 2nd Battalion, 265th ADA, has highlighted the National Guard's ability to perform multiple missions.

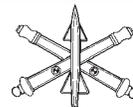
"They are extremely well-trained and very versatile in what they do," he explained. "They can do anything from performing a highly technical and sophisticated defense mission, to performing a [security] mission. It just shows the skills each of these soldiers have and their capabilities to perform these types of missions

Sgt. Albert Rivera, from Fort Myers, Fla., is a member of 3-265 ADA who has been on active duty for two years with the Florida National Guard. After serving on the base security mission at MacDill Air Force Base in Tampa, Rivera volunteered for the recent air defense mission.

Rivera, who works for the Department of Juvenile Justice in Fort Myers, said the two years away from his job were made easier because of the good support from his employers.

"They said 'Just do what you've got to do, serve your country, and when you get back you're job will still be here,'" Rivera said.

This group of ADA Soldiers was the largest group of Florida Army National Guard members operationally deployed in the United States recently. Currently there are more than 700 Florida Army National Guard Soldiers serving on active duty in the Middle East.



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When at Fort Bliss, visit the shop inside the Air Defense Artillery Museum. We're open Monday through Saturday, 10:00am to 4:00pm MST, except Thanksgiving, Christmas and New Year's Day.

SCANNING

Epitome of the Warrior Ethos

On the night of Aug. 13, 2004, 1st Lt. Alex Houston demonstrated his Warrior Ethos and saved the lives of many coalition Soldiers and civilian contractors. After hearing that my patrol was under attack by insurgents firing rocket-propelled grenades (RPGs), Houston maneuvered his Bradley Linebacker section to reinforce my position and secure a key overpass.

As he approached the overpass, he noticed a large logistics convoy moving up the main supply route into the enemy's engagement area. An RPG struck Houston's Bradley Linebacker shortly after he reached the overpass. He took the brunt of the attack, allowing the convoy to safely move through the area. He saved the lives of many in that convoy, but sacrificed his right arm.

When I spoke to him the following day, after surgery, he commented, "Sir, I had your back!" First Lieutenant Alex Houston's personal courage under fire epitomizes the Warrior Ethos.

—Lt. Col. Mitchell T. Morrow, 4-5 ADA

The Air Defense Artillery Association

The Air Defense Artillery Association is a private, non-profit organization whose mission is to benefit active and retired Air Defense Artillery soldiers.

The goals of the Association are:

- **Foster** a spirit of unity and *esprit de corps* among members of the branch;
- **Support** to the Air Defense Artillery Museum and the Fort Bliss Museum and Study Center and other programs of the Museums Division.

Visit our website (firsttofire.com) and use our secure Online Membership Form to join the ADA Association.

For More Information on the ADA Association:
Call 915-568-2711, email us at fanninge@bliss.army.mil, or write to the ADA Association at P.O. Box 6101, Fort Bliss, TX 79906



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