

Field Artillery

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A Joint Magazine for US Field Artillerymen

May-June 2005

Fires & Effects in the MultiNational Corps-Iraq

An Interview with
BG Richard P. Formica

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MANEUVER:**

1st Cav FA as a BCT

1ST ID IN OIF:

The Enduring
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The *Neues Heer*
Structure

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Front Cover: An Iraqi shows the sign of victory with one finger stained purple—proof that she voted in Iraq's first-ever democratic elections. The purple finger has become an international symbol of the Iraqi's courage and determination to become a democratic nation.

(US Air Force Photo by TSgt Cherie A. Thurlby, 1st Combat Camera Squadron)

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A Report from Home Station Sill

Preparing for War Today and Tomorrow

Preparing our Field Artillery Soldiers for war remains the most important thing we do at Fort Sill—or for that matter—the most important thing any of our Field Artillery commanders do at home station. I would like to share some initiatives I have seen and applaud them.

Operation Bedpost. Fort Sill’s Army Training Center (ATC) is now in full swing executing what is called “Operation Bedpost.” Operation Bedpost is another name for the weapons immersion program where the trainee keeps his weapon all day and, literally, hangs it over his bedpost at night.

After a Soldier’s first basic rifle marksmanship in Week One of his training, he keeps his weapon with him at all times, sort of like the old Army. Given that physical security in our ATC barracks—our “Starships”—is no less than that of any Fort Sill range or in a forward operating base (FOB) somewhere in Afghanistan or Iraq, the weapons remain with the Soldiers at night secured over their bunk bedposts and not in arms rooms. The only difference is in leader attitude as the young privates know nothing different.



“Operation Bedpost” requires BCT, AIT and OSUT Soldiers to keep their rifles with them at all times—including at night, hanging on their bedposts.

Each Soldier is responsible for his weapon 24 hours a day, including marksmanship proficiency, maintenance, security and safe handling at all times. At the ATC, not only basic combat training (BCT) Soldiers, but also advanced individual training (AIT) and one-station unit training (OSUT) Soldiers participate in Operation Bedpost. Our intent is to conduct weapons immersion also in the basic officer leader’s course (BOLC) II when it comes to Fort Sill in January 2006.

Some old timers have coached me that this weapons immersion training is not new. I “Roger that” but also acknowledge that peacetime migration has taken us away from that program and Operation Bedpost brings us back to train as we’ll fight.

We already are seeing positive results from this program with improved maintenance, increased confidence and muzzle awareness, and improved marksmanship.

FOBs at Fort Sill. The ATC has established a FOB for BCT and OSUT Soldiers to train them in a realistic contemporary operating environment (COE). It also decreases the time to transport Soldiers to and from training areas, allowing more time to train the Chief of Staff of the Army’s designated warrior tasks and battle drills.

Ultimately, we envision about five FOBs at Fort Sill in support of schoolhouse training: individual mobilization training (IMT), officer



education system (OES), NCO education system (NCOES), warrant officer education system (WOES), and III Corps Artillery and mobilization unit training.

Live-Fire Convoy Training. I mentioned convoy live-fire training at Fort Sill in my last column. We are continuing this training to standard.

At this point, it’s worth coaching unit leaders that live-fire training at Fort Sill or your home stations is a higher risk event. As unit leaders, you must ensure range officers-in-charge (OICs) and NCOs-in-charge (NCOICs) are certified properly, and, most important, you commanders must assess the exact points of highest friction or risk on your live-fire lanes and mitigate those risks with, among other things, leader presence.

As part of its deployment training, III Corps Artillery has used leader innovation with range control assistance to create convoy live-fire lanes. The training on the transit hardball roads involves dual-side engagements with “Shoot” or “No-Shoot” targetry. In addition, the convoy remains in a “red status” until it returns to the secure FOB motor pool where Soldiers finally clear their weapons in “clear barrels.” That is realistic training.

This training is further enhanced with a battalion command post (CP) in the FOB motor pool tracking the convoy along its route. The CP uses radio communications as well as the movement

tracking system (MTS) available in the continental US (CONUS).

Balancing Lethal and Non-lethal Training. Spot reports from CONUS dirt combat training centers (CTCs) suggest a trend of some concern. Given that the training rotation scenarios reflect more nonstandard missions and stability and support operations (SASO), there clearly is a tendency for FA units to focus entirely on delivering and coordinating nonlethal effects.

It is *essential* we continue to maintain our ability to deliver accurate, timely and responsive lethal fires.

I have asked the CTC observer/controllers (O/Cs) to emphasize that units maintain a balanced rotation, ensuring they can plan and execute both lethal and nonlethal fires and effects.

Augmentation for FA as Maneuver Units. Also of concern is when an FA battalion or Fires Brigade is given the nonstandard mission of serving as a maneuver formation because it requires certain augmentation to perform its mission; FA battalions and division artilleries (Div Artys) deployed in the Central Command area of responsibility (AOR) frequently serve as maneuver units. This augmentation includes the creation or assignment of an additional fire support element (FSE) at the battalion level or a fires and effects cell (FEC) at the BCT level.

The article "1st Cav Div Arty as a Maneuver BCT" by Colonel Steve Lanza, et al, discusses the augmentation required to serve as a BCT in Operation Iraqi Freedom (OIF) II. The 1st Cavalry Div Arty as the 5th BCT not only required a FEC, it also required further augmentation, based on the mission, enemy, terrain and weather, troops, time available and civil considerations (METT-TC), which Steve discusses in some detail. The standing Div Arty FEC was otherwise engaged with division-wide fires and effects.

Another article in this edition, "1st ID in Iraq: The FFA HQ [Force FA Headquarters] Mission Endures" by Colonel Rich Longo, includes information about the Div Arty's serving as a BCT headquarters during OIF II. This Div Arty also required a FEC and other augmentation, based on METT-TC, which Rich discusses briefly.



III Corps Artillery Soldiers drive through the live-fire convoy range on Fort Sill in preparation for deployment.

FFA HQ and Fires Brigades. The value of having a FFA HQ remains key throughout the spectrum of military operations, major combat operations (MCO) to SASO. At every echelon, the FFA HQ maintains the "high ground," ensuring all available sensors and shooters are linked, our delivery systems are coherently positioned, gaps or redundancies in capabilities are resolved, and the joint fires and effects community can support the maneuver commander's intent.

At the unit of employment (UEX) level, a Fires Brigade likely will be assigned the FFA HQ role. The three-star UEX will have the same force structure to fulfill the FFA HQ role as the two-star UEX will have. The UEX requires support similar to the support the 75th FA Brigade out of III Corps Artillery provided the 1st Cav during OIF II when the 1st Cav Div Arty executed nonstandard missions as the 5th BCT.

We will closely watch the 101st Airborne Division (Air Assault) and 2d Infantry Division Battle Command Training Program (BCTP) Warfighter exercises this summer. Both divisions will serve as UEXs with Fires Battalions organic to their BCTs, and each will employ a Fires Brigade.

In MCO, the ability to mass joint fires—including cannon and rocket artillery fires—remains paramount. The organic cannon battalions that have two batteries of eight howitzers (2x8) each will need additional reinforcing cannon and rocket fires from the Fires Brigade.

Determining the tactics, techniques and procedures (TTPs) to ensure that

every available asset is in the fight at the decisive battlespace and time demands we examine and define the support relationships among Fires Battalions organic to the BCTs and the Fires Brigade battalions. This relationship will drive the FA's ability to leverage horizontal and vertical connectivity within joint fires networks.

Training the Organic Fires Battalions. I recently asked several maneuver brigade commanders the question, "How will you know when your organic Fires Battalion is ready to fight?" The answer to that question is not an easy one.

One strong indicator would be for the BCT commander to go to a hilltop with his Fires Battalion commander, pick a target, direct that it be engaged by 16 guns and then start his watch. This would give a good measure of marksmanship and the battalion's ability to master the five requirements for accurate predicted fire. But as most of us know, that is only part of what the Fires Battalion, in concert with the BCT's FEC, brings to the fight.

The Army has decided there will be 12 Fires Brigades: six in the Active Component (AC) and six in the Army National Guard (ARNG). Obviously, not every UEX will benefit from the physical presence of a Fires Brigade at home station. And although base realignment and closure (BRAC) announcements have not been made at the time of this writing, I don't expect the Army to station four Fires Brigades at Fort Sill. The four FA brigades on Fort Sill will transform into Fires Brigades with some stationed elsewhere. I expect that at least four AC Fires Brigades will be on posts collocated with one or more UEXs.

That said, I strongly advocate the Fires Brigades establish habitual relationships for training and certification with the resident BCTs' organic Fires Battalions. Given geography, the Fires Brigades' training and certification of FA units likely will cross AC-ARNG boundaries.

But the more daunting issue is how to train our future Fires Battalion commanders, particularly those commanding the organic cannon battalions. Aside from 10 days in the current FA Pre-Command Course (PCC), the last time most battalion command selectees have had schoolhouse fire support and artil-

lery training was eight to ten years earlier during their captain's career courses. Clearly, recent fire support and delivery system training and experience provides the most valuable credential in the "BCT trenches," ensuring these FA commanders are successful.

In theory, because these battalions belong to the BCTs, the BCTs train and certify them; however, with the number and complexity of units organic to the BCT, this is a "tall" order.

Where feasible, the 06 Fires Brigade commander is the obvious one to help the BCT commanders train and certify these battalions. However, he should not have to depend only on his personal relationships with those Fires Battalion and BCT commanders to do the job; he must have a more formalized relationship with them. In cases where there is no 06 Fires Brigade commander, we must look for alternative solutions. These might include Fires Battalion time at the CTCs before their BCT rotations or, perhaps, the use of Fort Sill-based mobile training teams.

We don't have all the answers yet. But what is clear is the FA will not lower its delivery system or fires and effects coordination standards.

Joint Fires and Effects Course and Tactical IO Course. Both the Joint Fires and Effects Course (second iteration) and the Information Operations (IO) Course (pilot) are now in the execution mode. The Joint Fires and Effects course is well attended and feedback is most positive. The current IO Course is full with feedback from the attendees also positive.

The Joint Fires and Effects Course is

for personnel in all services, AC and Reserve Component (RC), and focuses on teaching joint doctrine and TTPs for planning, synchronizing and executing joint fires and effects in support of a joint task force (JTF) or joint force commander (JFC). Army seats for the August course are full; however, seats are available for the October course via the Army training and requirements system (ATTRS) or, for other-than-Army personnel, by calling the Fort Sill G3 at DSN 639-2199/5124 or commercial (580) 442-2199/5124 or the Joint and Combined Integration Directorate (JACI), Fort Sill, at DSN 639-1701/8671 or commercial at (580) 442-1701/8671.

As the Army's proponent for tactical IO, we have developed the IO Course for NCOs, warrant officers and officers, AC and RC, who coordinate lethal and nonlethal IO effects in joint fires and effects cells (JFECs) at the BCT level, in the fire support element (FSE) at the battalion level or on tactical IO teams at lower levels. It focuses on IO and effects-based operations at the brigade level and below. Seats are available through ATTRS or by calling the Fort Sill G3 at DSN 639-2199/5124 or commercial at (580) 442-2199/5124.

New Command Sergeant of the FA. In April, CSM William E. High took over as the new CSM of the FA and Fort Sill and became my new Battle Buddy. CSM High is fresh out of the Global War on Terrorism, recently returning from Operation Iraqi Freedom as the CSM for the 101st Airborne Division (Air Assault) Artillery. He served as the CSM of 2d Battalion, 320th Field Artillery, also in the 101st Division.



Photo by SPC Walter Ludka, Fort Sill Cannoneer

CSM William E. High

Bill High not only brings strong leadership skills and the personality to get the job done, but also an incredible branch-wide balance of Field Artillery NCO experience. He has served in heavy and light units and in every combat leadership position from Section Chief of a Lance missile section and Platoon Sergeant of a multiple-launch rocket system (MLRS) platoon to First Sergeant of five different firing batteries. He is airborne-, jumpmaster- and air assault-qualified and has served as a Senior Drill Sergeant and S2 Operations NCO.

I welcome Bill High as the CSM of the Field Artillery, a great leader who knows Soldiers and knows what they need in the COE.

The Field Artillery and Army are undergoing incredible change as we are at war and, simultaneously, transforming into a modular force. We, at Fort Sill, don't have all the answers for the issues facing the branch, so I welcome your input: redleg@sill.army.mil.

Be advised that, through it all, your branch leadership *will* ensure we maintain the FA's ability to provide accurate, responsive fires when and where the US Army, our sister services or allies need them. That's the really important part of our job, the part that can save lives and turn the tide of high-intensity battles when the going gets really tough.

Today, as some of the Army's "smart guys," Redlegs are devising unique training at home station and adapting, innovating and firing artillery daily to accomplish unique, nonstandard missions in Afghanistan and Iraq. I am proud to be your Chief.



Photo by Fred W. Baker III

Joint students interact during the Joint Fires and Effects Course in April at Fort Sill.

Response to “Why Do We Have 20th Century FSCM for a 21st Century Force?”—Current FSCM Are Relevant

Colonel Gerald L. Smith’s article “Why Do We have 20th Century FSCM for a 21st Century Force?” in this edition highlights a need for the Marine Corps to evolve its definitions and use of fire support coordinating measures (FSCM). He outlines a current gap in the *Marine Corps Warfighting Publication 3-16 Fire Support Coordination in the Ground Combat Element’s* (MCWP 3-16’s) definitions of FSCM. Finally, Colonel Smith suggests that we realign our thinking on FSCM.

We concur with Colonel Smith that there is a lack of debate/discussion of FSCM. We also acknowledge that there are irregularities in the MCWP 3-16 and its definitions of FSCM, and we do not desire to reflexively defend the status quo. We believe, though, that the intent of the FSCM remains the same: facilitate the attack of targets and safeguard friendly personnel.

The solution is either to adopt the *Field Manual 6-20-20 Tactics, Techniques, and Procedures (TTP) for Fire Support at Battalion Task Force and Below’s* (FM 6-20-20’s) definitions, which we believe are user friendly, or direct a formal review of MCWP 3-16. For example, FM 6-20-20 defines the purpose of a fire support coordination line (FSCL) to “...allow the corps and its subordinate and supporting units to expeditiously attack targets of opportunity beyond the FSCL.” (Page 1-19) FM 6-20-20 goes on to say the attack of targets beyond the FSCL should be coordinated, but it still does not preclude the attack of targets beyond the FSCL

(Page 1-19).

MCWP 3-16 defines the purpose of the FSCL the same; however, it goes on to say units attacking beyond the FSCL must inform affected commanders. “In exceptional circumstances, the inability to conduct the coordination will not preclude the attack of targets beyond the FSCL. However, failure to do so may increase the risk of fratricide...” (Page B-2). This vague description leaves a question. Do we have to coordinate fires beyond the FSCL?

Although Colonel Smith does not purport to have the complete answer, he does suggest some new FSCM. Our solution to the perceived FSCM problem differs from his. A major reason FSCM are perceived as out-of-date is because fire supporters and fire support coordinators are not applying them and (or) understanding them correctly. It is our job as artillerymen to train our supported units and sell them on FSCM’s applicability.

We believe that Colonel Smith’s solutions merely change the name of existing FSCM. For instance, he conceived a dynamic fire support area (DFSFA) that “...opens a three-dimensional block of space at a specific time to facilitate attack.” This is really just a free-fire area (FFA) that “...is a specific designated area into which any weapon system may fire without additional coordination with the establishing headquarters” (FM 6-20-20, Page 1-19).

In another example, Colonel Smith uses an immediate clearance area (ICA) that

“...involves pre-planned weapons and targets pairing against critical vulnerabilities...” We argue that this concept is more restrictive than our current FSCM because it does not allow the flexibility to change assets and/or engage targets at a different time. *Additionally, in the time it would take to promulgate the new ICA, the maneuver unit could have cleared the mission on an individual basis.*

New technologies and types of warfare (the “three-block war”) do not affect FSCM. The FSCM’s definitions are designed to transcend technological advances so we don’t have to change the FSCM all the time. If anything, new technologies should make it easier to attack targets safely.

In the September-October 2002 edition, the article “Afghanistan: Joint and Coalition Fire Support in Operation Anaconda” by Lieutenant Colonel Christopher F. Bentley highlighted that, used correctly, FSCM facilitated the attack of targets in what he called a “nonlinear environment.”

It is never a bad idea to ask ourselves, “Why?” and we respect Colonel Smith for bringing the issue forward and sharing his ideas with the FA community. However, based on the discussion and operational example above, we believe our FSCM are current and relevant on today’s nonlinear battlefields.

Capt Travis R. Kundel, USMC
Capt Tonio D. DeSorrento, USMC
Fire Support Instructors,
FA Officer’s Basic Course
Fort Sill, OK

New USAF JACI Deputy Director Onboard

Lieutenant Colonel Neil E. Roghair, USAF, will be the new Deputy Director of the Joint and Combined Integration Directorate (JACI), Fort Sill, Oklahoma, as of 22 May. He is a representative of the Air Force Doctrine Center at Maxwell AFB, Alabama.

LtCol Roghair was an Air Liaison Officer (ALO) and Assistant Director of Operations in the 3d Air Support Operations Group (ASOG), III Corps, at Fort Hood, Texas. He commanded the 712th Expeditionary Air Support Operations Squadron at Camp Victory, Iraq, where he served as Director of the Air Support

Operations Center (ASOC) and Chief Air Planner for operations in An Najaf in August and the second battle of Fallujah in November.

As a Forward Air Controller (FAC), he flew OA-37s. He also has flown F-15Cs and did an exchange tour with the French Air Force, flying the Mirage 2000C. He is a Command Pilot with 2,300 flying hours and has 2,600 commercial hours with American Airlines.

He will work with the USAF Detachment being stood up in JACI in August to train joint fires observers (JFOs) and work on other Army-Air Force joint training and effects initiatives.



LtCol Neil Roghair, USAF, new Deputy Director of JACI, stands in the Al Faw Palace in Iraq.

Brigadier General Richard P. Formica

Former Commander of the Force FA Headquarters (FFA HQ) and
Joint Fires and Effects Coordinator, MultiNational Corps, Iraq (MNC-I)

Part 1: Joint Effects for the MNC-I in OIF II

Interview by
Patrecia Slayden Hollis, Editor

BG Formica, the Commander of III Corps Artillery, Fort Sill, Oklahoma, deployed with part of his staff for Operation Iraqi Freedom (OIF) II in January 2004. He served as the commander of the FFA HQ and effects coordinator (ECOORD) in the Combined Joint Task Force 7 (CJTF-7), which was commanded by Lieutenant General Ricardo S. Sanchez. He reported to the C3 of CJTF-7.

On 15 May 2004, CJTF-7 was replaced by both the four-star strategic headquarters, MultiNational Forces, Iraq (MNF-I), and the three-star operational headquarters, MNC-I, the latter commanded by Lieutenant General Thomas F. Metz, who also commands III Corps. As the commander of the FFA HQ, BG Formica established the Joint Fires and Effects Cell (JFEC) for the MNC-I. He redeployed in February 2005.

Part I summarizes some of the contents of more than six hours of interviews with BG Formica in March. It focuses on the operational environment, organization of the MNC-I/JFEC, integration of joint fires and counter-strike operations.

Ed

The Threat and Environment. During the time we were in Iraq, the insurgency continued to develop. Today there are still attacks against Coalition Forces, but we are seeing an increase in the number of attacks against Iraqi Security Forces [ISF] and Iraqi civilians. Clearly a security challenge still exists.

But Iraq has continued to progress and is getting better all the time. Now there are more businesses and more people on the streets, and children go to school. There's a never-ending line of Iraqis



applying for jobs in the ISF—the Iraqi Army, Iraqi police and Iraqi National Guard [ING]. Even as the anti-Iraqi forces [AIF] increasingly target the ISF, there's no shortage of Iraqis applying. They want to be ISF.

The enemy's center of gravity is the will of the Iraqi people. It's a classic insurgency: to the extent to which the insurgents can garner the support of the Iraqi people or at least avoid being negated by the Iraqi people, then they can continue the fight. If we can isolate the bad guys from the support of the Iraqi people, then we can begin to defeat the insurgency.

The Coalition Forces recognize that the "will of the Iraqi people" is not something that they can universally or unilaterally impose. In the long run, the ISF and Iraqi people have the best shot at defeating the insurgency. They need us to help provide some of the security so they can do that.

And as the ISF are better trained and

have better equipment and gain experience in Coalition Force and independent operations, they are more capable of providing Iraq's security.

Iraqi National Elections. The ISF's increasing effectiveness was never more evident than during the national elections in January. I believe the reason the ISF stood so firmly on 30 January is because those were *Iraqi* elections. We distanced ourselves from the planning for those elections because we didn't want them to be seen as "Coalition" or "American" elections.

The Independent Election Commission, Iraq, IEC-I, was the Iraqi organization chartered with planning and running the elections. The commission did a good job.

Everything Coalition Forces did that year was designed to increase security so the Iraqi people could have successful elections. MNC-I prosecuted a series of battles: Fallujah, An Najaf, Karbala, Al Kut, Sadr City in Baghdad, Samarra, Fallujah (again in November) and Mosul. [See the map in Figure 1 on Page 6.] Those battles eliminated the insurgents' safe havens and reduced their ability to conduct operations or interact with the Iraqi citizens. They also increased the confidence of the ISF.

The more Abu Musab al-Zarqawi and the terrorists attacked Iraqis, the less tolerant the Iraqis were of the insurgency. It appears that trend is continuing, and more and more Iraqis are stepping up and speaking out against the insurgents.

During the elections, the ISF probably performed their best, to date. The ISF provided that inner cordon of security at the various polling places and in key areas while the Coalition Forces provided the outer cordon of support and quick-reaction forces [QRFs].

Several ISF personnel died intercepting vehicle-borne improvised explosive devices (VBIEDs) to protect polling places. The ISF demonstrated absolute courage that day and became the key provider of security for the Iraqi people.

The Iraqi people also showed great courage. The stories are numerous of Iraqis who endured VBIED threats or mortar attacks and stood their ground at polling places. They stayed in line for *hours* to have the opportunity to vote. We Americans could learn from that.

On election day, the Iraqis demonstrated that they want democracy more than we want it for them. That day, the people also showed disregard for the insurgents. When a VBIED attacker or an insurgent was killed at a polling place, Iraqis not only left the bodies unattended (which is against their culture), but also spit on them and then stepped over them to get back in line. The elections marked a shift in the Iraqis' level of support for the insurgency.

Another example of that shift is the "purple finger." If Coalition Forces had been running the elections instead of the IEC-I, there would have been no purple fingers. We were afraid it would mark someone who voted as a target for the insurgents, and he'd lose that finger or his life, or his family would be intimidated. But the elections were run by the IEC-I, and they wanted to dye every voter's finger purple for election control.

The purple finger turned out to be a very powerful symbol. Images of Iraqis holding up their purple fingers with pride raced around the world, symbolizing the Iraqi people's courage and determination in the democratic election process.

Eight and a half million Iraqis from across Iraq voted. I think we'll see the benefits of these elections as the political process takes center stage in Iraq. Hopefully, it will overshadow the security process.

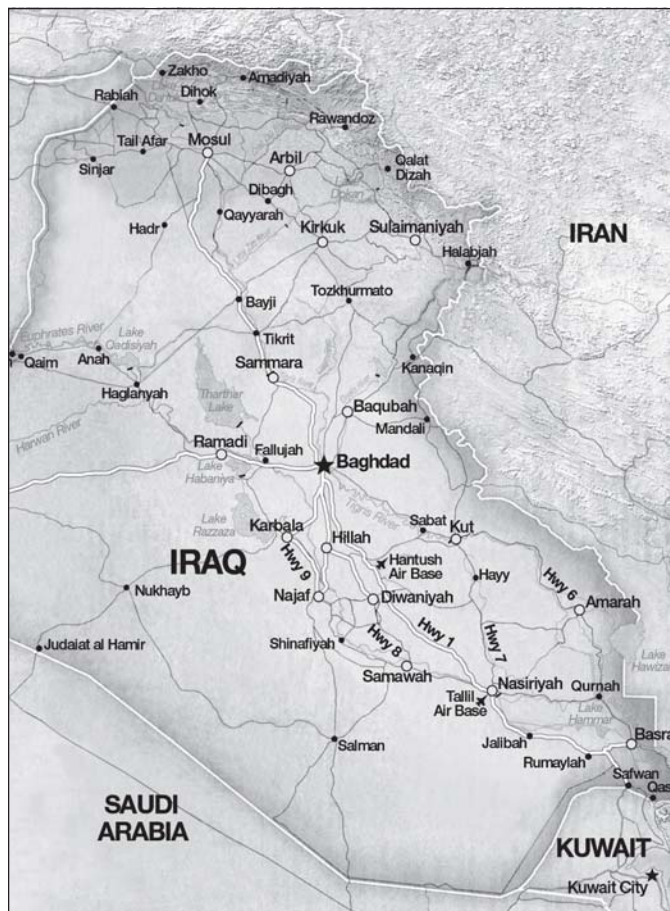


Figure 1: Iraq

It was very gratifying to help provide the secure environment for the Iraqis to vote.

JFEC Role and Organization. When we became the MNC-I JFEC, our role changed. Instead of being a US Army corps, we were a multinational corps, and MNC-I *truly* was coalition and joint. [See the organization chart in Figure 2.]

The commander, MNC-I, was an American Army three-star general with British, Canadian and Italian two-stars as his deputies. He had a one-star American chief of staff. Many of the MNC-I staff were US Army because we came from III Corps, but all elements were augmented by coalition and joint officers and NCOs.

Every night, Lieutenant General Metz had a commander's video teleconference with his multinational MSCs [major subordinate commands], who were headed by multinational commanders [shown in Figure 2]. Like all the staff elements, the JFEC organization was both joint and coalition.

The JFEC's main task was to integrate

joint lethal fires and nonlethal effects. We used the Decide-Detect-Deliver-Assess (D³A) targeting process. As I left Iraq, we were beginning to integrate lethal and nonlethal effects more formally into the same D³A process. We had deployed wanting to evolve to effects-based operations [EBO]—we never really got there, but we were integrating lethal fires and nonlethal effects.

To set up the MNC-I JFEC, we deployed the FFA HQ and the FSE [fire support element] from III Corps, both headed by US Army lieutenant colonels. The FSE included a Korean major, an individual augmentee.

The FFA HQ conducted counterstrike operations and supervised echelons-above-division FA assets, including radars and the 197th Field Artillery Brigade from the New Hampshire Army National Guard [NHARNG]. The 197th was a theater security brigade doing non-standard tasks in southern

Iraq. We also had a separate battalion, the 2d Battalion, 130th Field Artillery (2-130 FA) from the Kansas Guard, that ran the joint visitor's bureau [JVB] and executed fixed-site security tasks in Baghdad.

Our FSE did the standard, stereotypical fire support tasks in an insurgency environment, such as targeting (both operational and "personality"), fire support coordination in conjunction with the corps MSCs and the integration of joint fires.

Aligned and functionally integrated with the JFEC was the 3d Air Support Operations Group [ASOG], which provides direct support to III Corps and rejoined us when we became MNC-I. It was commanded by an Air Force colonel who was the corps ALO [air liaison officer]. The ASOG ran the ASOC [air support operations center] that executed the air-delivery tasks integrated by the FSE.

The JFEC included the information operations [IO] cell. IO, like much of the corps' organizational structure,

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matured and changed over time. An Air Force colonel headed the IO cell. It also included an Albanian IO officer.

Then as a carryover from CJTF-7, we inherited the ISF cell. It served as the corps implementation cell for the standardization of ISF. This cell was headed by a British colonel. It was an anomaly—a cell with functions not directly related to JFEC operations. Over time, as the Iraqi Security Forces became increasingly integral to coalition operations, the cell came under the purview of the MNC-I C3.

The JFEC was *truly* joint and coalition—but it also was an *ad hoc* organization. Some of the JFEC positions were filled by personnel designated by the joint manning document [JMD]. Others were part of organizations—such as our force FA headquarters, the 3d ASOG and the field support team [FST] from 1st IO Command.

The quality of the battle staff in the JFEC was *terrific*. However, the JFEC's ad hoc organization created challenges with staffers rotating in and out of the organization and on different rotation schedules.

The ISF cell had three chiefs in my 13 months in the JFEC—three British colonels, two artillery and one infantry. There were five corps ALOs in 13 months. Initially, the Air Force had all its personnel on 90-day rotations. About seven months into our tour, the Air Force expanded that to 120 days. The ASOG commander and his key staff extended to remain 179 days, which increased stability.

The IO cell had the most turbulence. Although the IO cell had four IO staff officers who deployed with us from III Corps headquarters and remained for the tour, it had five chiefs, one Army and four Air Force. The IO FST of 14

professionals rotated on a four- to six-month schedule, so the cell had three FSTs during our tenure. All these elements rotated through the IO cell on different schedules.

In addition, the IO cell was reinforced by a PSYOP [psychological operations] support element that planned the PSYOP portion of MNC IO.

The manning of the IO cell had *constant* turbulence that contributed to our challenges to effectively employ IO.

The JFEC had five sections and no deputy or chief of staff to integrate the operations among the sections. Over time, the corps deputy ECOORD [DECOORD] assumed chief-of-staff-like functions (along with targeting, fire support coordination and the integration of joint fires) and the ASOG chief (corps ALO), essentially, served as the deputy. The ASOG chief was senior, experienced and the integrator of most

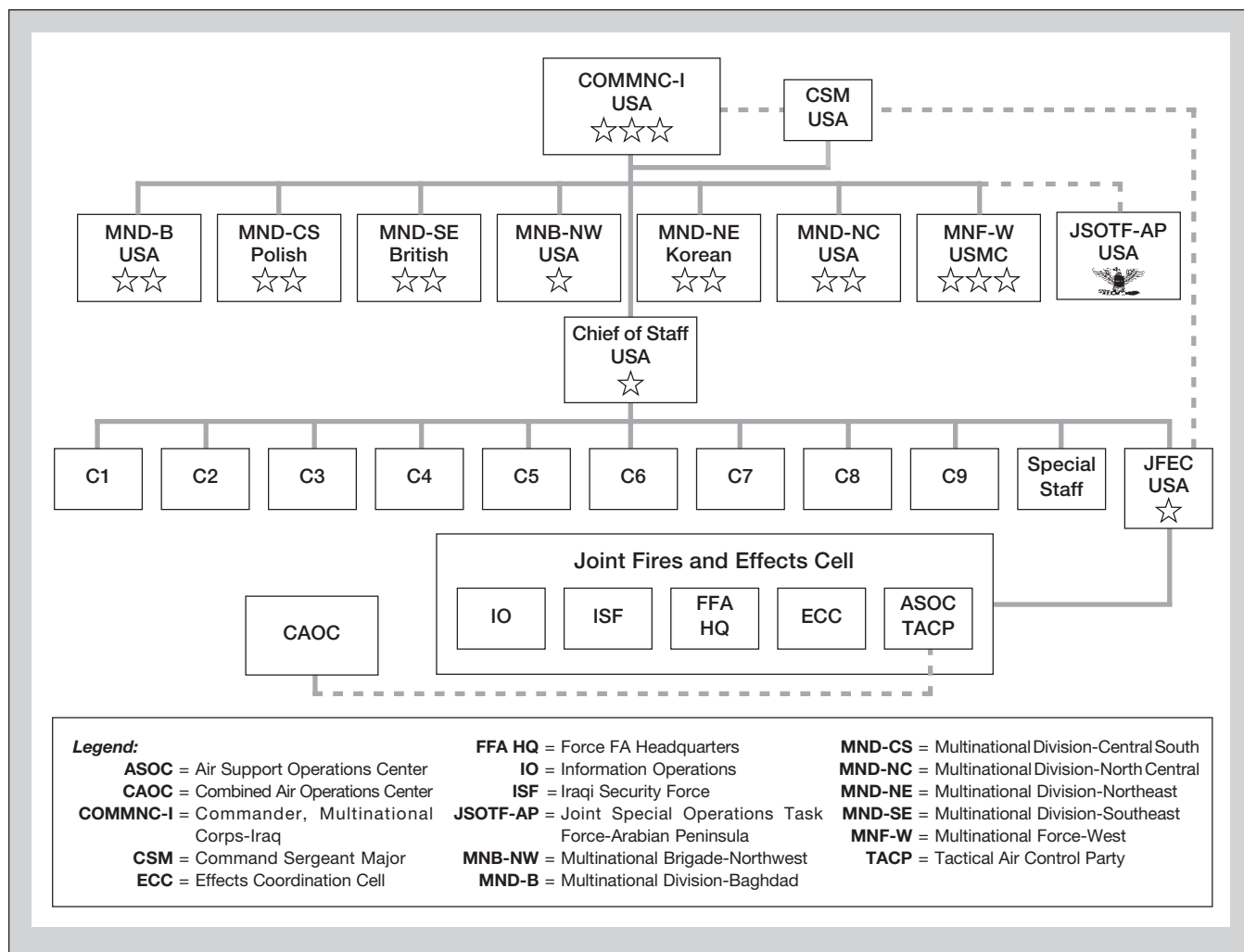


Figure 2. Organization of the MultiNational Corps-Iraq (MNC-I). The figure also shows the Joint Fires and Effects Cell (JFEC) organization.

joint fires.

As we examine how we must change to get better, we need to be less ad hoc and more deliberate in the design of the JFEC. That said, the overarching lesson learned is that a coherent JFEC enabled the corps headquarters to synchronize lethal fires and nonlethal effects. We learned the value of having FA fires, the ASOC, IO and, potentially, civil-military operations [CMO] incorporated into one coherent cell under a senior joint fires and effects coordinator while distributed among the command posts for planning and execution.

Joint Fires. Our main joint fires were air-delivered munitions—Air Force, Navy off the carrier and Marine. We planned ATACMS [Army tactical missile system] fires a couple of times but never delivered them. Most Field Artillery-specific targeting was done at the divisions and brigades or lower.

We had a routine process for providing joint fires. Everyday there was a series of battalion-, brigade- or division-level operations ongoing in support of corps operations. If units needed joint fires, which were allocated by the corps, they submitted ASRs [air support requests] through their divisions up to the corps. We preferred to get the ASRs three days out. But we were not hamstrung by the air tasking order [ATO] process that defined the application of air power in more conventional fighting. The CAOC, the Coalition Air Operations Center, was extremely responsive to our requirements for joint fires.

In the JFEC, we prioritized the ASRs based on the priorities established in the targeting process. During intense combat operations, we typically had more requests than we had air power, which is why the ground force continues to need organic artillery and mortars.

The JFEC priorities enabled the CAOC, a CENTCOM [Central Command] asset, to determine when to surge aircraft at what times and over which



BG Formica and CSM Willie L. Byrd case the colors after transferring authority of the MNC-I FFA HQ and relinquishing the MNC-I JFEC to the XVIII Airborne Corps in a ceremony at Camp Victory, Iraq, on 9 February 2005.

Photo by SFC Jeremy D. Crisp

locations to maintain an appropriate troop-in-contact, or “TIC,” response.

So, if we prioritized air, say in Fallujah and Baghdad, and something happened instead in Mosul, we could flex air from one of those other two locations in response to a TIC. The JFEC representative in the current operations section of the JOC [joint operations center] could make those decisions. The ASOC in the JFEC always had radios blaring in constant contact with the pilots and could immediately divert an aircraft to a higher priority mission.

A TIC was the standard CAS engagement supporting friendly troops. The commander on the ground, usually at the battalion or higher level, employed CAS. He had to positively identify an enemy force and determine that the use of CAS was proportional for the target. For example, we would not drop a 1,000-pound bomb on one guy with an AK-47 rifle.

We tried to maintain a rapid TIC response capability in multiple areas across the country. Our air power was absolutely agile and responsive.

The munition of choice was a 500-pound JDAM [joint direct attack munition]. Most aircraft had JDAMs on board along with a few 1,000-pound and 2,000-pound bombs. The AC-130 gunship, when available, was a particularly effective CAS platform in this environment.

MNC-I Counterstrike. One of the primary functions of the force FA headquarters, at every level, is the prosecution of counterstrike operations to defeat the AIF mortar and rocket threat. The mortar threat is fought more at the battalion, brigade and division levels, while the rocket threat is fought at the brigade and division levels under the umbrella of a corps operations plan.

The AIF fought nontraditionally; it improvised rocket launcher devices and fired rockets from a box on the ground, laid on a berm, mounted in the back of

a donkey cart or in the back of a van, or by other means. The counterstrike fight was nontraditional.

As we adapted to counter the enemy, he adapted to counter our new operations—each in a series of adjustments to the other. Any time we were predictable, he figured that out and exploited our predictability and vice versa.

At the corps, we analyzed his patterns and the trends—day or night, types of movement or attacks, points of origin [POOs], timing—to make the insurgents more predictable. We adapted our TTPs [tactics, techniques and procedures] from conventional counterfire operations to counterstrike in an insurgency.

In a conventional fight, there are four elements required to conduct the counterfire fight: take away his “eyes;” rapid, decisive maneuver; and conduct proactive and reactive counterfire operations.

First, you take out his eyes. If you win the counterreconnaissance fight, you’ve taken out his eyes.

The second element is rapid, offensive and decisive maneuver. If you are on the attack pushing him back, then he’s moving, he ain’t shooting at you. From a combined arms perspective, that tactic always has been effective in the counterstrike fight.

The third element is proactive counterfire. A lot has been written about how

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to do that: intelligence analyses; templating the enemy mortars and artillery; and deep attacks with helicopters, CAS or ATACMS fires.

And then the fourth element is the stereotypical reactive counterfire fight. He shoots and you acquire the shot on your counterfire radar and shoot back.

After we arrived in Iraq, we realized that counterinsurgency counterstrike operations had four parallel, yet different, elements.

First, although our units were not conducting a classic counterreconnaissance, they were doing personality-based targeting. For example, they targeted particular cells or individuals who fired the rockets or mortars, facilitated the rocket or mortar men's operations, or financed them.

Second, although we don't conduct rapid, offensive and decisive maneuver routinely, units aggressively patrolled—kept the enemy moving and denied him access to firing points.

Conducting ground and air patrols to deny the enemy access to firing points was very effective but manpower-intensive.

Third, units conducted proactive counterstrike when they established "snap" (impromptu) checkpoints or TCPs [traffic control points]; positioned snipers near likely firing points, based on pattern and trend analyses; and used aircraft and (or) UAVs [unmanned aerial vehicles] to look for enemy or unusual activities.

We employed air power innovatively for proactive counterstrike, including nonlethal presence and show-of-force missions. In a presence mission, the aircraft flies over a TAI [target area of interest] so the population can see or hear the aircraft. The show-of-force is much more—the aircraft deliberately flies much lower to make the targeted population very aware that coalition air power is readily available. Neither mission delivers any ordnance, but they are effective nonlethal applications of air power for counterinsurgency.

Another way units used air power and FA and mortar fires proactively was for terrain denial missions. The FFA HQ performed pattern analysis to identify the rocket or mortar boxes the enemy shot from and then attacked those targets in order to interrupt enemy operations. We denied him the terrain he

wanted to fire from.

Terrain denial by aircraft and fires was very effective. It kept the enemy from establishing and improving positions and getting known aiming reference points, which would allow him to set up and shoot more rapidly. Terrain denial reduced the number of attacks and made them less effective.

However, terrain denial could have an unintended "harassing" effect on a part of the population we didn't want to alienate. So a commander sometimes made a conscious decision not to conduct terrain denial missions because they would be counterproductive for his IO program.

To avoid killing non-combatants and minimize collateral damage, units always had "eyes on" the terrain before they fired on it.

Units used IO as part of their proactive counterstrike. They passed out leaflets and flyers or engaged the local residents to convince them not to tolerate insurgents using their fields or emplacing weapons next to their homes to shoot at us or other Iraqis. (In reactive counterstrike, we also used IO to convince locals never again to allow insurgents to fire from nearby.) CMO, those operations that earn the trust and confidence of the Iraqi people, also contributed to proactive counterstrike.

The fourth element is the reactive counterstrike fight. Sometimes we responded with mortars or cannons and sometimes with CAS, ground QRF or an armed UAV.

Frequently, we employed a combination of assets in reactive counterstrike. We might acquire enemy fires via a Q-36 radar, vector a UAV over the firing site and respond with artillery fire. If the enemy mortar or rocket crew had already moved, the UAV might track the crew to a new location to be attacked by fires or have a QRF capture them, as appropriate for the target and location.

Just before the Iraqi national elections, an indirect fire attack hit the American embassy in Baghdad. That indirect fire came out of a corps TAI in the 1st Cavalry Division AOR [area of responsibility].

The 1st Cav had been patrolling regularly and concentrating IO, CMO, TCPs, human intelligence [HUMINT] and other operations in that area. The 1st Cav responded immediately with an

airborne platform over the firing site, which followed the shooters to a village. In a short time, a QRF captured the seven insurgents who launched the attack.

Shortly after we arrived in Baghdad, the force FA headquarters documented all these counterstrike TTPs that units had been developing for more than a year in a corps plan called, "Op Plan Rocketman." All the divisions and I MEF [I Marine Expeditionary Force] developed implementing plans. Essentially, they executed the tenets of Op Plan Rocketman in their AORs. Op Plan Rocketman also established corps counterstrike priorities.

While counterstrike operations is a principal function of the force FA headquarters, it was not all we did. At the corps, the force FA headquarters provided command and control of echelons-above-division FA units conducting nonstandard tasks, provided a command and control capability for other corps operations and conducted future planning for FA units and operational requirements in theater.

In Part II of this interview in the July-August edition, General Formica discusses FFA HQ functions, IO and the Battle of Fallujah.

Ed



Brigadier General Richard P. Formica has commanded III Corps Artillery at Fort Sill, Oklahoma, since August 2002. He conducted split-based operations for 13 months when he deployed a portion of the corps artillery headquarters to Baghdad to establish the Force FA Headquarters and the Joint Fires and Effects Cell (JFEC) for the Multinational Corps-Iraq (MNC-I) during Operation Iraqi Freedom II. In his previous assignment, he was the Assistant Deputy Director for Politico-Military Affairs (Europe), J5, on the Joint Staff at the Pentagon. He also commanded the 3d Infantry Division Artillery (Div Arty) at Fort Stewart, Georgia; the 4th Battalion, 42d Field Artillery (4-42 FA), part of the 4th Infantry Division at Fort Hood, Texas; and two batteries. Among other assignments, he was the Deputy Fire Support Coordinator (DFSCoord), Div Arty S3 and a Brigade Fire Support Officer, all in the 3d Division. He holds a Master of Arts in National Security Strategy from the National War College, Washington, DC.

RED TEAM GOES MANEUVER

1st Cav Div Arty as a Maneuver BCT

On 1 November 2003, the 1st Cavalry Division Artillery (Div Arty), *Red Team*, at Fort Hood, Texas, received a mission that initiated its historic transformation from a force FA headquarters (FFA HQ) into the 1st Cav's 5th Brigade Combat Team (BCT) to deploy to Operation Iraqi Freedom (OIF) II. The 5th BCT did not perform the traditional roles and missions associated with its prior life as the 1st Cav Div Arty. From the BCT's activation in January 2004 until its redeployment from Iraq to Fort Hood in March, it operated as a maneuver BCT that owned ground in the Al Rashid District of the

By Colonel Stephen R. Lanza, Major Robert L. Menti, Captain Luis M. Alvarez and First Lieutenant Michael R. Dalton

southeastern portion of Baghdad.

To fulfill the FFA HQ mission, the Div Arty cut the division joint fires and effects cell (JFEC) and C Battery, 1st Battalion, 21st Field Artillery (C/1-21 FA), the target acquisition battery (TAB), to the division for the deployment. The JFEC was the coordinator of the 1st Cav's joint fires and effects and

all the Q-36 and Q-37 Firefinder radars and lightweight countermortar radars (LCMRs) in the 1st Cav footprint.

The transformation and simultaneous preparation for combat operations in Iraq presented unprecedented challenges for the *Red Team* Soldiers. To our knowledge, no Div Arty has transformed into a combined arms brigade while maintaining FA combat readiness. The prevalence of Army missions requiring combat operations in complex urban environments means that units may face similar transitions in the future.

The goal of this article is to provide



A 5th BCT NCO engages the people of Al Rashid.

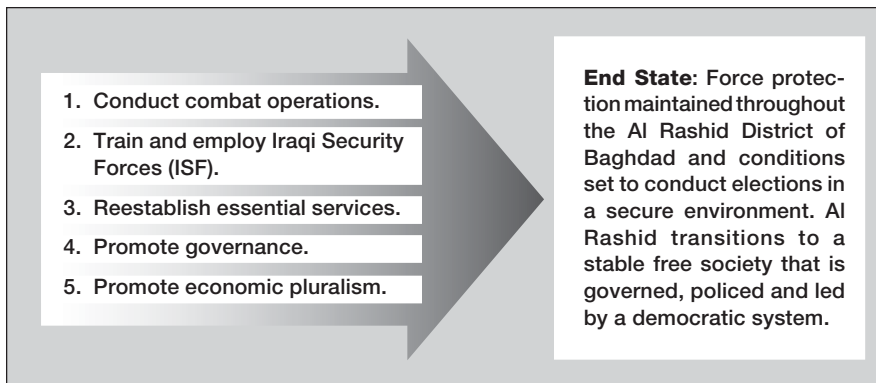


Figure 1: The Five Lines of Operations (LOOs) of the 1st Cavalry Division's 5th Brigade Combat Team (BCT). To help accomplish the five LOOs, the 5th BCT employed full-spectrum information operations (IO).

insights into this transformation and to show that it is a viable option for units in the future. We focus on the changes in doctrine, organization, training, leadership and materiel required to transform a FFA HQ into a combined arms brigade charged with conducting full-spectrum operations in Iraq.

Doctrine. This transformation presented unique opportunities for innovation. Before deploying, the staff took doctrine as the foundation and modified it to suit full-spectrum operations in Baghdad. In addition to mastering maneuver doctrine, the Div Arty staff applied FA doctrine in innovative ways to meet the requirements of maneuver and fire support in an urban fight.

Most importantly, the 5th BCT implemented an information operations (IO) framework that constituted the BCT's deep fight in combat. Throughout the OIF II deployment, the 5th BCT emphasized a holistic strategy of engagement with the local populace. This was at all levels, squad to brigade.

The BCT quickly discovered that IO truly is a decisive form of engagement, particularly in counterinsurgency operations. "Marginalize," "co-opt" and "leverage" became doctrinal tasks in their own right and were as vital to full-spectrum operations as "destroy," "neutralize" and "suppress."

Selected staff took part in two pre-deployment site surveys in Baghdad and brought back valuable information to use in developing the 5th Brigade's part of the 1st Cavalry Division's campaign plan. The plan centered on the simultaneous execution of five lines of operation (LOOs) with the desired end state of a secure Baghdad. (See Figure 1.)

The staff understood that security is a prerequisite for stability, which, in turn, is a prerequisite for prosperity. The ul-

timate goal of a free and prosperous Iraq has to be built upon a secure Baghdad, even if that end state takes years to achieve. The 5th Brigade's Al Rashid District took a tremendous step toward helping to achieve a free and prosperous Iraq when it had a 72-percent voter turnout in the January national elections.

Our BCT staff displayed the adaptability and creativity typical of fire supporters. Incidentally, fire support doctrine is ideally suited for full-spectrum combat operations in an urban environment. As shown in Figure 2, the 5th BCT modified the targeting model of *Decide, Detect, Deliver* (Track) and

Assess (D³A) to synchronize lethal and nonlethal effects, including civil-military operations (CMO). By adapting proven targeting tactics, techniques and procedures (TTPs) normally applied to lethal fires and adding a fifth element—track—the BCT brought fires expertise to bear on lethal and nonlethal targets in Al Rashid.

In Al Rashid, actions in LOOs 3 through 5 (Figure 1) support setting the conditions for generating human intelligence (HUMINT) that leads to effects to execute LOOs 1 and 2. The effects generated in LOOs 3 through 5 influenced the populace's perception of Coalition Forces positively and the populace's perception of the extremist anti-Iraqi Forces (AIF) conversely. We then exploited these positive IO effects in HUMINT, leading to precision lethal targeting information.

This concept is simple yet powerful. The 5th BCT routinely achieved 80 percent lethal targeting effectiveness on its HUMINT-generated precision targets.

The Al Rashid battlespace is complex, requiring the BCT to execute synchronized activities across all five LOOs nearly simultaneously on any given day during the deployment. Figure 3 gives an example of the application of activities in support of all five LOOs during

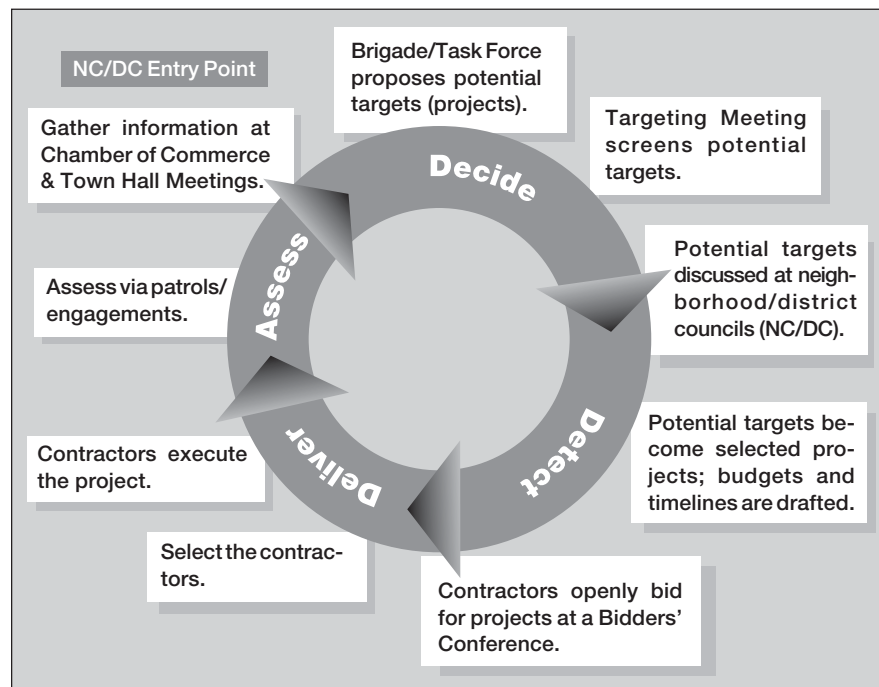


Figure 2: 1st Cav 5th BCT's Civil Military Operations (CMO) Projects Cycle. The decide-detect-deliver-assess (D³A) targeting cycle worked well for CMO projects development. Throughout the D³A process, the BCT used systems to track its projects' planning approval, resourcing, contracting, execution, inspection and advertising of their execution.

Operation Falcon Freedom in December 2004.

To accomplish the mission, the IO effects coordination cell (ECC) developed TTPs to synchronize events and assess targeting effects. The ECC treated each project or leader engagement as a conventional target with desired effects. The BCT leveraged these effects to increase HUMINT or change behavior toward Coalition Forces. The following steps outline the D³A targeting process that the BCT rehearsed at home station and put into practice in Iraq.

Decide. Rather than achieving the traditional kinetic lethal effects on an enemy military force, the brigade had to achieve more subtle effects

on the civilian population while maintaining the ability to execute lethal effects on the insurgents. The priority was always force protection while the brigade contributed in Al Rashid to the overall movement of Iraq toward security.

Achieving effects, such as gaining the trust of the local nationals, ultimately led to HUMINT for the brigade's Soldiers who then contributed to the precision targeting process. The 5th BCT also sought to build Iraqi responsibility for political and business affairs, critical infrastructure and security, developing local institutional responsibility to help achieve security and then stability in Al Rashid.

Detect. To achieve the effects identified in Decide, the staff prioritized the needs of the local population, the impediments to meeting those needs and the "power brokers" capable of influencing public perception: imams, sheikhs, tribal leaders, technocrats and former military leaders. The decision of where to focus CMO had to include input from the Iraqi people and their leaders.

The people's expressed needs were "key terrain" in the urban fight and were depicted in the integrated area of operations (AO) intelligence preparation of the battlefield (IPB) that supported lethal and nonlethal targeting.

Coalition understanding of the community's needs followed by quick actions to empower the people to help meet those needs leads to local owner-

Operation Falcon Freedom—Ministry of Interior (MOI) Commandos, Iraqi Police Service (IPS), the 40th Iraqi Armored Brigade (-), US 1-8 Cav and US 1-7 Cav conducted a combined cordon and search of suspected anti-Iraqi forces (AIF) in several Al Rashid zones. As the operation neared completion, the committees in LOOs 3, 4 and 5 began meeting.

The 5th BCT's Five LOOs:

1. Outer cordon is set in combat operations.
2. Actions on the objective employed ISF; the tactical command post was run by combined forces.
3. Essential Services Committee began meeting.
4. Women's Governance Committee began meeting.
5. Blue Ribbon Committee for economic pluralism began meeting.

Figure 3: Operation Falcon Freedom, conducted in December 2004, is an example of simultaneous full-spectrum operations in Al Rashid executing the five LOOs listed in Figure 1.

ship of security and reconstruction.

Resources were limited, so selecting the highest payoff projects was critical. The 5th BCT sought low-dollar, high-impact projects that produced high local employment and had an immediate visible impact in Al Rashid. Most importantly, these types of projects generated local national goodwill, which set the conditions for effective HUMINT collection and, subsequently, for precision lethal targeting—hence, *full-spectrum* operations.

To illustrate the effectiveness of this approach, the 5th BCT increased organic HUMINT generation from less than 30 reports per month in April 2004 to 120 reports per month by September 2004.

Track. Unlike traditional artillery targets, these targets were complex and achieved effects over a long period and through multiple, sequential and simultaneous applications of the five LOOs. For example, a single CMO project might involve two or three sections of the brigade staff, a local contractor, non-governmental organizations, ministries of the Interim Iraqi Government and higher echelon staffs.

It was not enough to propose or even begin CMO projects. The brigade had to develop tracking systems to ensure its projects were planned, approved, resourced, contracted, executed, inspected and advertised.

It was not enough to track only the number of projects ongoing or the dollars spent to date. Instead the doctrinal

idea of effects is more appropriate when measuring the impact of a particular project.

The BCT commander reviewed this process weekly at the nonlethal projects back brief. Projects were categorized by sewer, water, agriculture, etc., to facilitate discussion. See the tracking spreadsheet for sewage and solid waste CMO projects in Figure 4 on Page 13.

Deliver. Employing people from the local community was essential. As important was selecting a supervisor who had as vested an interest in the project as the people working for him. Local hires led to local ownership, force protection and HUMINT.

It was critical to clearly demonstrate what Coalition

Forces were doing for the community through the local newspapers and TV and radio broadcasts. The citizens needed to know about the projects and how they would benefit from them. Patrols (squad leaders and Soldiers), tactical psychological teams (TPTs) and civil affairs teams (CATs) also delivered the IO messages.

With Al Rashid's low literacy rate, pictures were essential for effective IO. The 5th BCT developed battle damage assessment (BDA) books of before-during-and-after photographs of the projects to show the population that coalition-enabled projects were having a positive impact on their neighborhoods. By continuously showing the local Iraqi leadership what we were doing, we ensured they couldn't refute our good intentions, which increased our ability to hold them accountable for the security of their respective areas.

Assess. Good assessment requires asking the right questions. What was the effect on the population (was there a change in behavior)? Do "you" know that Coalition Forces did "this" for you and that Coalition Forces are concerned about "your" needs? Was there an increase in HUMINT as a result of a specific project? Did Coalition Forces achieve neutrality in an area that used to support or give tacit approval to insurgents?

The 5th BCT used a comprehensive assessment system that had measures of effectiveness (MOE) and measures of performance (MOP). A key point is that

the subjective assessment of the leader who “owned” the ground was a critical part of the overall assessment of non-lethal effects.

Organization. The Div Arty had to change at all levels, from the separate company to the headquarters element. Three of the four organic FA battalions were attached to other brigades.

1-21 FA (-), *First Strike*, the divisional multiple-launch rocket system (MLRS), was in the 5th BCT and demonstrated its flexibility. It trained and deployed as a motorized infantry battalion and was prepared to provide a Hot Platoon of M270A1 MLRS, as the Multinational Corps, Iraq (MNC-I) required.

The 68th Chemical Company and C/2-82 FA were attached to Task Force (TF) 1-21 FA. C/2-82 FA deployed the brigade’s battery of M109A6 Paladins.

The 1st Cav’s cavalry squadrons, 1-7 Cav (-) and 1-8 Cav (Motorized), rounded out the 5th Brigade’s combat power.

In preparation for the Iraqi’s national elections in January, the brigade leveraged additional assets from the Coalition and Iraqi Security Forces (ISF), to include 1-5 Cav, the 411th and 458th Combat Engineers and organic units, such as the 304th Iraqi Army Battalion, 2d Iraqi Intervention Force Battalion and the 1-1 and 3-1 Iraqi Ministry of Interior (MOI) Commando Battalions. After the elections, the BCT became joint as well as combined when it received operational control of (OPCON) 2/24 Marines, a battalion that operated in the southern Baghdad AO.

Combat Service Support (CSS). The brigade required a forward support battalion (FSB) to support the newly attached combat units. The 1st Cav created the 515th FSB as a capabilities-

based unit rather than a modified table of organization and equipment- (MTOE)-based unit. The unit’s personnel and equipment were designed to provide the capabilities required for CSS to the 5th BCT, given that the 1st Cav’s 27th Main Support Battalion (MSB), III Corps assets and civilian contractors were pushing all classes of supplies to the BCT.

The 515th FSB required 450 additional personnel. The division resourced all personnel and equipment internally, forming three companies from five battalion-sized units. The brigade also added C Forward Support Company (FSC) to the 515th FSB for maintenance support for 1-8 Cav. The strength of the 515th FSB was about half the assigned strength of other support battalions, but given the supply push concept in place, the 515th was set to execute CSS for the brigade.

After we occupied the brigade’s Forward Operating Base (FOB) Falcon in Baghdad, we realized the push concept had to be tailored to accommodate the environment in the 5th BCT’s AO. The FSB staff provided excellent leadership and implemented a plan to account for the battalion’s lack of personnel. The FSB staff prioritized the work and executed the duties efficiently and effectively by stressing to the FSB Soldiers the importance and relevance of the mission at hand. The line battalions helped by providing tremendous support from their own crews—by not leaving all the maintenance work up to the FSB mechanics.

Local Iraqis were hired to augment the maintenance teams, working on tires, changing tracks and doing other less complex maintenance tasks. This freed the mechanics to focus on high-skill

tasks.

Headquarters and Headquarters Company (HHC), 5th BCT. To accomplish the mission of a maneuver brigade headquarters, the Div Arty underwent a drastic transformation of its own to become HHC, 5th BCT. Almost every staff section had to adjust to fulfill the requirements of a maneuver mission as the MTOE for a Div Arty staff is about half that of a legacy maneuver BCT. Every leader and Soldier had to be optimized for the deployment.

• **Intelligence**—A traditional Div Arty S2 section supports counterstrike missions and requires five Soldiers. The wider scope of BCT intelligence operations necessitated 15 additional personnel. The S2 created the subsections of HUMINT (S2x), detainee operations (brigade interrogation facility, or BIF), analysis and control team (ACT), joint coordination cell (JCC), weapons intelligence and forensics team (WIT), plans and current operations to meet the demands of intelligence-driven operations in Iraq. Analysts already working in the brigade S2 shop adjusted the IPB to gain counterinsurgency intelligence.

The formation of a robust S2x/targeting cell was essential in a full-spectrum fight. The S2x cell was the liaison with US and MultiNational Force (MNF) Special Operations Forces (SOF) and “other” government agencies. The integration of the JFEC targeting officer into the S2x cell ensured that actionable intelligence entered the D³A targeting cycle quickly.

Detainee operations also were part of the S2x cell and provided the S2 with a thorough exploitation of evidence, interrogations and witness statements, providing closure or requiring follow-on targeting.

Status	Category	Unit	Target #	Project	Zone	Grid	Start	%	End	Est # Empl	Cost
A	Sewage/ Solid Waste	1-21 FA	DCT0324	Repair concrete masonry, remove trash and debris, re-landscape rock gardens with grass and flowers.	Zone 40	MB 416736	26 Apr 04	90%	25 Jun 04	10	\$22,250
A	Sewage/ Solid Waste	1-7 CAV	AX5097	Remove trash in Al Furat and Al Jihad: 893, 895, 897, 889, 887, 881, 885, 891.	Zone 36, 5S	MB 325815	3 May 04	90%	16 Jun 04	200	\$72,500
A	Sewage/ Solid Waste	1-21 FA	AX5092	Build public restrooms for Al Saiidiyah Market.	Zone 41	MB 40087780	5 May 04	75%	30 Jun 04	20	\$23,900
A	Sewage/ Solid Waste	5 BCT	AX5202	Emplace 600 concrete reinforced bins for trash.	Throughout AO	Throughout AO	5 May 04	30%	26 Jul 04	200	\$480,000

Figure 4: Examples of the 5th BCT’s CMO Projects. This is a weekly spreadsheet tracking the sewage and solid waste CMO projects in support of LOO “3. Reestablish Essential Services.”

The brigade acquired additional intelligence assets that were essential in fighting a counterinsurgency. B Company of the 101st Military Intelligence (MI) Battalion, part of the 1st Infantry Division (Mechanized), provided our ACT for intelligence analysis, signals intelligence section (Prophet) and HUMINT section with three tactical HUMINT teams (THTs).

The ACT had to have a strong analytical leader for accurate and timely interpretation of information. Initially the amount of information entering the brigade daily exceeded the capacity to assimilate it. Over time, the analysts in the ACT developed methods of processing the large volumes of disparate information into a coherent threat assessment.

The contemporary operating environment (COE) was the framework within which we templated the threat groups. For example, the threats in the battalions' AOs were templated on a matrix by insurgent leaders, known organizations, exact locations, etc., and then the activities for each were annotated. These activities included, but were not limited to, providing insurgent financing, suicide bombers, mortar/missile crews, other attackers, kidnappers, safe houses, anti-Coalition Force intelligence, and caches of weapons and munitions as well as manufacturing improvised explosive devices (IEDs) or vehicle-borne IEDs (VBIEDs). The 5th BCT updated the activities of threats on a map of its AO every 72 hours to assess the changes in the threat locations and levels of activity.

Using a COE template ensured doctrinal consistency and portability to other units. This became especially important when we dealt with adjacent units from different services or established links between threat groups that were common to several AOs.

- Other Staff Sections—Other sections faced similar challenges. The S5 section began with one officer. Lessons learned from the pre-deployment site surveys showed the BCT S5 needed additional personnel to support CMO



A 5th BCT civil affairs team chief leads a bidders' conference for CMO projects.

purchasing and paying agents for projects. Shortly after arriving in Iraq, the scope of CMO expanded significantly. The S5 shop added five additional troops: one officer, one NCO, and three Soldiers, for a total of eight personnel.

The engineer section needed a substantial overhaul as well. The 8th Engineer Battalion provided B Company, combat engineers, to the 5th BCT. The company had to be augmented to execute traditional combat engineer tasks with the amount of construction and construction management ongoing in Al Rashid as well as address the district's sewer, water, electrical and solid waste problems. With no direct support (DS) engineer battalion, the brigade had to optimize B/8 EN's combat power.

An engineer's headquarters element and assault and obstacle platoons became brigade assets. The assault and obstacle platoons were dedicated to improving force protection on FOB Falcon. The 1st and 2d platoons were OPCON to 1-7 and 1-8 Cav, respectively. This task organization mitigated the lack of a doctrinal engineer battalion per BCT.

In addition, the 5th BCT aggressively pursued and acquired additional engineer assets from the 411th and 458th Engineer Battalions to be OPCON to the BCT when it executed operations with massive mobility (Operation Hardball) and countermobility (Operation Thunderstruck) in Al Rashid. These operations were designed to provide force protection for the Coalition Forces and deny freedom of movement to the

insurgents. These assets came from the 36th Engineer Group supporting the 1st Cav.

Training. The training for OIF II included everything from FA readiness training to BCT lethal combat operations to stability tasks. The Div Arty's mission-essential task list (METL) changed to a maneuver brigade's METL. The 5th Brigade focused on training the units and staff to fight a counterinsurgency across the spectrum of operations.

Pre-Deployment

Training. The brigade headquarters executed a comprehensive training plan consisting of individual readiness training (IRT), small arms on ranges, convoy live-fire exercises (LFXs), reflexive fire tables, rotations in the military operations in urban terrain (MOUT) shoot house and platoon/company/battalion situational training exercises (STXs). In addition, the brigade deployed to both the National Training Center (NTC) at Fort Irwin, California, and the Joint Readiness Training Center (JRTC) at Fort Polk, Louisiana, for training.

The 5th BCT also was responsible for training 1-21 FA, 68th Chemical Company and HHC. 1-7 and 1-8 Cav executed training with their former brigades.

- Five Phases of Training—Phase I began with division leader training for platoon sergeants and above in September 2003.

Phase II consisted of individual training from 15 October to 14 November 2003. Train-the-trainers gave briefings on country orientation, anti-terrorism/force protection, rules of engagement (ROE), unexploded ordnance (UXO) and IEDs. The Div Arty conducted IRT in nuclear, biological and chemical (NBC); first aid; land navigation; combat lifesaving; and weapons qualification.

In many cases, Soldiers would fill roles unrelated to their military occupational specialties (MOS), which increased the requirement for thorough training. One example of this is training cooks in detainee operations so they

could run the 5th BCT interrogation facility.

Phase III focused on unit collective competencies. The Div Arty staff trained as a maneuver brigade staff in the NTC's leader training program (LTP) in November 2003, and all units conducted collective LFXs in early January 2004. Units trained on troop-leading procedures (TLP), convoy live fires, tactical road marches, evaluation and treatment of casualties, and calls for medical evacuations (MEDEVACs).

Phase IV consisted of unit collective competencies in warfighting tasks, counterinsurgency operations and stability operations. 1-21 FA trained from the squad to the battalion levels, and HHB Div Arty trained from the squad to brigade levels.

Training included the integration of disparate unit types. Both 1-21 FA and the 68th Chemical Company transitioned to motorized infantry units while retaining their unique specialties. 1-21 FA retained the readiness to fire Army tactical missile system (ATACMS) missions by fielding the M270A1 MLRS launcher, and the 68th Chemical Company maintained proficiency in hazardous response team (HRT) operations in support of MNC-I.

In Phase V, the 5th BCT participated in a division-wide mission readiness exercise (MRX) at Fort Hood from 11 through 17 December 2003. This exercise was the capstone training event—the first time the brigade simulated operations with 1-7 and 1-8 Cav. The MRX trained the brigade staff in planning, operations and the dissemination of information.

The exercise simulated demonstrations and protests, IED detections, mortar attacks, VBIEDs, the transition to offensive operations and local national assassinations. The battle staff developed battle-tracking techniques that proved essential in Iraq.

The brigade staff worked with the newly attached civil affairs (CA), psychological operations (PSYOP) and MI units for the first time during the MRX. Working with these critical elements before deploying helped build the staff into a capable maneuver headquarters. The ECC coordinated the actions of PSYOP and CA under the brigade's IO plan.

Future MRX training should include additional tasks. Troop management at the brigade level became increasingly important in Iraq because many bri-

gades had units at several different FOBs. Troop-to-task issues were a constant challenge. Units needed to manage tasks that ranged from regular combat patrols to CMO. Troop management training should be stressed during pre-deployment training.

At the MRX, the brigade staff learned how to setup and operate many of the digital battle-tracking systems not previously part of the Div Arty headquarters. The staff had to learn how to use the maneuver control system-light (MCS-L) and the experimental command post of the future (CPOF). Digital battle tracking became extremely important, and the MRX was a good opportunity to gain proficiency.

The S6 had to remote most digital systems from vehicles into a hardened building. He consolidated the equipment from four expando-vans into one shelter that served as the nexus for telephone, radio and networks. It was important to replicate the conditions at the FOB in Baghdad as closely as possible. The staff overcame many of the limitations of the MCS and all-source analysis system-light (ASAS-L) and developed solutions to address the need for battlefield information where these systems failed to provide the functionality promised.

- Training FA Readiness—During its transition to a maneuver brigade headquarters, the Div Arty also had to train FA combat readiness. The training schedule for Div Arty units was rigorous. The Div Arty executed Paladin and MLRS tables in support of the brigades' rotations to NTC in the months before deploying. 1-21 FA completed M270A1 new equipment training (NET) and certified 12 crews.

The Div Arty staff continued to resource and equip the artillery battalions for gunnery, firing range, IO and radar training—all of the tasks from the Div Arty METL. During this time, the adaptability of the *Red Team* Field Artillerymen truly was tested, and they rose to the challenge.

- Joint Operations and Operational Fires and Effects Training—In retrospect, the brigade would have benefited from training in conducting joint operations and providing fires and effects for targets that had operational- and strategic-level consequences, both of which became central aspects of full-spectrum operations in Al Rashid.

The brigade assumed control of 2/24 Marines immediately after the national

elections. This was a capstone change in our task organization, making us joint, and came on the heels of a near-year-long working relationship with the 24th Marine Expeditionary Unit (MEU) operating in the north part of the Babil Province that is just south of Baghdad. It helped that we had worked so closely together.

Likewise, training to execute operational fires and effects at the brigade level should be part of future training exercises. The 5th BCT routinely executed operational fires in support of the International Zone (IZ) by denying insurgent groups the ability to fire long-range rockets—typically the 122-mm rocket with a range out to 27 kilometers—at operational and strategic targets, such as the US Embassy and the Center of Iraqi Government.

At any given time, the BCT commanded or controlled joint assets for operational level fires and effects to support the counterrocket mission. These included the Shadow, Armed Predator, or Hunter unmanned aerial vehicles (UAVs); MNC-I long-range surveillance detachment (LRSD) teams; EA-6B Prowler electronic attack support; Scathe View (C-130 with a thermal intelligence, surveillance and reconnaissance platform); national measurements and signals intelligence (MASINT); a joint surveillance and target attack radar system (JSTARS) with its moving target identification (MTI); AC-130 Spectre Gunships; sea/air/land (SEAL) sniper teams; Army attack aviation; and organic artillery.

Leadership. In November 2003, the Div Arty staff participated in the LTP at the NTC. The two-week program was central to the transformation of the Div Arty staff into a maneuver brigade staff.

The program focused on the military decision-making process (MDMP) in maneuver brigade planning for full-spectrum operations. The staff trained on planning tactical operations using the abbreviated MDMP and battle drills adopted from its maneuver brethren.

The LTP observers helped the staff members change their thought processes from creating FA support plans (FASPs) to creating full maneuver operations orders (OPORDs). The observers also honed the staff's understanding of TLP.

LTP dramatically improved the operations of the BCT tactical operations center (TOC) through training vignettes in planning traffic control points (TCPs), cordons and searches, and cordons and

attacks/raids; integrating air-ground operations; and transitioning to offensive operations. In addition, selected staff members attended cultural training in Jordan and city-management/essential services training with the City of Austin in Texas.

This leadership and other specialized training contributed significantly to the brigade's ability to command and control up to nine subordinate units that were the equivalents of battalion task forces, ranging from Iraqi Commandos to US Marines.

Additional leadership requirements were manning and operating Army support teams (ASTs). These 5th BCT ASTs were imbedded in Iraqi units for the duration of the deployment. The AST provided the Iraqi forces leadership training and support. In all, more than 50 5th BCT personnel served on ASTs.

Materiel. The brigade S4 shop had to develop a support plan for the newly formed brigade. In order to evaluate the logistical needs of the brigade, the S4 shop had to rebuild the Div Arty's logistical database from scratch. Inventories of the new battalions' equipment were compiled, to include the number of on-hand items, such as weapons and high-mobility multipurpose wheeled vehicles (HMMWVs). Until early January 2004, the Div Arty had to track logistics for all of the FA battalions as well.

Once this database was compiled, the S4 could evaluate the logistical needs

of each unit and work to correct deficiencies. At the height of the inventory load, the S4 tracked one armor, one MLRS and three cannon battalions; one cavalry squadron; one each chemical, signal, MI and engineer company; the provisional FSB and HHC 5th BCT.

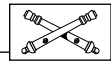
The S4 and S3 sections relied on flexibility, innovative thinking and cooperation to overcome challenges resulting from the unit's unusual task organization. Because the 515th FSB did not have an official unit identification code (UIC), it was difficult to acquire ammunition to support weapons zeroing, qualification and training. Many Soldiers received new weapons and needed to zero and qualify them before deploying.

The brigade headquarters worked around the lack of a UIC by consolidating ammunition from all the subordinate units under one brigade allocation and tasking one unit to run a range attended by all units in the brigade. This system required careful resource management to ensure there was plenty of ammunition available.

The Div Arty's transformation to a BCT was a tremendous challenge and a valuable learning experience. The requirement to train for full-spectrum maneuver operations in a rapidly changing environment and embrace new methods of operations, all while retaining the ability to support the division with artillery fires, truly tested the adaptability and agility of *Red Team* Field

Artilleryman.

Although the road to success as maneuver was a tough one, the *Red Team* proved the Army can count on Field Artillerymen to thrive in that role.



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Captain Luis M. Alvarez is the S2 of the 1st Cav Div Arty and deployed to OIF as the S2 of the 5th BCT. Also in the 1st Cav, he was the G2 Targeting Officer and the S2 for 4-7 Cav. He is a graduate of the US Army Counterintelligence Course, Fort Huachuca, New Mexico.

First Lieutenant Michael R. Dalton is a Firing Platoon Leader in 2-82 FA, Steel Dragons, in the 1st Cavalry Division. During OIF II, he was the 5th BCT S1. He is a 2003 graduate of the US Military Academy at West Point.

TRICARE for Reserve Component Soldiers

The Department of Defense (DoD) announces the start of health care coverage under TRICARE Reserve Select (TRS) for eligible Reserve Component (RC) service members and their family members.

TRS coverage is available to RC members who were called or ordered to active duty under Title 10 in support of a contingency operation on or after September 11, 2001. The RC member and his RC unit must agree the member will remain in TRICARE Reserve Select for one or more whole years to be eligible.

TRS coverage must be purchased. TRS members pay a monthly pre-

mium for health care coverage. The monthly premiums for calendar year 2005 are \$75 for TRS member-only coverage and \$233 for TRS member and family coverage.

TRS offers comprehensive health care coverage similar to TRICARE Standard and TRICARE Extra. TRS members can make an appointment with any TRICARE authorized provider or hospital (TRICARE network or non-network) or at a military treatment facility (MTF) on a space-available basis.

Pharmacy coverage is available from an MTF pharmacy, TRICARE mail order pharmacy (TMOP) and TRICARE network and non-network retail phar-

macies.

Services include routine, urgent and emergency care, family health care, maternity services, clinical preventive services, behavioral health care, annual eye exams, ancillary services such as laboratory and radiology, durable medical equipment and supplies, and prescription drug coverage.

A TRS handbook, list of service contacts to verify eligibility and contacts for TRICARE regional contractors for TRS benefits are all available on the TRICARE website: www.tricare.osd.mil/reserve/reserveselect.

Why Do We Have 20th Century FSCM for a 21st Century Force?

By Colonel Gerald L. Smith, USMC

Battle Log—12 October 2023: Additional engagements and losses anticipated due to a missed opportunity. At 0330, we failed to complete an immediate, time-sensitive strike on the enemy center of gravity. Joint and combined sensors precisely identified the target, long-range kinetic assets were available/ready and probability of kill was 100 percent.

The unexpected target location required reactive deconfliction of FSCM [fire support coordinating measures] and battlespace coordination requirements that delayed the attack—target escaped. Request follow-on forces soonest!

Many may find this scenario improb-

“Transformation is...also about new ways of thinking and new ways of fighting.”

Secretary of Defense
Donald Rumsfeld, 2002

able. After all, with our technological advantages, superior precision weapons systems and drive to transform future capabilities, this scenario could never happen...could it? Despite our strengths and the on-going efforts to transform the entire force, one topic remains neglected by decades of evolu-

tionary thinking: FSCM.

Today’s FSCM originated in World War II and Korea and slowly evolved through the Vietnam era. Yet, while much has changed in the application of fires and fire support in recent decades, FSCM have evolved little since the 1970s.

Not only has the evolution of FSCM failed to keep pace with recent changes in the conduct of war, but also their applicability in a future transformed force is questionable.

Despite the Department of Defense’s transformation imperative, there is little discussion regarding future FSCM. New concepts, ideas and ways of thinking

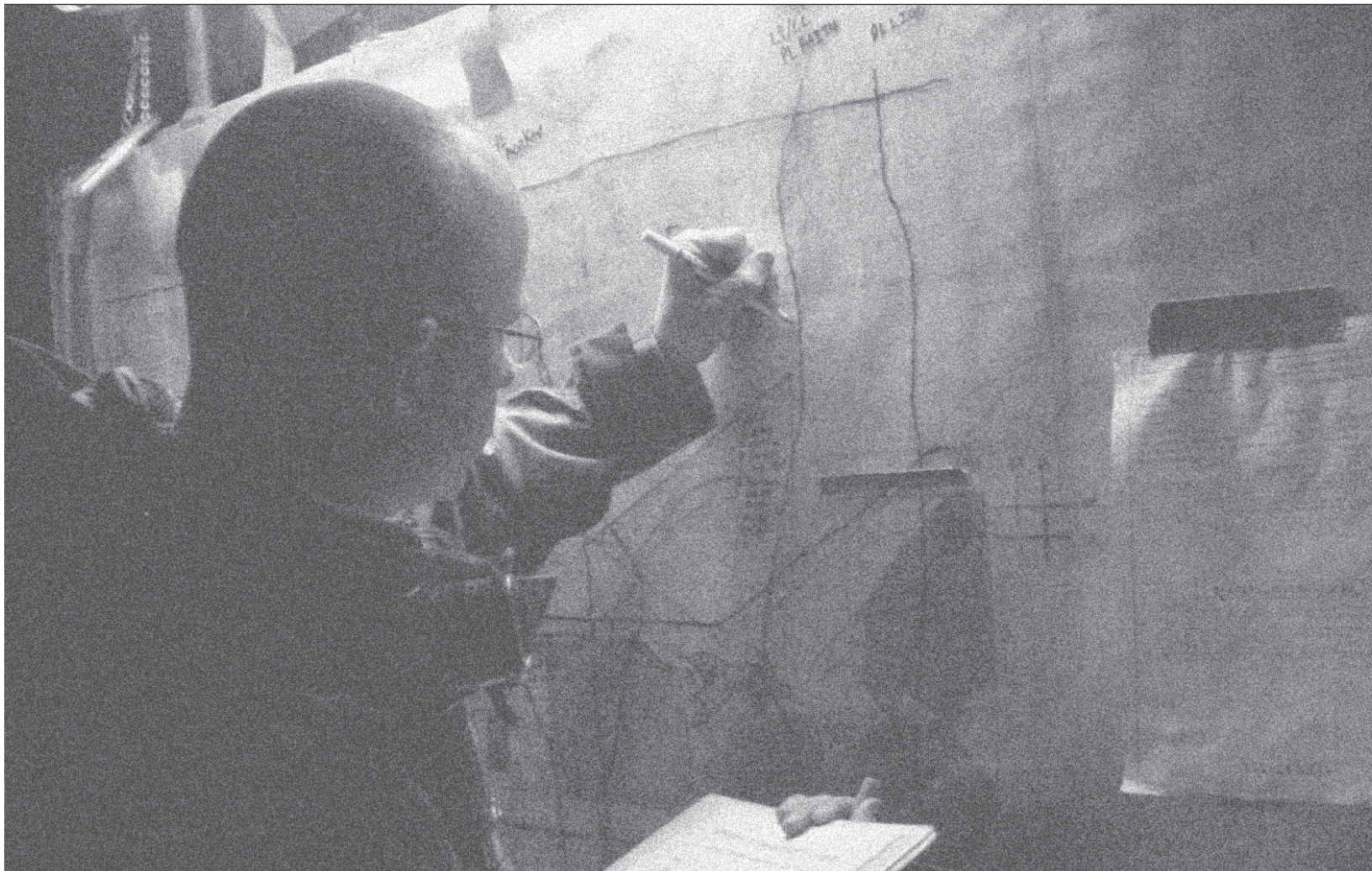


Photo by Fred W. Baker III

about FSCM are long overdue to enhance future force capabilities and new dynamic warfighting concepts. A lack of debate will have tactical and operational consequences in the joint force and may cause unintended strategic consequences. A critical assessment of current and prospective FSCM will decrease the probability of future missed-opportunity scenarios.

This article does not provide answers. It outlines a brief history of our FSCM, addresses a few current issues and suggests ideas for new thinking about the future. Its purpose is to generate discussion to prompt new ideas that provide 21st century FSCM for a 21st century force.

FSCM History. To assess the future of our FSCM, one must understand where we came from in the last century. Surprisingly, very few formal fire support coordination centers (FSCCs) or FSCM were used in World War II. The need to integrate air and ground forces and increasingly complex combined arms coordination requirements mandated the creation of the FSCC and the first FSCM.

While “it was at Iwo Jima that the first Marine FSCC was established,”¹ the US Army developed and experimented with similar concepts. However, the Army did not doctrinally acknowledge the FSCC until October 1953.² Although the Army was slower to officially employ the FSCC, its publication of *Joint Air-Ground Action* in July 1945 outlined the bomblines concept that later evolved into what is currently recognized as the fire support coordination line (FSCL).³

The bomblines (also called the bomb safety line) was the “line beyond which the air forces have freedom of action and behind which the air may attack only when certain conditions—to be determined by each Army—have been met.”⁴ While forces in World War II employed other coordination means, they were not well documented or understood outside of local unit standing operating procedures (SOPs).

During the Korean Conflict, the use of FSCM increased, but they remained loosely defined as doctrinal publications focused on the role of the FSCC



Photo by Doug Whitfield

Soldiers from the 1st Battalion, 92d Field Artillery fire an M114 howitzer in Vietnam. The most significant fire support coordinating measures (FSCM) changes occurred during the Vietnam era as new challenges demanded new solutions.

and key personnel duties. In 1954, the Marine Corps doctrinally recorded FSCM concepts that emerged from the Korean War. Air and ground coordination challenges again prompted the development of new FSCM, such as “aircraft safety measures” and the associated concept of “restricted fire plans.”⁵ Restricted targets also made their debut. These measures evolved into the airspace coordination area (ACA), no fire area (NFA) and restricted fire area (RFA).

Still, most FSCM were only part of unit SOPs vice service doctrine, and deconfliction was reactive and based on visual observation.

The most significant FSCM changes occurred during the Vietnam era as new challenges demanded new solutions. The terrain and faster aircraft rendered visual deconfliction between air and surface assets ineffective.

The “save-a-plane” program replaced the cumbersome restrictive fire plans to increase artillery responsiveness and protect friendly aircraft. This process required artillery units to transmit firing data (firing unit and target location, time of firing and max ordinate) to aviation controllers and pilots. It became the pilot’s responsibility to avoid surface fires.

Additionally, the nonlinear conflict and requirement to minimize civilian casualties magnified the dilemma between the competing demands of safety clearance procedures and responsiveness. To offset the opposing demands, the 1st Marine Division area of respon-

sibility (AOR) “was divided into three types of fire zones”: no-fire zones, pre-cleared fire zones and specified-strike zones.⁷ These were evolutionary steps in the development of NFAs, RFAs, and free-fire areas (FFAs).

More than any other conflict, Vietnam institutionalized FSCM and coordination procedures that remain relatively unchanged today. In addition to other FSCM, the restrictive fire line (RFL) and coordinated fire line (CFL) emerged as tools to help alleviate the safety-versus-responsiveness dilemma. The 11th Marines Commander accurately reflected the Vietnam-era fire support mindset when he concluded that the optimum coordination system was “balanced...on one hand on the side of safety, and on the other, responsiveness.”⁸

In essence, the Vietnam-era innovations fostered and perpetuated the acceptance of a trade-off mindset as the ideal way to conduct business.

By 1977, FSCM were formally included in service doctrine vice just unit SOPs. The Army and USMC doctrinal FSCM were almost identical and, for the first time, fell into either “permissive” or “restrictive” categories.⁹ The USMC did not categorize FSCM until 1981 when it adopted definitions similar to the Army’s: permissive measures would “facilitate the attack of targets” and restrictive measures would “provide safeguards for friendly forces.”¹⁰

FSCM remained virtually unchanged throughout the 1980s, but new dynamics in the 1990s created unique challenges and a new approach to solving them. The mandated “jointness” of the Goldwater-Nichols Act, rapid technological advances and longer range weapons systems significantly impacted fire support procedures: the Tomahawk land attack missiles (TLAMs), multiple-launch rocket systems (MLRS) and unmanned aerial vehicles (UAVs). Until this time, fire supporters had solved novel fire support coordination challenges by devising new FSCM and procedures using critical thinking.

However, a new problem-solving approach was adopted in the last decade. Rather than creating new FSCM or new ways of thinking, old concepts and some FSCM were merely redefined to fit the

new circumstances—one notable exception is the battlefield coordination line (BCL), which I address later in this article.

As we look to the future, the challenges will increase. The impact of joint interdependent procedures, technological advances and vastly improved weapons systems will foster change at an increasingly faster pace. Simply redefining old tools and concepts will no longer suffice.

In terms of fire support coordination and FSCM, we must ask two very basic questions: How will new dynamics affect future fire support, and how will we provide solutions? Unfortunately, the recent approach has been a poor attempt to solve new challenges with old mindsets, and this approach has created issues.

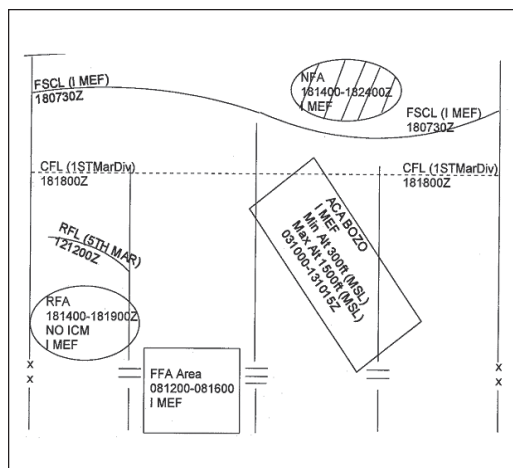
Current Issues. Several examples illustrate the deficiencies of merely modifying old mindsets. The first issue is the way we categorize FSCM. It used to be relatively easy: they were either permissive or restrictive and directly associated with one of the two doctrinal reasons for employment (facilitate attack or protect friendly forces).

Recent refinements modified permissive and restrictive definitions; they are no longer intuitive or easy. Permissive measures no longer facilitate; they now “authorize the attack of targets...if certain circumstances are met.”¹¹ Likewise, restrictive measures no longer protect friendly forces; they “restrict the use of supporting arms.”¹²

There are instances when supporting arms must meet certain circumstances or need to be restricted, but these vague definitions do not directly link measures to a specific reason for their intended use. In other words, the new definitions create situationally dependent gray areas that magnify the complexity of proactively integrating fire support.

Consider the dilemma: how should one plan? Should planners employ a permissive measure based on the belief (or hope) that the requisite conditions will exist to authorize the attack, or do they plan for the worst case and assume that conditions will warrant specific restrictions?

The point is that permissive and restrictive may no longer be useful or valid means to categorize FSCM. Does it really matter if an FSCM has a permissive or restrictive label? Do the new definitions add or detract from the com-



Current FSCM: How will new dynamics affect future fire support, and how will we provide solutions?

plexity of the issues? Moreover, with the requirement for permissive measures to meet certain circumstances, these categories now assume a relative perspective. If an FSCM is permissive for one unit, can it also be restrictive for another?

Specifically, is the FSCL permissive or restrictive? Historically, it has been a permissive measure. In the late 1970s, the FSCL was defined as “a line beyond which all targets may be attacked by any weapons system without endangering friendly troops or requiring additional coordination.”¹³ While it retained a protection feature, the primary purpose was to facilitate the attack of targets.

However, the new definition states, “the FSCL delineates coordination requirements for the attack of surface targets...Forces attacking targets beyond the FSCL must inform all affected commanders...to avoid fratricide.”¹⁴ The new definition does not facilitate; it delineates coordination requirements to prevent fratricide. In essence, it restricts some supporting arms.

The FSCL now fully assumes both permissive and restrictive aspects as one’s perception depends on one’s position relative to the safety versus responsiveness dilemma. Again the question: Is there any value added by using the new permissive and restrictive categories?

Another issue is how we think about FSCM in relation to battlespace and time. As noted, the BCL is the only major doctrinal FSCM addition in the past 30 years, and its inclusion into USMC doctrine was very contentious. At a major exercise in 1999, an evaluator (in a decidedly negative comment)

noted that the BCL segmented the battlespace into smaller blocks that required frequent changes. His observation, although initially lost in the immediacy of the exercise, later provided great insight into our mental predispositions about FSCM, battlespace and time.

Our traditional mindset is comfortable with carving out large blocks of battlespace for relatively long timeframes. The approach denotes ownership of battlespace and is rooted in the old mindset that accepts safety and responsiveness trade-offs.

This mindset worked well for the planning process in single-service linear engagements (i.e., Cold War scenarios) with limited technology. It tends, however, to drive execution toward reactive deconfliction and excessive coordination that consumes too much time, especially between joint forces in a dynamic nonlinear environment. This ownership mindset and the mental barriers created by permissive versus restrictive obscurity will contribute to future failures if they are allowed to persist—much like the opening scenario of this article.

New Ideas. What should be the new mindset for the future? The transformation of fire support and FSCM will require new ways of thinking vice merely redefining old concepts. This new thinking may involve original FSCM concepts with regard to battlespace and time, the creation of new FSCM or new categories of old and new FSCM. Again, no answers are prescribed in this article, just new ideas for critical thought about the art and science of the possible.

In many ways, the institutionalized mindset that has persisted since the 1970s is now invalid. Previous technology limitations forced acceptance of an ideal system with the inherent trade-offs of safety versus responsiveness. New technological capabilities should foster innovative mindsets; the future ideal system should fuse competing requirements dynamically to offer multiple integrated solutions regardless of battlespace geometry. We must combine new thinking with new technology to eliminate the historical fire support dilemma.

In terms of battlespace and time, new command, control, communications, computers and intelligence (C⁴I) systems offer significant capabilities and

opportunities previously unimaginable. We are no longer constrained by limitations on FSCM dissemination that predisposed thinking in terms of battlespace ownership to either facilitate attack or protect friendly forces. Technology allows us to reverse the old mindset. We must identify procedures to use small amounts of battle-space for short periods.

This concept suggests a greater degree of common sharing vice ownership of battlespace in the application of proactive integrated fires with a minimum, or even absence, of reactive deconfliction. Imagine a scenario where a future battlefield management system could automatically determine or predict vacant battlespace and permit fire support assets to use this space for limited periods. Depending on the capability, the FSCL, ACA and BCL could become obsolete or replaced by other measures that simultaneously facilitate the attack and protect friendly forces.

Granted, the full potential of this concept is difficult to grasp, especially if the thinking is constrained by the current list of FSCM. We should explore other methods of delineating battlespace to produce new FSCM that maximize emerging capabilities. Are there ways automatically and safely to open three-dimensional blocks of space at specific times to facilitate attack? This might require a *dynamic fire support area (DFSA)* concept.

Another idea may involve preplanned weapons and target pairing against critical enemy vulnerabilities to generate an on-call *immediate clearance area*, or *ICA*. This area also could be linked to a specific collection asset to maximize sensor-to-shooter and battlefield assessment linkages.

Another idea focuses on current FSCM procedures that require significant resources to create, implement and track countless protective FSCM (i.e., RFAs and NFAs). Some of these could become self-generating or eliminating measures that ensure protection based on their location relative to time and space.

As weapons become increasingly precise, integrated planning may increasingly dictate a specific weapons system against a specific target set for a specific time. A *specified fire support area (SFSA)* may provide a proactive solution that renders additional coordination or deconfliction unnecessary.

No doubt, many readers will find fault

immediately with each of these new concepts. The essence of these measures, however, is not their feasibility; but their potential to stimulate thought about creating opportunity for success by leveraging future capabilities.

Finally, the problem of how to categorize FSCM remains. Any new thinking about the previously listed concepts will not make sense using a permissive and restrictive mindset. While the old mindset categorized FSCM according to what they did for us, perhaps the new mindset should categorize FSCM by their intended use: proactive or reactive.

The first set might include *fire support integration measures (FSIM)*. These would be proactive, preplanned measures to eliminate or reduce reactive deconfliction, facilitating automatic engagement. The second category, reactive, might comprise *fire support deconfliction measures (FSDM)*. These could be reactive or preplanned and held in an on-call status designed to facilitate a rapid and safe attack in unusual circumstances.

Considering the imperative to prevent both fratricide and collateral damage, it is possible that a separate category of fire support force protection measures is required. There may even be instances where new FSCM fall into more than one category, depending on their use or parameters.

All or none of these categories may be applicable in the future, but the fact remains that how we categorize FSCM will drive how we think about them and, ultimately, how we employ them. We must explore new ideas.

It is fallacy to assume that 20th century FSCM will meet 21st century requirements. Considering that the last significant evolution of FSCM occurred in the 1970s, our thinking is about 30 years behind. More importantly, without any additional thought about FSCM for the transformed force of 2015 or 2025, we will find ourselves with a 40- to 50-year cognitive deficit.

If the concepts outlined in this article appear outlandish or revolutionary, it may be worth considering that an FSCM revolution is required just to catch up with emerging transformation concepts. Future battles depend on today's critical thinkers. It is time to debate, write, propose, discuss and develop new FSCM concepts to ensure this alternative scenario.

Battle Log—12 October 2023: Commencing stabilization ops earlier than

expected. At 0330, we completed an immediate, time-sensitive strike on the enemy center of gravity. Joint and combined sensors precisely identified target, long-range kinetic assets were available/ready and probability of kill was 100 percent.

The unexpected target location was immediately and automatically cleared by dynamic preplanned FSIM. Target destroyed, and enemy surrendering. Request redeployment instructions.

Endnotes:

1. Lieutenant Colonel Kenneth J. Clifford, USMCR, *Progress and Purpose: A Developmental History of the United States Marines Corps, 1900-1970* (Washington, DC: Headquarters, USMC, 1973), 69.
2. J.B.A. Bailey, *Field Artillery and Firepower* (Oxford: The Military Press, 1989), 270-1.
3. *Joint Air-Ground Action, Ground Liaison Officer School Workbook, Part I*, (Department of the Army: 1945), 123.
4. *Ibid.*
5. *Landing Force Manual 22 Coordination of Supporting Arms* (Washington, DC: Headquarters, US Marine Corps, 9 August 1954), 4-4 through 4-7.
6. Major Gary L. Telfer, USMC, et al, *US Marines in Vietnam: Fighting the North Vietnamese—1967* (Washington, DC: History and Museums Division, Headquarters, USMC, 1984), 216.
7. Graham A. Cosmas and Lieutenant Colonel Terrence P. Murray, USMC, *US Marines in Vietnam: Vietnamization and Redeployment—1970-1971* (Washington, DC: History and Museums Division, Headquarters, USMC, 1984), 305.
8. *Ibid.*, 306.
9. *Field Manual (FM) 6-20 Fire Support in Combined Arms Operations* (Washington, DC: Headquarters, Department of the Army, 30 September 1977), 3-14 through 3-16.
10. *FM 7-1 Fire Support Coordination* (Washington, DC: Headquarters, USMC, 23 April 1981), 2-11.
11. *Marine Corps Warfighting Publication 3-16 Fire Support Coordination in the Ground Combat Element* (Washington, DC: Headquarters, USMC, 28 November 2001), Appendix B.
12. *Ibid.*
13. *FM 6-20 Fire Support in Combined Arms Operations*, 3-15.
14. *Marine Corps Warfighting Publication 3-16, Appendix B.*

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Tropic Lightning

Convoy Ops Lane Training

Before the 25th Infantry Division (Light) (25th ID) and Pacific Command (PACOM) Soldiers deployed from Hawaii to Operation Iraqi Freedom (OIF) II and Operation Enduring Freedom (OEF) V, the division devised a list of deployment certification training tasks (DCTT). These tasks were divided into three levels, as shown in Figure 1 on Page 22.

Level III of the DCTT included convoy operations. In Iraqi and Afghan, every convoy is a combat operation, regardless of how far it's traveling or what it's hauling.

With its routine repositioning and resupply operations, an FA unit was the logical choice to train the division's convoy operations. Therefore, 3d Battalion, 7th Field Artillery (3-7 FA) received the mission to execute the DCTT convoy operations lane.

Step 1: Get the Right People and Training Content. The battalion commander tasked the battalion fire direction officer (FDO), two battery executive officers (XOs), two chiefs of firing battery, the battalion master gunner,

**By Lieutenant Colonel
Clarence Neason, Jr., and
Captains John D. Williams
and J. Bradley Marvin**

two gunnery sergeants, four howitzer section chiefs, the battalion support platoon sergeant and 30 additional personnel to execute this training on a daily basis.

Having this many personnel involved in convoy operations training for three months as the battalion prepared to deploy to Afghanistan was a unique challenge. The 30 personnel came from the firing batteries on a rotating basis and served as the opposing force (OPFOR), but the lane cadre, instructors and observers/controllers (O/Cs) remained constant throughout the training. This helped standardize the training for all units.

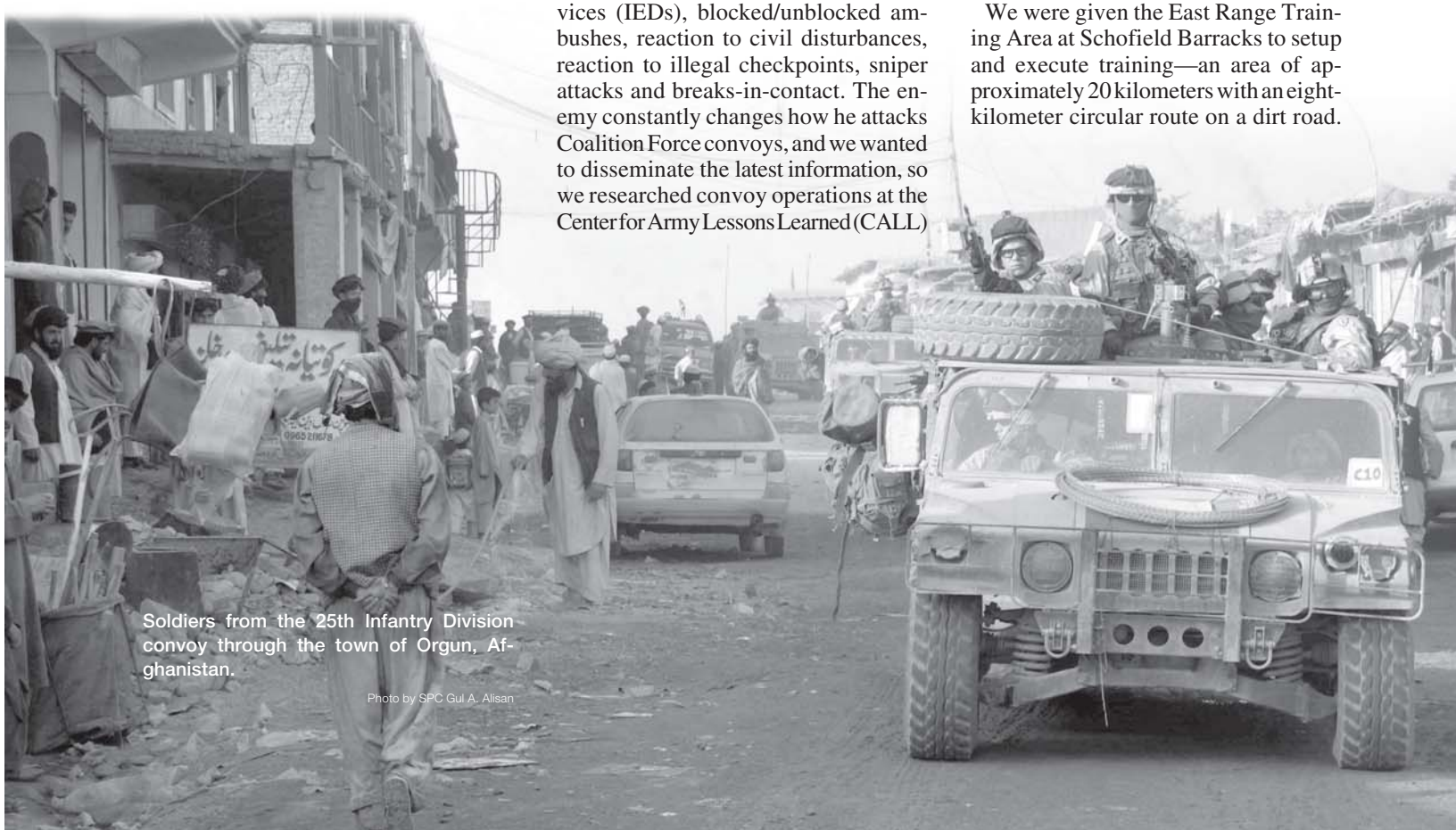
Convoy operations are dynamic, and we wanted to ensure we were training the latest tactics, techniques and procedures (TTPs) used by units deployed in Iraq and Afghanistan. These TTPs covered combat, improvised explosive devices (IEDs), blocked/unblocked ambushes, reaction to civil disturbances, reaction to illegal checkpoints, sniper attacks and breaks-in-contact. The enemy constantly changes how he attacks Coalition Force convoys, and we wanted to disseminate the latest information, so we researched convoy operations at the Center for Army Lessons Learned (CALL)

website, emailed units currently deployed in both theaters executing convoy operations (1st Armored Division in Iraq and 10th Mountain Division in Afghanistan) and read doctrinal manuals about the subject. Relying too heavily on doctrinal manuals is a problem because OIF started in March 2003 and manuals dated earlier may be obsolete.

We developed the instruction based on this research with the intention of providing a baseline of information for leaders. Once the instructors, O/Cs and OPFOR were trained and certified, we conducted a "murder board" with the entire cadre present to improve each block of instruction.

Step 2: Resource the Training. For the convoy operations lane, we needed a larger amount of land than the other Level III tasks—enough land for a hands-on practical exercise (PE), as directed by the commanding general (CG). The PE required a vehicle assembly area for the pre-combat checks (PCCs) and pre-combat inspections (PCIs) and a lane long enough for multiple convoy scenarios for each company to react to.

We were given the East Range Training Area at Schofield Barracks to setup and execute training—an area of approximately 20 kilometers with an eight-kilometer circular route on a dirt road.



Soldiers from the 25th Infantry Division convoy through the town of Orgun, Afghanistan.

Photo by SPC Gul A. Alisan

On this land, we could push two company iterations through the PE at a time, each traveling in opposite directions. This allowed us to evaluate whether or not units cross talked when passing each other in convoys.

We resourced the vehicles from the battalion, giving us the ability to train each convoy using the same criteria. A unit may not have the up-armored high-mobility multipurpose wheeled vehicles (HMMWVs) or light medium tactical vehicles (LMTVs) used during the training, but it could have the mission to escort LMTVs and would need to know how to position them.

This approach also enabled us to teach the convoy planning factors of tactically segregating leaders and high-value targets in a convoy; using a forward security element; positioning the crew-served weapon systems; and locating communications platforms. Not every vehicle has an advanced system improvement program (ASIP) single-channel ground and airborne radio system (SINCGARS), and leaders must identify which vehicles get them.

With two companies going through each PE, our throughput was 220 personnel or 110 per convoy. We did not want convoy leaders to get used to having big convoys (a bad habit), so we planned seven vehicles for each convoy, three M998 HMMWVs and four LMTVs. The combat configuration load (CCL) for each LMTV was 26 personnel and for each HMMWV, eight personnel. The battalion provided six M998 HMMWVs and eight LMTVs for the convoy PE and, additionally, one LMTV and four HMMWVs for the O/Cs and OPFOR.

To replicate IED explosions, we used artillery simulators. Each O/C had two artillery simulators per convoy. We also resourced 5.56-mm blanks for our unblocked and blocked ambushes. At the legal checkpoint, we used concertina wire for the obstacle where each convoy had to stop and conduct face-to-face coordination with host-nation police.

Kevlar blankets were not available during training, so the battalion bought 4,400 sand bags. We filled them before

Level I Tasks—Taught and certified by the companies.

- Rifle Marksmanship
- Nuclear, Biological and Chemical (NBC)
- First Aid Tasks

Level II Tasks—Taught by division in blocks 30 days before the unit deployed.

- Interacting with the Media (Public Affairs Office, or PAO)
- Threat and Country Culture (G2)
- Rules of Engagement (ROE) (Staff Judge Advocate, or SJA)
- Preventative Medicine (Tripler Army Medical Center)

Level III Tasks—Taught by units that executed them daily; division had a matrix to coordinate company rotations through the lanes.

- Planning Convoys, Preparation of Vehicles/Equipment and Actions-on-Contact Battle Drills (3d Battalion, 7th Field Artillery)
- Identification of Minefields and Improvised Explosive Device (IED) Awareness and Hardening Vehicles/Structures for Force Protection (65th Engineers Sappers Battalion)
- Checkpoint Setup/Vehicles and Personnel Searches (25th Military Police)

Figure 1: 25th Division Deployment Certification Training Tasks (DCTT)

the first iteration of training and hardened each vehicle in accordance with standards in the *CALL Handbook Stability and Support Operations*. This enabled each unit to get a firsthand look at what “right” looks like without having to spend training time filling sand bags or hardening each vehicle.

It took five hours per iteration to give the convoy leadership a movement order, observe the unit’s PCCs/PCIs, execute the PE portion and conduct an after-action review (AAR). We trained two companies in the morning and two in the afternoon for a daily throughput of 440 personnel.

Step 3: Conduct the Training. Five hours only touches the surface of convoy operations. We had to determine the most critical information and best way to present it. The PE was our “moneymaker.” During this phase, convoy leaders took the information, executed their abbreviated troop-leading procedures (TLPs) and reacted to four vignettes while conducting convoys. After the PE, the O/Cs would facilitate thorough AARs.

Finally, at the end of the day, we emailed each company commander and first sergeant a “take-home packet” with our “smart cards” and convoy operations formats. These helped units to continue training before their departure.

For the first hour of the training, we divided every unit into two groups: squad leader and above (potential convoy leaders) and everyone else. We broke leaders away from Soldiers be-

cause we had specific topics to discuss with leaders and time was limited.

Soldiers had two 30-minute blocks of instruction taught by a certified leader. Leaders had four 15-minute blocks of instruction, including a briefing on the threat and rules of engagement (ROE) for the PE. The instructors were two captains and two senior NCOs.

On the lane, each convoy had to react to four vignettes: a legal checkpoint, a civil disturbance, an unblocked ambush and an IED with mass casualties. Additionally, at the IED site, the scenario unfolded into a blocked ambush if a vehicle was disabled and

the convoy did not attempt to recover or move the vehicle.

We provided each convoy an interpreter (a “Terp”) upon request. Four O/Cs rode with each convoy: one with the convoy commander, two with the lead element and one in the middle of each convoy. The O/Cs assessed Soldiers’ actions.

Although we allocated 90 minutes for each PE, we had no clock. Units could take as long as they wanted to negotiate the lane. The longest a unit took was three hours and 30 minutes; the shortest was 25 minutes.

For the convoy leaders, we chose company XO, platoon leaders and senior NCOs. First sergeants, platoon sergeants and personnel that would push convoys to and from the administration and logistics operations center (ALOC) were designated as convoy NCOs-in-charge (NCOICs).

In some cases, company commanders were convoy commanders, so their lieutenants could see the TLP initiated. But while the convoy was still inside the wire, a “mortar attack” took out the commander (he became an observer) so a lieutenant could take over the convoy. We also provided a field grade officer each day to receive convoy back briefs from the convoy commanders.

We had three weeks to prepare for this mission, from the tasking until the first iteration. The 3-7 FA commander, then the division artillery commander and finally the CG validated the convoy operations lane training.

In retrospect, conducting this training

forced many *Never Broken* Battalion leaders, from section chiefs to the battalion commander, to update their thinking on convoys and constantly seek additional information. The battalion not only trained 8,000 personnel, but also witnessed many unique TTPs devised by units going through the training.

As 3-7 FA deployed to Afghanistan in support of OEF V and conducted at least five mounted combat patrols per day, the training allowed the battalion to “hit the ground running” with a solid base of knowledge on convoy operations.

Lessons Learned. Over the course of almost three months, we observed more than 100 company-sized units in convoy lane training. Although they were not evaluated or given a “Go” or “No-Go” score, the O/C team noticed two elements of convoy operations that translated into success in lane execution: convoy composition and communications, and adherence to good TLPs.

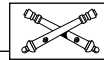
Convoy Composition and Communications. Units that correctly thought through the equipment and personnel placement within the convoy order recognized the advantages composition planning gives to the mission.

The most important factor in determining the composition of the convoy is leader control. Slower units realized quickly once movement started that control depends on communications, and units that fared better established a healthy secondary communications plan ahead of time. A convoy leader who ensured he could communicate with each vehicle in the convoy rarely dealt with a breaks-in-contact and minimized Soldier vulnerability by stopping only when absolutely necessary.

It is important to note (especially for Lightfighters) that hand and arm signals are not an effective means for convoy secondary communications. Multi-colored flags and other longer range visual signals are more effective when radio communications are unavailable.

Troop-Leading Procedures. Units whose leaders had practiced TLPs fared much better than those without a solid procedural structure, including combat support (CS) and combat service support (CSS) units. The O/C team noticed the greatest difference in performance between units that used one-third of the time available for planning and issuing the convoy order with two-thirds allotted for supervision and rehearsals—the one-third, two thirds rule. See Figure 2 for the TLP for convoy operations.

Leaders at all levels must constantly stay informed of the latest means that enemy combatants are using to attack our convoys in both Iraq and Afghanistan. Our Soldiers deserve the best and latest information and home station convoy training to counter the changing threat in Iraq and Afghanistan.



Lieutenant Colonel Clarence Neason, Jr., gives up command of the *Never Broken* 3d Battalion, 7th Field Artillery (3-7 FA), 25th Infantry Division (Light), Schofield Barracks, Hawaii, in June, the battalion he deployed

to Afghanistan for Operation Enduring Freedom (OEF) V. His battalion executed Convoy Operations Lane Training for the 25th Division prior to its deployment. He will be the 25th Division Inspector General.

Captain John D. Williams, Commander of C/3-7 FA, and Captain J. Bradley Marvin, S4 of 3-7 FA, planned, resourced and executed the 25th Division’s Convoy Operations Deployment Certification Training Tasks (DCTT) from November 2003 until February 2004. They trained more than 8,000 Soldiers in Hawaii and then deployed to Afghanistan for OEF V in support of the 3d Brigade Combat Team, 25th Division. While in Iraq, C/3-7 FA doubled as a mounted infantry company.

Receive the mission.

Issue the warning order.

- Issue convoy leaders the five Ws—who, what, when, where, why—and tentative timeline.
- Prioritize PCCs (NCOIC).
- Create a sand table or visual aid.
- Prioritize rehearsals (based upon enemy MDCOA/MPCOA).

Make a Tentative Plan.

- Consider intelligence, terrain/weather, convoy composition, rehearsal techniques and safety.
- Determine mission-essential tasks.
- Have a plan for vehicle self-recovery—**always**.
- Understand which other units can be mutually supporting along the route.

Initiate Movement.

- Establish a vehicle marshalling area if task organization includes more than one unit.
- Gain positive control of all external equipment and loads.

Conduct Reconnaissance. (Air, Ground and Map)

- Consider historical ambush/IED locations and bad neighborhoods.
- Determine what other convoys have seen on the route.
- Decide where your convoy is vulnerable along the route.

Complete the Plan.

Issue the Convoy Order. (Complete in less than 1/3 of the planning time.)

- Everyone in the convoy should attend the orders brief, if time allows; at a minimum, convoy leaders and drivers must attend.
- Use visual aids and **strip maps** to help understand route info.

Supervise. (Done in 2/3 of the planning time.)

- Prioritize PCIs.
- Prioritize rehearsals—conduct rehearsals in order of importance based upon enemy MDCOA and MPCOA or what you think will most likely happen to your convoy (**always** be prepared for breakdowns and breaks in communications).
 - Full-Force Rehearsal—all Soldiers participate, same conditions as the operation.
 - Reduced-Scale Rehearsal—drivers and convoy leaders in convoy order “walk through” battle drills while others watch; the walk through identifies what trucks will do when an enemy or external action affects the convoy.
 - Rehearsal Back-Brief—At a minimum, the rehearsal should include a back-brief from convoy leaders and drivers.

Legend:

IED = Improvised Explosive Device	NCOIC = NCO-in-Charge
MDCOA = Most Dangerous Course-of-Action	PCCs = Pre-Combat Checks
MPCOA = Most Probable Course-of-Action	PCIs = Pre-Combat Inspections

Figure 2. Troop-Leading Procedures for Convoy Operations



SSG Kevin Davis, a Gunner in B Battery, 4th Battalion, 27th Field Artillery (B/4-27 FA), prepares to fire a 155-mm round on 25 April 2004. 4-27 FA was responsible for responding to mortar attacks in the Baghdad area. (Photo by SPC Katherine M. Roth)

1st AD Hot Platoon in Iraq: POC to Brigade FSE Counterstrike Drill

The acquisition is transmitted via the advanced FA tactical data system (AFATDS) to the platoon operations center (POC). The fire direction center (FDC) quickly plots, verifies and computes the firing data. The fire direction officer (FDO) announces the fire order, which is sent via radio to the guns. Simultaneously, the platoon leader verifies the grid on his automated deep operations coordination system (ADOCS) computer, and the battalion fire control NCO (FCNCO) calls the brigade fire support element (FSE) via digital non-secure voice telephone (DNVT) to verify the acquisition.

The Hot Platoon fires the mission

By Sergeant First Class Robert M. Castillo

within the two minutes allotted by the brigade commander, and the mortar is silenced with nine rounds of high-explosive (HE) ammunition.

ADOCS and DNVT were just two of the additional tools used by 4th Battalion, 27th Field Artillery (4-27 FA), 1st Armored Division (1st AD), during the battalion's final four months of its 15-month deployment in support of Operation Iraqi Freedom (OIF) II. Although such equipment is not part of the table of organization and equipment (TOE) of a 155-mm howitzer platoon, they

proved invaluable in our mission to provide fire support for the 2d Brigade Combat Team (BCT) in Joint Operating Area (JOA) Iron.

This article discusses the use of non-doctrinal technology and personnel to enhance the lethality of the brigade FSE and Hot Platoon POC in counterstrike operations, maintaining the battalion's gunnery skills for counterstrike operations and Hot Platoon operations.

Brigade FSE to POC Counterstrike Drill. The counterstrike drill is perhaps one of the most common battle drills in the Field Artillery. An effective counterstrike battle drill is a well defined and rehearsed function in the tactical opera-

tions center (TOC).

But what happens when the FA battalion TOC is removed from the drill because it is functioning primarily as a maneuver TOC as the 4-27 FA TOC was during OIF?

In our case, the answer was to train, equip and man the brigade FSE and the POC to ensure that counterstrike operations were timely and effective. A brigade FSE or POC handling basic functions that were once the domain of a reinforcing (R) or direct support (DS) battalion FDC can be overwhelming, to say the least.

Based on several factors, such as the location of the DS battalion TOC, the location of the Hot Platoon and the superior connectivity between the brigade TOC and subordinate units, we chose to move these functions to the brigade FSE. It was, therefore, important to ensure the autonomous counterstrike battle drill in the brigade FSE became the same well defined and rehearsed event that it was in the DS battalion TOC. (See Figure 1.)

The brigade FSE became the primary facilitator of the sensor-to-shooter trail that allowed the POC to concentrate solely on the technical computations of the fire mission; the brigade FSE retained some of its traditional doctrinal activities, such as activating all fire support coordinating measures (FSCM) and facilitating the clearance of fires with the local task force commanders.

To support the rapid delivery of fires, the commander of 4-27 FA and the battalion operations officer established a command and control (C²) cell within the POC. The POC was manned by the battalion FCNCO and a battery platoon leader responsible for the overall mission of providing fires across the brigade sector. This was necessary because the firing platoon was collocated with another maneuver task force approximately 50 kilometers from the DS battalion TOC.

Communications. The POC maintained two AFATDS; one was used solely as a back-up system. AFATDS helped to provide a common counterstrike picture across the brigade sector. AFATDS screens in the maneuver task force (TF) and brigade FSEs instantaneously displayed red (enemy) vectors throughout the BCT, enhancing each commander's ability to decide which assets (counter-mortar, air or ground troops) to use to attack targets.

AFATDS can communicate using the

single-channel ground and airborne radio system (SINCGARS) or a local area network (LAN) connection; in this case, the POC used both methods to communicate to higher (the brigade FSE) and lower (the gun line).

Initially, using the LAN was a challenge because of the POC's lack of familiarity with it; however, once the system was emplaced, it proved reliable and user-friendly. The LAN and SINCGARS were maintained by Soldiers from the battalion communications section.

The battalion provided the C² cell a DNVT to facilitate coordination with the brigade FSE and to enhance the cell's ability to control all fires in the brigade sector. The battalion also provided the C² cell an ADOCS computer to improve situational awareness by allowing rapid vector plotting with one-meter imagery accuracy.

Of the two systems, the DNVT had the most impact because it provided a direct link to the brigade TOC. It improved the POC's ability to understand the intent of higher headquarters and allowed for direct coordination.

To ensure both systems were operational on a continuous basis, the battalion TOC also provided a signal Soldier and coordinated with higher headquarters to troubleshoot any possible ADOCS software problems.

Brigade FSE and Fire Direction. The ability to control fires during the tradi-

tional counterstrike battle drill is, for the most part, the battalion FDC's responsibility. However, in this case, the battalion FDC served as a maneuver battalion FSE, and its duties were transferred to the brigade FSE.

This non-doctrinal arrangement created a few issues in the early deployment of the Hot Platoon. The primary issue was the brigade FSE's lack of familiarity with the issuance of fire orders. This was quickly overcome by training the brigade FSE and encouraging cross talk with the firing platoon POC using the DNVT.

The brigade FSE gave the POC a counterstrike-specific fire order that supported the brigade commander's intent for fires and the OIF rules of engagement (ROE). The initial confusion in the POC was quickly alleviated when we provided a standard fire order to the POC.

When non-doctrinal arrangements are made to accomplish the mission, leaders must look for and isolate the points of friction, such as this one. The C² cell was instrumental in reducing this type of friction throughout this nonstandard mission.

Gunnery Training for Counterstrike Readiness. During combat deployments, we must find ways to train so our core skills do not atrophy. The battalion had scheduled a week of gunnery training per battery at Butler Range east of Baghdad. Each firing battery took a week off from its normal mission of patrolling in Baghdad to train spe-

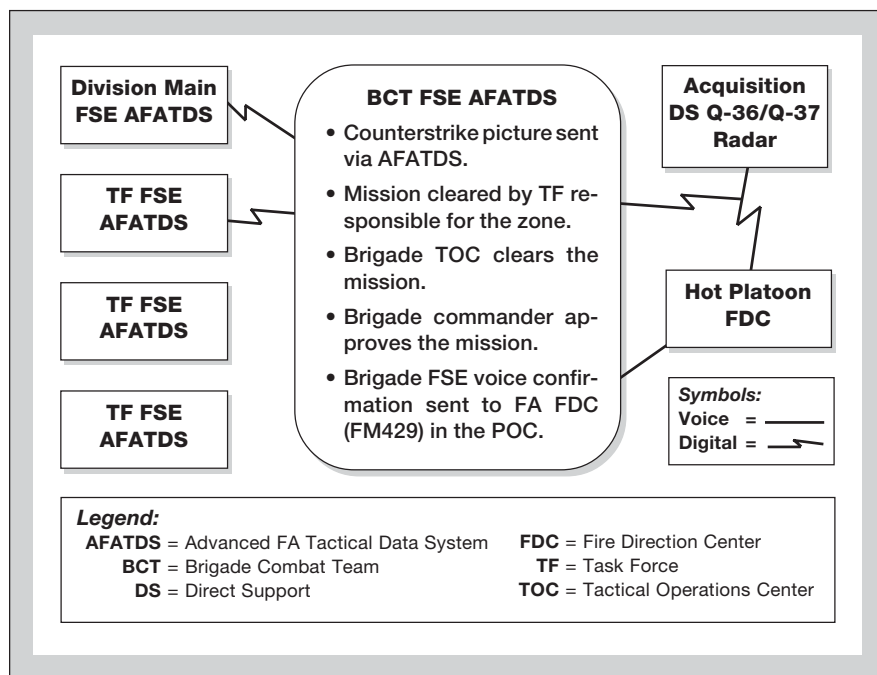


Figure 1: Brigade Fire Support Element (FSE) to Hot Platoon Operations Center (POC) Counterstrike Battle Drill

cifically on artillery tasks at the section level (Table VII).

The gunnery training at Butler Range was essential for our Soldiers and our ability to quickly retrain an entire battery to provide counterstrike operations; this was a requirement in combat shortly after the division was extended in theater to fight Muqtada al-Sadr's militia. Some of the basic skills addressed were AFATDS operations, gunnery troubleshooting procedures, calibration, muzzle velocity variation (MVV) management and direct fire. We used these skills (except for direct fire) in combat operations during our 120-day extension.

During the extension, the 4-27 FA Hot Platoon fired 35 counterstrike missions, 15 harassment and interdiction fires, and many battlefield preparation fires. However, perhaps the most important fires were the calibration fires conducted during the early part of the extension. The calibration data gave us the ability

- Range from point-of-origin (POO) to point-of-impact (POI) has been determined.
- Impact of the round fell within the forward operating base (FOB).
- Human intelligence (HUMINT) confirmed the impact.
- POO was not in a no-fire area (NFA) or near a known structure.

Figure 2: The brigade FSE filtered the missions sent to the Hot Platoon POC, based on these criteria.

to verify the MVV for each powder lot and contributed greatly to our accuracy.

The 1st AD Division Artillery (Div Arty) also provided a meteorological (Met) team to supply the platoon and radars the current Met data. Because the Met team was on the forward operating base (FOB) with the Hot Platoon and

radar, it coordinated with them daily. In fact, the Met section chief provided an invaluable service in training the entire C² cell in the use of Met. He tracked Met trends, helping to determine the Met schedule for the entire sector. Finally, he provided the status of Met supply consumptions weekly to help determine our long-range planning factors.

Hot Platoon Operations. The basic counterstrike drill involves the radar, processing cell and shooter. This did not change as we refined our brigade-to-POC counterstrike battle drill. However the tasks that fall within the drill were changed to meet the environment and the threat.

The ability to clear fires quickly and accurately proved to be the first hurdle for both the brigade FSE and the C² in the POC cell. For the first few weeks, every call-for-fire (CFF) received from the radar sensors (Q-36 or Q-37) was sent to the POC to rehearse the entire process. However, once the mission times

Home Station Fire Direction Training for More Autonomous POCs

Reintegrating the 4th Battalion, 27th Field Artillery Battalion (4-27 FA), 1st Armored Division (1st AD), into the cool green hills of Baumholder, Germany, from the hot dusty roads of Baghdad began several months before it left Forward Operating Base (FOB) Thunder in Iraq.

This early reintegration plan included training fire direction Soldiers to conduct more autonomous operations.

Training fire direction Soldiers and officers in a direct support (DS) battalion is a difficult job because of the level of technical expertise required. Today's Military Occupational Specialist (MOS) 13D Fire Direction Specialist must be well versed in a variety of tasks, such as advanced FA tactical data systems (AFATDS) operations, gunnery troubleshooting, digital communications, FM radio operations and basic automatic fire control system (AFCS) operations.

About two-thirds of the battalion's fire direction center (FDC) Soldiers had been involved in Hot Platoon operations during Operation Iraqi Freedom (OIF) II. The nature of the mission called for fire direction NCOs (FDNCOs) and fire direction officers (FDOs) to work autonomously with the brigade fire support element (FSE). Therefore they had to articulate their needs to meet the five requirements for accurate predicted fires and understand how each of the five requirements affected their ability to place timely, accurate fires on the enemy.

However, upon returning from Iraq, most of the senior fire direction Soldiers and section chiefs were lost to permanent change-of-station (PCS) moves. In addition, many of our senior lieutenants who would become platoon leaders had not been FDOs in Iraq; instead, for the most part, they had been infantry platoon leaders or had manned the battery command posts (CPs) on our FOB.



A 4-27 FA howitzer patrols south of Baghdad on 23 April 2004. (Photo by SPC Katherine M. Roth)

decreased, the brigade FSE began to filter the number of missions sent to the POC.

The filter used to determine what missions were transmitted were established by the 1st Armored Division Target Production Section (TPS) that continually updated the measures based on the current threat. The filter criteria are listed in Figure 2.

During the many rehearsals, the standard for the POC was to send each mission to the gun line in a do-not-load (DNL) status. This safety factor allowed for the easiest transition from an acquisition to a confirmed target. However, the POC crew drill remained, essentially, the same. (See Figure 3.)

The addition of the DNVT and ADOCS proved invaluable in the missions where uncertainty or confusion had replaced the normal operating procedures. The DNVT provided the most direct link and had a positive influence on our ability to shoot artillery in sector.

1. The mission enters the POC digitally via AFATDS.
2. The fire direction officer (FDO) and fire direction NCO (FDNCO) confirm the general target data.
3. The FDO, who issued a fire order, plots the target data on a map.
4. The mission is computed, verified and sent to the gun line.
5. The gun line is given the voice fire command, "Do not load" (DNL).
6. The gun line reports "Ready-to-Fire" to the brigade FSE.

Figure 3: Hot Platoon POC's Crew Drill

Finally the platoon leader established cross training between his gun line and the POC. This training allowed his Soldiers to make great strides in understanding the platoon's systems.

Overall, the use of artillery in sector

during 4-27 FA's deployment to Iraq was successful. However, our greatest accomplishment was training future leaders to be flexible and use technology, allowing the artillery to remain the *King of Battle* in unique situations.

Sergeant First Class Robert M. Castillo is a Project Officer in the Army's CounterStrike Task Force, Fort Sill, Oklahoma. In his previous assignments, he was Fire Control NCO (FCNCO) for the 1st Armored Division Artillery in Germany and deployed with the Div Arty in Operation Iraqi Freedom II. He also served as FCNCO for the 4th Battalion, 27th Field Artillery (4-27 FA), in Baumholder Germany; Operations Sergeant for 2-320 FA, 101st Airborne Division (Air Assault) at Fort Campbell, Kentucky; Fire Direction Observer/Controller (Wolf Team), National Training Center (NTC), Fort Irwin, California; FCNCO for 3-29 FA, also in the 1st Armored Division, and Fire Direction Chief, 1-7 FA, 10th Mountain Division (Light Infantry), Fort Drum, New York.

Before deploying to OIF, the battalion had fielded AFATDS followed by a rotation to the Combat Maneuver Training Center (CMTTC) in Hohenfels, Germany, as well as participation in several digital communications exercises (COMEXs). However, many of the battalion's hard-fought lessons had been set aside when our Soldiers conducted infantry operations in the center of Baghdad.

The battalion experienced a great deal of success as a maneuver task force and in Hot Platoon operations in support of the 1st Division's 2d Brigade Combat Team (BCT). Hot Platoon operations in OIF gave us a new perspective on training our platoon operations centers (POCs).

Our strategy was to integrate the lessons learned from our Hot Platoon operations in Iraq into a program to develop our fire direction leaders and Soldiers. The Hot Platoon after-action reviews (AARs) provided lessons about what FDC Soldiers needed to know to operate a battalion FDC, both tactically and technically.

In the program, we revised our battalion safety program, conducted mandatory professional development classes for FDOs and FDNCOs, introduced a fire direction leader's book, taught basic AFATDS classes and reintroduced skill-level testing for all FDC Soldiers.

Revised Safety Program. We revised our safety program to produce fire direction Soldiers who can meet the needs of autonomous operations. The battalion safety test is the "alpha" of the fire direction program with the "delta" a test for fire direction Soldiers on duties once considered the sacred domain of the battalion FDC. Therefore, the revised test included more real-world gunnery troubleshooting techniques and scenarios that tested the FDNCOs' and FDOs' (in some cases, computer operators') abilities to explain the steps in solving gunnery problems.

Professional Development Classes. To reach the required level of expertise, FDOs and FDNCOs had to attend professional training for FDOs and FDNCOs in the form of brown

bag lunches and classroom instruction. The classes were on basic gunnery, troubleshooting techniques, platoon operations and basic safety. The purpose of the classes was to ensure the POC leaders could pass the new battalion safety test.

This program was successful due in large part to the battalion commander's and the command sergeant major's total commitment and allotment of time on the training schedule.

Fire Direction Leader's Book. This book provided a quick reference for all fire direction personnel and allowed the battalion to standardize a few of the basic POC crew drills. The book was based on the "Rosetta Stone CD" provided by the Fire Support and Combined Arms Operations Department (FSCAOD) in the FA School several years ago that addressed issues, such as shell/fuze combinations, gunnery troubleshooting procedures, AFATDS operations and muzzle-velocity variation (MVV) management.

AFATDS Training. The introduction or, in some cases, the reintroduction of basic AFATDS classes ensured that new Soldiers understood the capabilities of the system and that the more senior Soldiers who conducted infantry operations in Baghdad were brought up to speed. The classes were initially taught in a classroom and then moved into vehicles to provide a more realistic setting. At this time, the gun crews were added to the training to continue to reintegrate all digital systems.

Soldiers Skills Test. Finally, a skills test was devised for all MOS 13D10 FA Tactical Data System Specialists to determine their abilities to conduct future combat fire direction operations and to provide training feedback for the battery commanders and the battalion command group.

This reintegration training for fire direction Soldiers provided the battalion six certified POC crews that are up to the task of providing fires.

SFC Robert M. Castillo
Former FCNCO,
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1st ID in Iraq

The FFA HQ Mission Endures

By Colonel Richard C. Longo and Major Michael R. Eastman


The 1st Infantry Division Artillery (Div Arty) headquarters performed many traditional force FA headquarters (FFA HQ) functions for Task Force (TF) Danger during Operation Iraqi Freedom (OIF) II. The Div Arty headquarters executed many nonstandard missions as well.

As the Army transforms to units of employment (UEs) and modular brigade combat teams (BCTs), we must ensure we retain the capability to perform *all* these tasks.

In this article, we describe two critical characteristics that our Army must maintain in the transformation from Div Arty to Fires Brigades. First, the Army must continue to consider the human dimension of habitual association. Second we need to retain operational and tactical flexibility.

The mission, enemy, terrain and weather, troops, time available and civil considerations (METT-TC) in which the 1st Infantry Division operated in OIF II was almost an exact representation of the contemporary operating environment (COE) for which the transformation of the Army was designed. We engaged many small groups of well trained, loosely connected forces in non-contiguous battlespace. We faced an inventive, resourceful enemy who demonstrated an unsophisticated, yet ever-increasing lethality, adaptability, agility and ability to learn.

Div Arty Functions in the COE. The 1st Infantry Div Arty headquarters executed many of the doctrinal functions outlined in *Field Manual 3-09.22 Tactics, Techniques and Procedures [TTP] for Corps Artillery, Division Artillery and Field Artillery Brigade Operations*. These include providing command and control (C²) for subordinate artillery



Soldiers of C Battery, 1st Battalion, 7th Field Artillery Regiment, 1st Infantry Division, move toward an apartment complex located on the outskirts of Baiji, Iraq.

units, planning fires and orchestrating the counterstrike fight. Additionally, we were responsible for integrating all lethal and non-lethal effects in support of the maneuver commander's intent.

The successful performance of these functions during combat operations required sound leadership, a well trained staff and a solid working relationship with maneuver commanders at all levels. The procedures required the effective synchronization of collection assets, fires support elements (FSEs) and delivery systems developed over months of training. Just as important, the

personal relationships fostered between maneuver commanders and key members of the division staff enabled the FFA HQ to integrate effects across the division's area of responsibility (AOR).

The Div Arty headquarters conducted many other important missions for the division that did not fall into the traditional category and would not be found in *FM 3-09.22*. These included serving as a brigade combat team (BCT) headquarters for an out-of-sector mission in An Najaf; serving as a division-level C² node in Kuwait to supervise reception, staging, onward movement and integration (RSOI) in the winter of 2004; and serving as the division's redeployment headquarters in Kuwait a year later. Additionally, the Div Arty headquarters was tasked with overseeing the collection and destruction of more than 29 million pounds of captured enemy ammunition (CEA).

Functions Today vs Tomorrow. As the Army transforms, there is some risk there won't be an organization in the UE to perform all these vital functions in the future. As currently designed, there is no true equivalent to the Div Arty headquarters in the modular design. Combat division headquarters are replaced by the UEx, organizations capable of commanding a mix of subordinate combat and support BCTs. In the Army's transformation plan, the Div Arty's inactivate and a fewer number of Fires Brigades are created with a mix of firing units assigned based on mission requirements. These Fires Brigades, most probably, will not be habitually associated with a given UEx.

The division joint fires and effects cell (JFEC) in the current force structure is replaced by a modular design JFEC assigned to the UEx headquarters. Be-



A 1-33 FA Soldier loads captured enemy ammunition (CEA) for disposal. The Div Arty headquarters was tasked with overseeing the collection and destruction of more than 29 million pounds of CEA.

tween the Fires Brigade and the JFEC, many of the current roles and missions of the Div Arty would continue to be performed. A staff of experienced fire supporters remains charged with the synchronization of lethal and nonlethal effects in support of the maneuver commander.

Similarly, when the METT-TC demands that the UEx will need a Fires Brigade, that brigade headquarters would retain the traditional C² functions over its subordinate firing units and would be capable of training and mentoring the FA units organic to the UEx's BCTs. The critical difference is that the Fires Brigade is not habitually associated with the UEx—potentially compromising all the advantages of living and training together.

It is important to understand the Div Arty commander's current role as both a brigade-level commander and senior division staff officer. The inherent credibility the Div Arty commander has as the senior effects coordinator (ECOORD) and the importance of the relationships he establishes as an organic member of the division's leadership cannot be overstated. In the future, the JFEC will be run by a lieutenant colonel ECOORD as a permanent member of the UEx staff and a Fires Brigade commander will come to the division as a modular addition when METT-TC so directs.

Key to the successful effects coordination in the UEx will be the relationship between the ECOORD and the Fires Brigade commander; in the current construct, they are the same person. Either the lieutenant colonel ECOORD must be empowered by the UEx commander to the same level as the current Div Arty commander or the UEx must take full advantage of the

Fires Brigade commander and his colonel-level effects coordination experience.

The modular concept is a timely one that recognizes the challenges posed by the expeditionary nature of modern warfare. Modularity gives the supported commander flexibility, a range of capabilities and a scalable, rapidly deployable force. UEs can quickly assemble a mix of combat and support brigades to meet operational requirements, building a force tailored to METT-TC and the needs of the maneuver commander, encompassing everything from peacekeeping to high-intensity conflict.

In an operation comparable to OIF II, a UEx would be built by drawing brigades from any number of geographically distant home bases and assembling them under a single UEx headquarters. However, this "plug-and-play" flexibility creates some unexamined shortfalls in potential division operations of the sort demanded in OIF II.

The Force FA HQ. The Div Arty headquarters' primary function is to serve as the FFA HQ for the division commander. Its staff develops the procedures and cultivates working relationships vital to the effective synchronization of lethal and nonlethal effects. Nowhere are those relationships more visible and more important than in the execution of the counterstrike fight.

Counterstrike Fight. In the counterstrike fight, the FFA HQ receives, analyzes and attacks by both lethal and nonlethal fires and effects acquisitions of numerous sensors from across the division area of operations (AO).

In the 1st Infantry Division's AOR, this meant positioning more than 25 different radars drawn from both Active Component (AC) and Reserve Component (RC) units to ensure all radars were employed to their maximum effectiveness. The Div Arty also incorporated the full suite of collectors, to include radars, observation posts (OPs), unmanned aerial vehicles (UAVs), reconnaissance helicopters and maneuver patrols.

More than simply "orienting radar fans," the counterstrike fight demanded constant attention to radar maintenance—no simple task when temperatures stayed well above 130 degrees for much of the summer. The Div Arty counterstrike officers supervised a proactive maintenance program for all the



A 1st ID Q-36 radar on point at Forward Operating Base (FOB) Bernstein, Iraq. In the 1st Infantry Division's area of responsibility (AOR), more than 25 different radars were positioned by both Active Component (AC) and Reserve Component (RC) units that ensured all radars were employed to their maximum effectiveness.

division's radars, resulting in readiness rates that remained at nearly 99 percent despite the challenges of the Iraqi environment.

To get a full appreciation for the importance and role of radars in the COE fight, see the article "1st ID in OIF II—The Role of the TAB in Radar Operations" by Captain John J. Neal, et al, in the March April edition.

The counterstrike fight also required expertise in analyzing enemy tactics, adjusting to changes and constantly fine-tuning sensor-to-shooter links. As the FFA HQ in OIF II, the Div Arty maintained a division-level view of the counterstrike fight. Our perspective facilitated recommendations to the division commander on how to best allocate and position assets in support of the division fight. This involved prioritization of limited assets because the size of the AOR, coupled with the nature of the non-contiguous battlespace, precluded any kind of redundant coverage.

With this synchronized acquisition plan, one of every two enemy indirect fire attacks was acquired—the highest success rate of any division since OIF began.

The Fires Battalions of heavy BCTs will have two counterbattery radars. Without a FFA HQ intimately involved in the division-level counterstrike fight, the UEx of the future could find itself fighting separate counterstrike fights in each of its subordinate unit AORs. There will be times when this makes sense and other times when it will not.

Synchronization of Effects. As we

know from recent experience, be it a combat training center (CTC) rotation or true combat, synchronizing effects in support of a division in contact is no easy task. Having a dedicated FFA HQ, complete with a JFEC and a well trained staff, is critical to the success of such efforts.

The working relationships formed between this headquarters and other contribu-

tors to the fight over months of training are equally important. Developing common situational understanding, employing collection assets available and integrating the contributions of these assets demand a great deal from any command post (CP), especially a maneuver CP consumed with planning the direct fire fight. Without a headquarters habitually associated with the contributors to the maneuver fight, a maneuver staff faces the hurdle of developing relationships with personnel from disparate units for an operation as they meet the personnel for the first time.

Standards of FA and Fire Support. The Div Arty headquarters also addressed variations in unit TTPs during training and standardized the fire support process during execution. With its robust suite of digital communications, connectivity across the division battlespace was quickly established and maintained across multiple unit boundaries.

As the center of indirect fire expertise for the division, the Div Arty headquarters managed the training of subordinate fire support and FA elements, ensuring that Soldiers remained ready to perform their missions. Without such a dedicated headquarters, the training of fire supporters and indirect fire assets falls to the maneuver commanders.

While Fires Brigades would be up to the task of preparing their organic assets for combat, standardization across the Fires Battalions in the maneuver BCTs would pose challenges. The synchronization of lethal and nonlethal effects across the BCTs is challenging at

best, particularly with Fires Battalions organic to maneuver BCTs rather than the Fires Brigades. Although efficient in terms of providing the BCT commander his own combined arms team, this structural change places the demand on the BCT commander to train his fires units, a role currently fulfilled by the Div Arty headquarters.

Div Arty as a BCT HQ. The characteristics and capabilities that make the Div Arty headquarters successful in its doctrinal mission also enable it to perform a range of nonstandard missions. Having an FFA HQ available to act as an alternate division- or brigade-level CP and successfully perform nonstandard missions provides the UEx commander an exceptional resource.

The potential of the 1st Infantry Div Arty headquarters as an additional C² headquarters came to light during combat operations in An Najaf. The Div Arty assumed the role of a maneuver brigade CP. The division was tasked by MultiNational Corps, Iraq (MNC-I) to detach a brigade-sized element to bridge the gap between the 1st Armored Division's departure and the 11th Marine Expeditionary Unit's (MEU's) arrival in this hotly contested region of Iraq. The mission required temporary subordination of the unit to the C² of MultiNational Division-Center South, commanded by a Polish major general.

Rather than take a committed brigade headquarters out of contact and lose the benefit of its established relationship with local Iraqi leaders, the mission was given to the Div Arty headquarters. For 47 days, the 1st Infantry Div Arty took operational control of a light infantry battalion, an El Salvadoran battle group, an engineer battalion, three Iraqi Army battalions and a 1,200-man Iraqi police force. After assuming control of its AO from the 2d Armored Cavalry Regiment (subordinate to the 1st Armored Division), the Div Arty staff performed all the traditional functions of a maneuver staff with outstanding results.

The Div Arty's ability to perform as an additional maneuver headquarters required augmentation, including psychological operations (PSYOP) teams, information operations (IO) personnel, a UAV support team, increasing the size of the S2 section, adding a brigade engineer and, although not intuitively obvious, creating a brigade JFEC (the standing JFEC had to continue supporting the division's overall operations with lethal and nonlethal effects).

During the tense stand-off between Coalition Forces and the militia of Muqtada al-Sadr, TF Drumfire planned and executed many combat patrols, maintaining order and discipline in An Najaf. The Div Arty then conducted a deliberate relief-in-place (RIP) with elements of the 11th MEU.

The proven ability of the Div Arty to operate as a BCT headquarters and successfully conduct combat operations provided more flexibility for the division and the corps. The Div Arty of the 1st Cav, 25th Infantry and 1st Armored Divisions also are FFA HQs that have served as maneuver brigade headquarters in both OIF and Operation Enduring Freedom (OEF) in Afghanistan—the COE. This reinforces the need to maintain a versatile FFA HQ.

This situation emphasizes the potential lack of flexibility created by the UE/BCT structure. If the modular organization of the UEx is based on the current or pre-deployment METT-TC, how do we respond to changes in the environment?

The 1st Infantry Div Arty was given a mission not anticipated before it deployed to Iraq. Without the flexibility of giving this task to the Div Arty headquarters, the division would have been forced to either accept significant risk by pulling another brigade out of contact or wait for another unit to be mobilized.

Div Arty as a Division-Level CP. The *Big Red One* also relied upon the Div Arty headquarters to oversee the division's deployment and redeployment operations. When the division deployed to Iraq, the Div Arty provided C² for RSOI of all TF Danger units. This involved receiving equipment at the port, coordinating the linkup of units and vehicles at many deployment camps in Kuwait and overseeing all required pre-combat training before the move into Iraq.

Having proven its ability to perform as a surrogate division CP during deployment, the Div Arty was the natural choice to perform similar duties on the completion of 12 months in combat. Tapped to oversee the redeployment of the *Big Red One*, the Div Arty headquarters conducted split-based operations and moved a tactical command post (TAC) to Kuwait, again assuming the role of a division-level CP.

For three months, while simultaneously conducting combat operations



Photo by SFC Elizabeth Erste, 55th Signal Company (COMCAM)

Soldiers from C/1-7 FAR, 1st ID, give away soccer balls to Iraqi children in Baiji.

in Iraq, it supervised the reception, processing and return movement of more than 20,000 Soldiers and 9,500 vehicles from departure from Iraq until arrival at home station. This large-scale operation involved AC and RC BCTs from the continental United States and Hawaii along with organic division units returning to Germany.

Synchronizing the division's redeployment required coordinating heavy equipment transport assets, tracking flights from four different airfields, managing port upload operations and ensuring an efficient flow of vehicles through wash racks and sterile yards at several different redeployment camps in Kuwait. Again, the Div Arty headquarters' robust communications network, flexible staff and ability to coordinate with multiple units proved essential to the division's success.

Additionally, the Div Arty provided division-level C² of CEA destruction. This mission, resulting in the collection of some 29.7 million pounds of ordnance, involved constant, close coordination with maneuver commanders, civilian ordnance experts and local nationals. The Div Arty headquarters, with well established communications networks and accustomed to working across unit boundaries, was especially well suited to accomplish this mission.

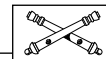
By performing this demanding C² function, the Div Arty denied thousands of improvised explosive devices (IEDs) to the enemy, saving countless coalition and innocent Iraqi lives in the process. Just as important, this critical operation did not require the attention of the maneuver brigade staffs during their own close combat and stability and support operations (SASO).

On a battlefield such as Iraq, where combat operations mix daily with

SASO, the ability to assign division-level tasks to the Div Arty headquarters paid dividends. Whether acting as a maneuver brigade headquarters in An Najaf, overseeing divisional RSOI operations, or collecting CEA, the Div Arty headquarters was up to the task. Considered alongside its doctrinal functions of integrating fires and synchronizing effects in support of maneuver operations, there is no doubt that the Div Arty headquarters demonstrated its relevance to contemporary warfighting.

As our Army transitions to the modular design structure, all these capabilities must be considered deliberately and incorporated. The combat power of habitual associations and the human dimension can never be overstated. As we design the force, we must constantly remind ourselves that modularity must account for potential changes in METT-TC. In our drive for efficiency, we must acknowledge the requirement for flexibility in the rapidly changing environments in which we will fight.

The 1st Infantry Div Arty's year in Iraq serves as solid evidence of the relevance of the FFA HQ, both now and for the foreseeable future.



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Major Michael R. Eastman is the S3 of the 1st Infantry Division Artillery in Germany. He deployed with the Div Arty in that capacity to OIF II. Among other assignments, he served as an Assistant Professor of Political Science at the US Military Academy at West Point, commanded B/4-42 FA in the 4th Infantry Division (Mechanized) at Fort Hood, Texas, and served as Battalion Fire Direction Officer in the 25th Infantry Division (Light) at Schofield Barracks, Hawaii. He holds two master's degrees, and is a doctoral candidate in International Security Strategy at MIT.



Hoosier Redlegs Train Afghan Kandaks: *Semper Gumbi*

“Choturasti?” [“How is your health?”]
“Khub. As, ti?” [“Good. And Yours?”]
“Bkhail as. Ti?” [“(and) Your body fitness?”]

“Bkhail. Jonnyjuras?” [“Healthy. And your well being?”]

“Jur as. Ti?” [“It is well. And yours?”]
“Khub, tashakur.” [“Good, thank you.”]

These repetitive Afghan greeting phrases are now standard for a number of Redlegs from the three Indiana Army National Guard (INARNG) artillery battalions: 3d Battalion, 139 Field Artillery (3-139 FA), in Crawfordsville, part of the 38th Infantry Division Artillery; 2-150 FA in Bloomington, a corps support battalion; and 1-163 FA in Evansville in direct support (DS) to the 76th Infantry Brigade (Separate). The Hoosier Redlegs are deployed to Afghanistan until August 2005. Yet none of the phrases used to execute the missions are fire commands or elements of a call-for-fire. This is because none of the Hoosier Redlegs are involved with artillery missions or artillery training.

All are mentors to the Afghan National Army (ANA) infantry *kandaks* (battalions), serving in both battalion staff and company advisor positions. These nonstandard missions represent the continuing evolution of the role of the Field Artillery in the contemporary operating environment (COE).

In March 2004, plans were finalized to send the 76th Brigade to Afghanistan to lead Task Force (TF) Phoenix III. The TF had embedded training teams to accomplish its mission: advise, train

By Majors Kellard N. Townsend, Jonathan E. Marion and Joseph W. Boler and Captain Madison M. Carney, All INARNG

and mentor ANA officers and NCOs from the corps down to company levels. This training was conducted “down range” and at training centers in Kabul: Kabul Military Training Center and Pol-e-Charki Compound. Each team consisted of 12 to 18 officers and NCOs from up to 17 different states for a total of more than 400 trainers.

Indiana provided the bulk of the infantry embedded trainers (six *kandak* teams) with 20 percent of the infantry officer slots filled by Hoosier artillery officers.

While one would like to think these artillerymen were chosen for their knowledge of infantry tactics and flexibility, the truth is closer to a need for *any* combat arms officers. With increasing deployments and commitments, Indiana found itself short of senior infantry captains and majors.

General Organization. Organized much like a fire support or an observer/controller (O/C) training team, each *kandak* team advises its respective Afghan Army counterpart. The team has two advisors (officer and NCO) per line company (*tulai*) and an advisor each for the headquarters and headquarters company (HHC), S1, S3, S4, XO, sergeant major and *kandak* commander.

Similar to fire support, the embedded

training teams are the liaison between the *kandaks* and US forces from the 25th Infantry Division (Light) out of Schofield Barracks, Hawaii; Special Forces and Marines; and forward observers (FOs) for artillery and close air support (CAS). The team also coordinates with German, Romanian and Mongolian embedded trainers.

The embedded teams provide emergency purchasing power for the *kandaks*, deploying on missions with \$50,000 at a time. This money buys the *kandaks* fuel, building supplies and the Afghan equivalent to A-rations: rice, milk and goats.

Helping is a pool of interpreters, called “Terps” or *tarjimans*, who range in age from 18 to 45. Many have grown up in Europe or Pakistan during the Russian occupation, civil war or Taliban regime. They all speak at least two of the Afghan languages in addition to English.

While Afghanistan has as many languages as all of Europe, the primary ones are Dari (Farsi) and Pashto. The ANA uses Dari and most of the southern province civilians speak Pashto. In addition, the Terps must understand US military jargon, a difficult task for anyone.

Functions. On one embedded team for the 3d *Kandak*, 1st Brigade, 205th Corps (3/1-205 *Kandak*) (*Nightfighters*), artillerymen make up 25 percent of the team. They serve as mentors for HHC and the 2d *Tulai* Commander, S1 and S4.

On another team, 2/1-205, the *kandak* commander, S3 and S4 mentors are

Redlegs. On a third, 1/2-205 *Kandak*, two of the three *tulai* mentors are experienced artillery staff officers.

The *tulai* mentor's primary mission is advising the *tulai* commander and his first sergeant on individual and collective training as outlined in *Field Manual 7-8 Infantry Rifle Platoon and Squad*, administration and attendance procedures, logistics planning and accountability, and leadership as outlined in *Field Manual 22-100 Army Leadership*.

One focus is the use of military decision-making process (MDMP) at the *tulai* level. This is coupled with after-action reviews (AARs) following training exercises, combat patrols, village assessments and larger combat operations and stability and support operations (SASO).

The secondary mission is training *tulai* NCOs and officers in their duties and responsibilities. Critical to this is fostering the ability for individual decision-making at the platoon and squad levels.

The ANA has experienced a mixture of leadership training—Russian, *Mujahadeen* and French—none of which are very compatible with the US philosophy of individual initiative. This proves to be one of the toughest challenges. Not only does this mixture of military styles affect how the team trains the company, it also affects how the team monitors attendance, slots modified table of organization and equipment (MTOE) positions and plans missions.

A third nonstandard mission for the *tulai* mentors is in field ordering officers/pay agents (FOO/pay) operations. Each team is trained on the drawing, spending and clearing procedures for operational funds (OPFUNDS) of \$50,000 dollars in Afghani (roughly 2,350,000 Afghanis). These funds often directly support *kandak* and *tulai* logistics at both base camps and on missions.

Budget constraints and attempts at fiscal responsibility drive what the FOO/pay teams can purchase. These purchases are managed directly by a *kandak* staff mentor, usually the S4, and processed through TF Phoenix J4. During an initial occupation of an area or on an extended mission, much of the team's time can be taken up by FOO/pay activities rather than actual mentoring.

At the *kandak* level, embedded mentors' primary mission is to implement cohesive staff operations, supervising mission-essential task list (METL) de-

velopment and the MDMP. Again, the previous military leadership models of the *kandak* soldiers are barriers to this implementation.

For example, during combat operations, decisions and planning often take place in the mind of the *kandak* S3 or XO only and then are disseminated to the commanders and staff. While this is a direct, clear approach, it creates a reactive environment for the staff.

At the *kandak* level, the mentors' secondary mission is to develop each staff officer and staff section. While many *kandaks* have good accountability of personnel and equipment, they have not developed clear disciplinary actions for soldiers' failing to show up or losing equipment.

A third mission is to help manage and pay ANA personnel, which is in excess of one million dollars each month. As in our Army, a soldier's pay and record keeping are critical retention tasks.

Hoosier Redlegs serve as S4 mentors in four infantry *kandaks* and for a brigade (*lewa*). Of all the mentors deployed from Indiana, those in the artillery have the most experience with battalion-level logistics. Most have served either as S4s, headquarters and headquarters battery (HHB) commanders or battalion motor officers, and all have extensive experience in the battery XO position. Most of the infantry mentors come from line unit command slots or secondary staff positions.

Logistics for the ANA is based on donations from various countries, primarily former Soviet satellites and eastern countries eager for a new market. This results in a fill-or-kill system of supply (fill immediately or kill the requisition) for Class II, V, VII, VIII and IX, which does not keep pace with the needs of the forward-deployed *kandaks*. US supply assets or OPFUNDS are used for Class I, III, VIII and IX. Due to the Afghan terrain and sudden mission shifts, supplies often are available only by cash purchase from an Afghan vendor.

The *kandak* transport vehicles include US 2.5 ton trucks, Russian Kamaz and Zil trucks, Chinese Hinos, German Mercedes, European Ivecos and Indian Tatas while the non-tactical vehicles include Ford Rangers, Russian Jeeps, Indian Mahindra Boleros and Toyota Land Cruisers for ambulances. This makes Class IX ordering difficult and prescribed load list (PLL) maintenance a major challenge.

In August 2004, only one-half of the 5/1-205 Combat Service Support (CSS) *Kandak* performed support functions. The other half of the *kandak* served as infantrymen. This was true for the other CSS *kandaks* as well. Only in the second quarter of 2005 has a conscious effort been made to train and use the CSS *kandaks* in other than infantry roles.

Train-Up. Before deploying, the 76th Brigade embedded trainers trained at Camp Atterbury Maneuver Training Center (CAMTC) outside Edinburgh. The training consisted of three phases: standard Soldier tasks, embedded trainer tasks and an in-country orientation. See the figure on Page 34.

Key Traits for Success as Embedded Trainers. Success depends on a number of personal traits. These traits, for the most part, are those ingrained in every artilleryman at FA Officer's Basic Course (OBC). Some have been developed through civilian occupations or individual experiences. Also important for success were some military skills.

Flexibility. This trait is the hallmark of the embedded trainer mission. With changes in focus and mission occurring daily in both the ANA and US forces, flexibility allows the trainer to maintain both his sanity and focus on the *kandak* level.

Willingness to Learn. Such a trait sets the example for the officers and soldiers being mentored. Whether it is a function check on an AK-47 rifle, a crew drill for the SPG-9 anti-tank gun or a demonstration of how to use pepper and egg white to stop a radiator leak, opportunities to learn present themselves daily.

Self Evaluation. This is a related trait. Realizing personal areas of strengths and weaknesses allows the trainer to continue development. While mission AARs help the *tulai* and *kandak*, self-AARs enable the mentor to better advise and coach the ANA.

Infantry Tactics Proficiency. All officers must be proficient in basic infantry tactics. Whether training or in an actual operation securing the firing position or conducting a dismounted patrol or a cordon and search, artillerymen must be prepared to call, "Follow Me!" and be followed.

Physical Fitness. This complements the growing role of artillerymen as infantrymen. It is the basis for survivability in Afghanistan.

Cultural and Religious Knowledge.

Phase I: Basic Soldier Tasks

- Mission-Oriented Protective Posture (MOPP)
- Weapons Qualification
- Physical Fitness
- Driver's Training
- Individual Mobilization Training (IMT)
- Mine Marking and Minefield Extraction

Phase II: Embedded Trainer Tasks

- Combat Lifesaver Skills
- Use of an Interpreter
- Mortar Call-for-Fire
- Operations of Tactical Satellite Radios for Close Air Support (CAS)—Harris 117 and 150
- Defensive Driving (J-turns, Deadman Exchanges and Reverse Handbrake Turns)
- Checkpoint Operations
- Dismounted Patrols
- Squad Live-Fire Assault on an Objective

Phase III: In-Country Orientation

- Afghanistan—geographically, geologically, socially, politically and militarily. It is a complex country as the result of standing at the crossroads of Asia for thousands of years. The country is divided by the Hindu Kush Mountains, deserts and dry river beds waiting for spring floods.
- The people are divided by distinct ethnic and religious lines with the only common point of reference the Afghan National Army (ANA).
- The ANA is an army influenced by the Russian communist model, *Mujahadeen* tactics and organization, British instructors for soldiers, French instructors for officers and US mentors “down range.” This polyglot of military styles often creates confusion and friction in expectations and standards.

Three phases of pre-deployment training for the Indiana Army National Guard (INARNG) trainers of the 76th Infantry Brigade (Separate) who are embedded in Afghan *Kandaks*.

These add a new dimension to the battlefield. Artillerymen currently are executing missions demanding the ability to think outside a military context. Information officers target civil issues and unrest. Embedded trainers interact daily with civic leaders and businessmen. Demonstrating understanding of others lowers cultural barriers and increases opportunities for mission success.

Lessons Learned. The key embedded trainer lesson is the same one artillerymen are learning in every theater of operation: *Semper Gumbi* (Always Flexible). Like no other branch, the FA is required to take on tasks outside its normal lanes. From infantry tactics to landing zone (LZ) preps to civil affairs management, embedded trainers cover more ground and more non-military occupational specialty (MOS)-specific tasks than any other branch.

As embedded trainer Redlegs, we have learned other important lessons from this deployment that are applicable to all.

- Individual mobilization training (IMT) and squad live-fire training provide the individual warrior spirit and team fire control skills. As we continue to take on force protection and infantry missions, we must revisit the basic skills of the infantry Soldier. Our ability to engage

the enemy, once again, is based on direct fire and close range actions.

- Combat lifesaver (CLS) training is a must for every Soldier. The enemy can strike anytime, anywhere. Too often this training is neglected or only provided to a limited number of Soldiers. The skills gained allow the Soldier to act when a buddy goes down or a mine throws a vehicle off the road. The fog of battle is reduced and lives are saved when Soldiers know they can quickly dress a wound or prevent shock by giving an intravenous (IV).

- The new environment in Operation Enduring Freedom (OEF) and Operation Iraqi Freedom (OIF) requires us to look at convoys from a totally different perspective. For artillerymen, conducting convoys is part of basic FA operations: move, shoot and communicate. We practice many tactics, techniques and procedures (TTPs) involving actions to be taken if a convoy is hit. Most focus on the convoy's ability to either fight through an ambush or stand and fight.

As the threat has changed from ambushing friendly forces to emplacing mines and improvised explosive devices (IEDs), so too have the TTPs changed to emphasize, among other things, site clearance and security, and medical evacuation procedures.

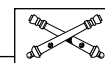
- As we learn daily with the ANA, logistics is a showstopper if not properly forecasted, planned and executed. The key is not the numbers in the daily logistics and personnel reports, but what those numbers mean to push packs, short tons and numbers of vehicles to send on a log push.

Officers and senior NCOs also must be trained on nonstandard logistics—OPFUNDS and purchase request and commitment (PR & C) forms. These are the methods maneuver units use to extend their influence over civil affairs and civilian reconstruction projects.

The time to train is not two days before a unit deploys by air to a remote portion of a foreign country—it is now.

The role of the artilleryman in battle is a dynamic, ever-changing one. From effects cells in Iraq to infantry embedded trainers in Afghanistan, Redlegs must prepare for every contingency. As missions change, so must training and mindsets.

To be the *King of Battle* calls for political savvy, logistical planning and the ability to perform any task anywhere as well as or better than those formally trained in that task. *Semper Gumbi!*



Major Kellard N. Townsend is the S4 Mentor for the 3d *Kandak*, 1st Brigade, 205th Corps (3/1-205 *Kandak*) in Operation Enduring Freedom (OEF) in Afghanistan. He was a Brigade Fire Support Officer (FSO) in 3-139 FA, Indiana Army National Guard (INARNG), in Crawfordsville. He also was a Company Fire Support Officer in 2-3 FA for 4-34 AR in the 3d Armored Division during Operation Desert Storm. He teaches English in a high school in Indianapolis.

Major Jonathan E. Marion is the S3/S1 Mentor for 3/1-205 *Kanda* in OEF. He was the Battalion Executive Officer (XO) for 1-163 FA, INARNG, in Evansville. He is a high school History Teacher in Martinsville.

Major Joseph W. Boler, who is the XO/Headquarters and Headquarters Company Mentor for 3/1-205 *Kandak* in OEF, was the Division Artillery (Div Arty) S2 for the 38th Infantry Division, INARNG, in Indianapolis. He is a Police Officer in Spencer.

Captain Madison M. Carney, INARNG, is the 2d *Tulai* Mentor for 3/1-205 *Kandak* in OEF. He was a Div Arty Fire Direction Officer (FDO) for the 38th Division. He also was a Radar Platoon Leader for the Implementation Force (IFOR) in Bosnia. He is a Police Officer in Zionsville.

The German Field Artillery in the *Neues Heer* Structure

The German Army is transforming into a *Neues Heer*, or “New Army.” Its transformation is a continuous, far-sighted adjustment of its security, social, technological and, above all, mental dimensions. This process is not only ongoing in the army, but also in the entire German armed forces and those of our allies.

The conceptual framework for transforming the German armed forces and Bundeswehr was defined in the “Defense Policy Guidelines,” dated 21 May 2003; the “Directive for the Further Development of the Bundeswehr,” dated 1 October 2003; and the “Overall Bundeswehr Concept,” dated 9 August 2004. Figure 1 summarizes the core assumptions and design principles of these three planning documents.

In the course of preparing these documents, the “Directive for the Further Development of the German Army” was refined and issued on 5 July 2004, defining the model *Neues Heer* personnel and equipment. By 2010, the German Army personnel strength will be reduced by some 30,000 billets to the target of about 104,000 soldiers.

As will the other German armed services, the German Army will be divided

By Brigadier General Heinrich Fischer, Chief of the German Field Artillery

into three categories of forces: reaction, stabilization and support. The core of the *Neues Heer* organization is five division headquarters with a total of 12 reaction or stabilization brigades. (See Figure 2.)

One division will be purely *reaction forces*. German Army reaction forces contribute to combat and peace enforcement operations with minimum friendly losses. These forces will be capable of fighting in network-centric multinational operations in high-intensity scenarios as well as perform rescue and evacuation operations at the lower end of the spectrum. German Army reaction forces will be mechanized for large-scale and mobile combat operations and characterized by high mobility and robustness. These reaction forces will be supported by precision fires and effects from standoff distances.

Two divisions will consist of purely *stabilization forces*. These forces must operate successfully against both a predominantly military adversary and asymmetrical in-

surgency forces, ensuring minimum losses in both cases. Stabilization forces must be able to control limited areas of operations in a situation with escalating danger and fight in combined arms operations at the battalion level for a limited time. In addition, stabilization forces must be able to function in stability and support operations (SASO). To achieve these capabilities, stabilization forces will be supported by graduated precision fires and effects from standoff distances.

The other two of the five divisions in the *Neues Heer*, the *Division Spezielle Operationen* (DSO), or Special Operations Division, and the *Division Luftbewegliche Operationen* (DLO), or Air-Mobility Division, will have a mixture of reaction and stabilization forces.

Given the limited number of forces and the increasingly complex and rapidly changing battlefields of today and tomorrow, the *Neues Heer* requires the alternating capabilities of the reaction and stabilization forces dur-



PzH2000 Howitzer

- There is no foreseeable threat to German territory.
- The German armed forces do not need the capabilities and structure for conventional territorial defense.
- The most probable missions for the Bundeswehr are conflict prevention and conflict management.
- The armed forces must strengthen their joint capabilities.
- The armed forces must reorganize into the categories of reaction, stabilization and support forces.
- The armed forces must synchronize all available financial resources to gain the required capabilities and equipment.
- The armed forces must integrate conscripts.

Figure 1: Basis of the Transformation of the German Armed Forces and Bundeswehr into the **Neues Heer** (New Army).

ing military operations. This “operational interplay” describes the cooperation between the headquarters and units of both force categories and illustrates the reciprocal assumption of each other’s tasks.

FA Mission. In the *Neues Heer* structure, the German Army Field Artillery continues to be the backbone of

fire support, operational fires and reconnaissance and target acquisition (TA) across the spectrum of conflict. The Field Artillery provides the all-weather, day or night, near-real-time precision effects from standoff distances—anywhere in the maneuver commander’s area of responsibility (AOR). These fires are critical for *Neues Heer* reaction and stabilization forces to avoid head-on duels with the enemy, incurring heavy friendly losses. In addition, the FA is the German Army’s provider of joint fires.

The FA has a digitized integrated artillery system (IAS), a system of systems for command and control (C²), surveillance, TA and reconnaissance (STAR) as well as for coordinating the fires of all FA weapons platforms within

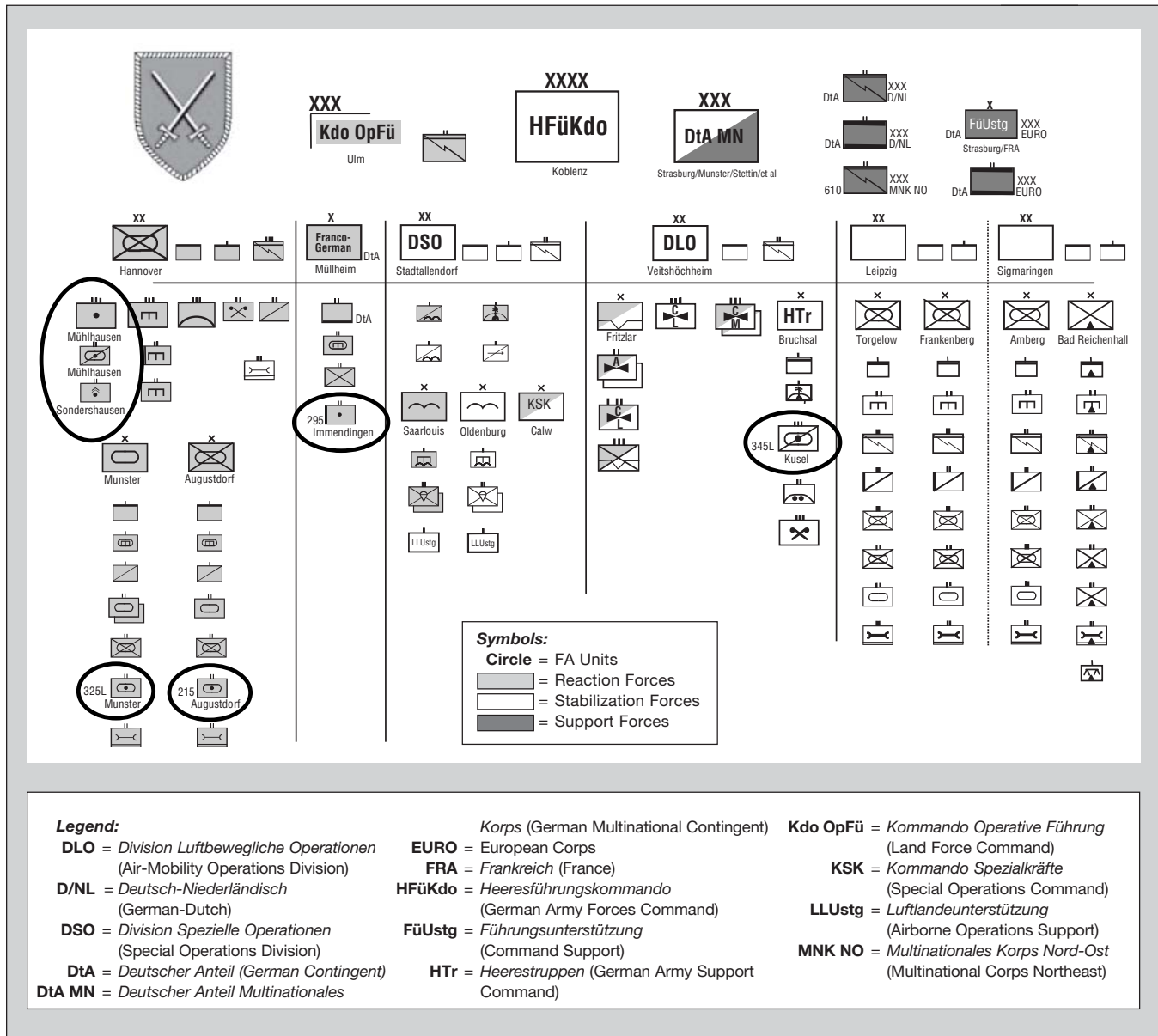


Figure 2: The Five Divisions of the **Neues Heer**

an operational formation, task force or major subordinate command. This system of systems is centralized under a single command and linked to central (C²) and weapons control systems.

FA Organization. In the course of the German Army personnel reduction, the FA branch will be reduced from about 9,500 billets in today's plan for the *Heer der Zukunft* (German Army of the Future) to about 4,900 billets in the *Neues Heer* structure.

As shown in Figure 2, the *Neues Heer's* Reaction Force Division will have an artillery brigade, consisting of one self-propelled/TA battalion and one medium artillery rocket system (MARS) battalion (Figure 3). (MARS is the equivalent of the US multiple-launch rocket system.)

Also, the Reaction Force Division will have an artillery battalion in each of its two brigades (Figure 4 on Page 38). In addition to the elements shown in Figure 4, the self-propelled artillery battalion in each of the two mechanized brigades will have an integrated fire control platoon and a battlefield surveillance section in each firing battery.

As shown in Figure 5 on Page 38, the Franco-German Brigade has a unique self-propelled/TA artillery battalion. This brigade is 50 percent French and 50 percent German with rotating leadership. In addition to the headquarters and weapons elements, it has a meteorological (Met) component and integrated reconnaissance capabilities: the counterbattery radar (COBRA) and *Kleinfluggerät Zielortung* (KZO) target-locating unmanned aerial vehicle (UAV). It also has an integrated fire control platoon in each of the cannon firing batteries.

Thus, the Franco-German Brigade has all components of the IAS with organic C² systems, STAR assets and weapons platforms. For the first time, the Franco-German Brigade will have an artillery battalion optimized for the brigade's tactical-operational role in the European

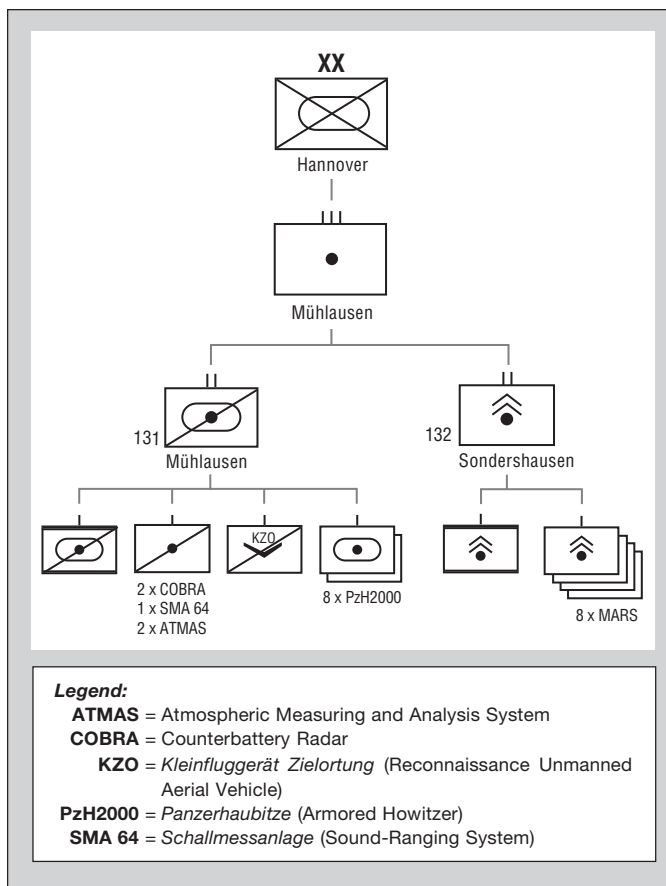


Figure 3: Organization of the Reaction Division Artillery Brigade (Figure 1). The brigade has one self-propelled/target acquisition (TA) battalion with 16 PzH2000 howitzers and one rocket artillery battalion with 32 medium artillery rocket systems (MARS), which are equal to US multiple-launch rocket systems (MLRS).

Corps (EUROCORPS) and for initial-entry operations. This EUROCORPS is the combined forces from Germany, Spain, France, Belgium and Luxembourg.

The two stabilization force divisions and the mixed-category special forces and air-mobility divisions, generally, will have access to the artillery in the self-propelled/TA regiment organic to the air-mobility division shown in Figure 6 on Page 39, as needed. Each firing battery in this artillery regiment has an integrated fire control platoon.

This reduction in the overall number of FA units in the German Army should not automatically be construed as a reduction in operational capabilities. In fact, the *Heer der Zukunft* structure called for 19 units (battery equivalents) in the reaction forces while the *Neues Heer* structure has 22 rapidly deployable units (battery equivalents) in the reaction forces.

Order of Battle. The order of battle and internal structure of the *Neues Heer* units largely adhere to the principle

“organize and train as you will fight.”

The IAS has been maintained in the organization—even optimized in parts of the force. For instance, the Reaction Force Division has organic IAS under the command of the divisional artillery commander, making the requirement to merge modular artillery elements from the artillery brigade and the three mechanized brigades' artillery battalions obsolete.

Similarly, the IAS is in the self-propelled/TA regiment available to the stabilization forces.

By linking TA assets directly with weapons platforms at the battery or battalion levels—sensor-to-shooter—and factoring in the accuracy of the TA systems and high rate-of-fire of the weapons platforms, the FA can eliminate layers of indirect fire coordination and provide target effects in near-real time. The linkage at the lowest levels minimizes collateral damage and optimizes ammunition expenditure and post-strike damage assessment.

Additionally, a synergistic effect is achieved by combining the organizational capabilities of the TA battalions and fire control batteries.

The design of the TA and firing batteries are standardized by type. This ensures the operational interplay between the FA reaction and stabilization forces. (Rocket artillery is the exception because it is not included in stabilization forces.)

The number of billets for stabilization forces prevented those forces from having one artillery battalion per brigade. The result is that artillery support for the stabilization forces must come from the self-propelled/TA regiment in the air-mobility division. Thus, the artillery can support stability operations in a maximum of two theaters but only with limited combat capabilities.

Considering the likely operational-tactical demands of future theaters and the increase in missions for the FA as the main contributor of the German Army's joint fires, the four batteries in the MARS battalion of the Reaction Division's artillery regiment is somewhat on the lean side.

Force Capabilities. Figure 7 outlines the essential capabilities the maneuver

or contingent commander must have for all types of operations, both combined arms and joint, throughout his AOR. These capabilities allow him to gain and maintain his freedom of operations and initiative, avoid close combat situations involving heavy losses and protect friendly and allied forces. The following FA systems provide these capabilities.

Command and Control. The fielded and well proven *Artillerie-Daten-Lage-Einsatz-Rechnerverbund* (ADLER) is a C² and intelligence (C²I) system that is the central link between C² systems, STAR assets and weapons platforms (including those under development). ADLER provides digital interface, both nationally and internationally.

With preplanned product improvements, ADLER will be interoperable with the C² and information systems of

the German Army, the C² and weapons control systems of the other German armed forces branches, as well as those of our allies. ADLER must have this C² superiority and be fully capable of network-centric operations.

The current FA command post (CP) vehicles can operate across the spectrum of conflict. However, they are not mobile enough and do not afford enough force protection for the modern battlefield. FA CP vehicles must comply with the requirements for *Neues Heer* equipment as outlined in the "German Army Command Post Concept," Parts 1 and 2.

STAR. TA and post-strike reconnaissance must be in real-time and under all Met conditions 24/7, cover large areas and identify targets in the depths of AOR. These capabilities are prerequisites for standoff, precision indirect fires.

In addition, intelligence must be collected and disseminated via integrated networks as an essential part of the near-real-time situational picture. What the *Neues Heer* needs is a mix of various standoff, penetrating and imaging sensors complementing each other that are closely linked with weapons platforms plus highly mobile ground-based systems.

In the *Neues Heer*, the FA will have the following STAR assets.

- **Artillery Observers**—They are equipped with Marder infantry fighting vehicles and work closely with their maneuver companies. The FA Marder is an interim vehicle to be replaced by

the objective system, the future Puma, an armored observer vehicle, and the new Fennek, a lightly armored wheeled observer vehicle. These two vehicles will improve the units' flexibility in employing their artillery observers and the fire support they provide maneuver forces.

For the first time, the observer vehicle, the Puma, will be the same vehicle used by the supported maneuver forces only with fire support equipment installed. The observer Puma will be indistinguishable from the other Pumas in the unit.

The Fennek allows for day and night observations with high-mobility, force protection for all types of operations and has a navigation system and laser rangefinder capable of locating long-range targets precisely. Its onboard systems are integrated into ADLER.

The German Army bought Fenneks to fulfill immediate requirements, and they are deployed as part of the German contingent of the International Security Assistance Force (ISAF) in Afghanistan.

In addition, artillery observers will have portable observer equipment for dismounted operations.

- **Radars**—the artillery battlefield radar (ABRA) acquires moving targets: individuals out to a range of 14 kilometers; small vehicles out to 24 kilometers; larger vehicles, such as medium battle tanks (MBTs), out to 30 kilometers; and moving columns out to 38 kilometers. The radar sections overwatch the battlefield under all weather conditions 24/7, contributing information to the situational picture, thus protecting against any enemy surprises.

The developmental ground surveillance *bodenüberwachungsradar* (BÜR) eventually will replace ABRA.

- **Sound-Ranging System**—As a passive target-locating asset, the *Schallmessanlage 64* (SMA 64) can locate cannons and mortars firing out to 15 kilometers. We are improving its accuracy with an automatic data evaluation system that will be integrated into ADLER.

- **COBRA**—This radar has a range of up to 40 kilometers and an angle of aperture of 90 degrees. It can locate cannons and mortars firing and, for the first time, rocket artillery firing with a high degree of accuracy and classify the detected targets. The COBRA can locate up to 40 firing positions in two minutes.

- **Target-Locating UAV**—The KZO,

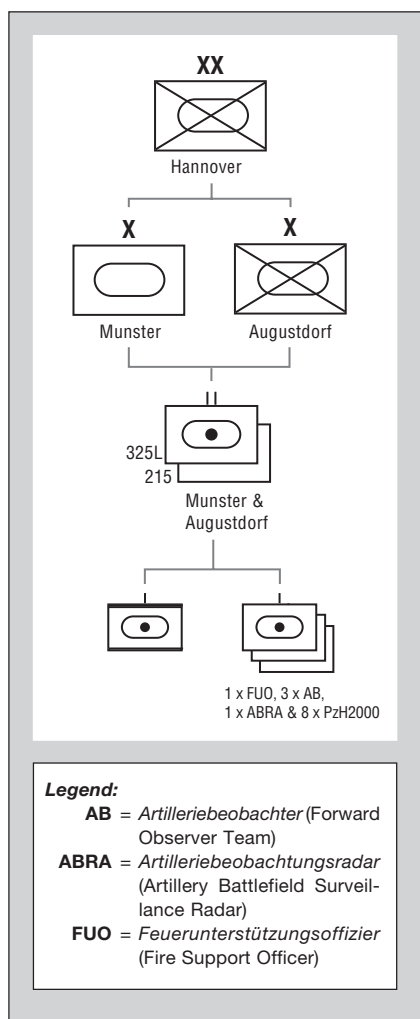


Figure 4: The Reaction Force Brigades' Artillery Battalions. The Armored Brigade in Munster and the Mechanized Infantry Brigade in Augustdorf have matching self-propelled artillery battalions (325L and 215, respectively).

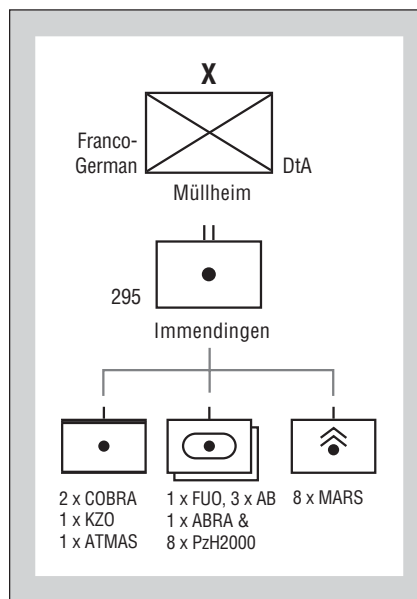


Figure 5: Franco-German Brigade Artillery. This unique brigade has a self-propelled/TA and MARS battalion. The brigade is deployable with the European Corps.

our reconnaissance capability, is significantly improved. We use KZO for situation reconnaissance, TA and post-strike reconnaissance out to a range of about 100 kilometers, day or night. Its endurance is about three and one-half hours. Its height above ground varies from between 300 and 2,500 meters, and it has a flight speed of about 150 kilometers per hour. The KZO's imagery transmission is in real-time. The KZO operator can modify the flight program entered at launch, allowing the UAV to track a target until the target is engaged.

• **Artillery Met Platoon**—This platoon is fully mobile and equipped with the atmospheric measuring and analysis system (ATMAS) as well as an upper wind radar system. ATMAS supplies the IAS and other users Met data. The global positioning system- (GPS)-supported radio probe system (RPS) will replace ATMAS, ensuring a timely supply of exact Met data covering larger areas. RPS will have passive ranging, thereby, making the upper wind radar unnecessary.

This new system calls for a new meteorological model. RPS will calculate refined Met data for a larger predetermined area, including the target area, and then send accurate Met messages throughout entire area of operations (AO). This will improve FA accuracy in the AO, reducing ammunition expenditures. Moreover, such Met messages also will be used to plan airborne reconnaissance systems' flights and improve the performance of SMA and COBRA.

With current and future artillery STAR assets, the German Army FA finally will have a jam-resistant, complementary sensor mix, ensuring TA and post-strike reconnaissance out to ranges of about 65 kilometers. To ensure precision standoff capabilities at great depths, TA organic to the IAS is indispensable for indirect, controlled and graduated target effects out to about 150 kilometers. Until we field modern and suitable STAR assets, we will maintain one reconnaissance drone battery with the older but proven CL289 reconnaissance drone.

Target Effects. In all types of operations and terrain, the *Neues Heer* needs precise standoff indirect artillery fires immediately available that are scalable to the situation and avoid collateral damage. This requires mobile, air-transportable weapons platforms that can fire long

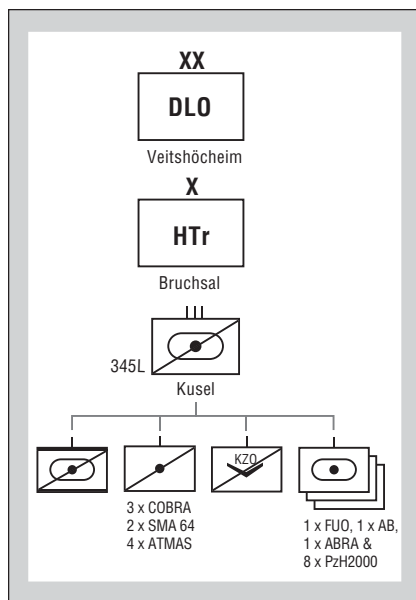


Figure 6: Stabilization Forces Artillery Regiment (345L in Kusel). This regiment in the **Neues Heer** air-mobility division (Figure 1) generally is the artillery the stabilization forces will have access to.

ranges.

Weapons with multi-roles will provide these required capabilities and reduce peripheral equipment. Precision munitions to support these weapons platforms must be able to identify a target and be aborted in flight. The *Neues Heer* must be able to selectively destroy all target categories and employ graduating effects, including nonlethal effects. To meet those requirements, the *Neues Heer* FA will have the following weapons systems.

• **PzH 2000 Self-Propelled Howitzer**—This howitzer is the most modern cannon in the world. Its maximum firing range of up to 36 kilometers together with its variety of ammunition and high rate-of-fire ensure effective support for the German maneuver forces. Its modular armor, high-mobility, and nuclear, biological and chemical ventilation system protect the crew and enhance the overall survivability of the system.

The PzH2000 can engage soft and semi-soft area targets with its current ammunition. With the procurement of the 155-mm smart artillery (SMARt) seeker-head ammunition, for the first time the howitzer will be able to attack semi-hard and hard individual targets precisely while minimizing collateral damage.

• **MARS**—This system can fire bomblets and rocket-delivered mines out to a range of 38.5 kilometers. After the MARS product improvement and

- An optimized command and control system for the artillery forces that is integrated into national and international command, control and information systems.
- Efficient, all-weather, 24-hour target acquisition and reconnaissance capabilities that are closely linked to the weapons platforms in real-time or near-real-time.
- Precise ground target engagement capabilities provided from a distance that are adjustable to the mission and situation.

Figure 7: These are the essential capabilities the maneuver or contingent commander must have for all types of operations, both combined arms and joint, throughout his area of responsibility (AOR).

the procurement of guided-MLRS (GMLRS), we will be able to fire rockets precisely from about 70 kilometers away with a significant reduction in collateral damage. To achieve effects that we can adjust to both the situation and targets, we will employ GMLRS initially in two types: one with an intelligent SMARt warhead and one with a penetrating fragment/high-explosive unitary warhead.

• **Air-Transportable Weapons**—In the future, the *Neues Heer* FA needs a combat UAV (CUAV) with a range of a minimum of 150 kilometers. This CUAV will have precision standoff target location and attack capabilities.

If forces in conflict prevention and conflict management operations are to be supported in theater with appropriate artillery elements, we need air-transportable weapons platforms. Currently, the German FA has no weapons that are deployable via national air transport. The procurement of the medium lift A-400M transport aircraft will change this situation.

Thus, one of the main efforts of the German artillery is to develop the capability to support its rapidly deployable troops. Envisioned are weapons—regardless of whether or not they are cannon, rocket or missile systems—that can be developed and(or) procured on the basis of existing components while minimizing the time and cost of their development.



The air-transportable 155-mm howitzer was first shown at the Live-Fire Demonstration 2004.

The air-transportable 155-mm self-propelled howitzer first fired during the Live-Fire Demonstration 2004 at Baumholder Training Area in Germany last September appears to be a promising air-transportable solution with further development.

The MARS launcher in a light wheeled version as a multi-functional platform is envisioned, possibly, with only one pod for launching existing munitions plus GMLRS. Here, too, development would be feasible in the short to medium term.

Although very capable, current weapons platforms and their munitions do not meet all future requirements. On the one hand, artillery must maintain its ability to engage area targets; on the other hand, it needs long-range weapons systems and the ability to engage high-value targets with pinpoint precision while minimizing collateral damage. Based on these requirements, German FA future weapons developments will focus on precision, range and air transportability.

Joint Fires. To accomplish the joint mission, joint fires are especially sig-

nificant. Joint fires are the coordinated fires of all the armed forces against targets in all dimensions of the battlespace. They are coordinated to ensure the maneuver commander can engage enemy targets throughout his area of responsibility using the most effective joint fires assets available to optimize target effects.

With its command, control, fire support and communications organization reaching across all command levels, the artillery already plans and executes ground force fire support. Therefore, because these IAS elements interface digitally with and are networked by ADLER, including the international Artillery Systems Cooperation Activities (ASCA), the IAS is predestined to be the nucleus of the German Army's planning, coordination and execution of joint fires. The artillery already has considerable experience working with joint fires in multiple exercises with the German Air Force.

The German Army artillery branch has crossed the line of departure (LD) in the transformation process. According to the current schedule, the *Neues Heer* structure will materialize by 2009.

The reduction in the overall size of German Field Artillery is significant. However, the *Neues Heer* maintains and, in some aspects, even optimizes the IAS.

The new structure offers the reaction forces an order of battle that to a large extent meets the requirements of this force category, particularly after fielding the emerging TA and reconnaissance assets, implementing the MARS product improvement and fielding new munitions.

To retain IAS in the stabilization forces would require structural and organizational increases to the stabilization force. Due to the limited IAS resources available, IAS support for the stabilization forces will be limited in time and battlespace. We have identified and defined capability gaps in artillery observer equipment and precise standoff and individual target engagement as well as air-transportable weapons platforms. We will work to fill those gaps during the German Army transformation process.

The German Field Artillery will continue to offer constructive innovative solutions for the *Neues Heer* structure, in accordance with its motto—*Always be Prepared and All-Weather Capable!*

Brigadier General Heinrich Fischer is the Chief of German Artillery and Commandant of the German Artillery School at Idar-Oberstein, Germany. Among his other assignments, he was the G3 Operations for the II German-US Bi-National Corps in Ulm; Branch Chief of the Federal Ministry of Defense of the German Army Staff in Bonn; Deputy Commander and Chief of Staff of the German Army Contingent of the Stabilization Forces (SFOR) in Bosnia-Herzegovina; and the Executive Officer to the Assistant Chief of Staff for Resources in the Supreme Headquarters Allied Powers Europe (SHAPE) in Belgium. He commanded Artillery Regiment 7 in Dülmen and Self-Propelled Artillery Battalion 45 at Göttingen. He is a graduate of the German and Canadian Armed Forces Staff Colleges in Hamburg and Toronto, respectively. He began his career as a conscript and then attended Reserve Officer Candidate School.



Training for OIF IV

Redlegs of the 3d Battalion, 6th Field Artillery (3-6 FA), 10th Mountain Division (Light Infantry), Fort Drum, New York, conduct air assault operations at Fort Indiantown Gap, Pennsylvania, in January. 3-6 FA was preparing for its rotation

to Iraq for Operation Iraqi Freedom (OIF) IV with the assistance of G Company, 104th Aviation. The battalion also fired thousands of 105-mm rounds during its week of pre-deployment training.

Photo by Joe Ketterer, Pennsylvania National Guard Public Affairs

2004 Hamilton Award Winner

The Hamilton Award was established in 2002 and is named after Alexander Hamilton, a Revolutionary War artilleryman and American statesman, to recognize a high-performing Army National Guard (ARNG) battery annually. The battery is selected based on specific criteria and a narrative of its performance. (For more information about the award and application/deadline for 2005, see the link "Knox, Hamilton and Gruber Awards" on the Fort Sill website at <http://sill.www.army.mil/awards/default.htm>.)

C/3-178 FA, 151st FA Brigade, SCARNG

C Battery, 3d Battalion, 178th Field Artillery (C/3-178 FA), 151st FA Brigade, South Carolina Army National Guard (SCARNG), has won the 2004 Alexander Hamilton Best ARNG Battery Award. The battery is commanded by Captain Christopher A. Hyman with First Sergeant Danny C. Richardson as his NCO leader.

C/3-178 FA is a corps support multiple-launch rocket system (MLRS) battery stationed in Hartsville. In November 2003, C Battery was alerted for deployment to support Operation Iraqi Freedom (OIF) II. By 3 January 2004, the Soldiers finished preparing for the tour and left for their deployment station at Fort Stewart, Georgia.

At Fort Stewart, C Battery began training for its nonstandard security and communications mission. It trained on several weapons, including the M240B, a system new to the battalion. It also trained on establishing traffic control points (TCPs), entering and clearing buildings, calling for medical evacuation (MEDEVAC), managing unexploded ordnance (UXO), controlling crowds, reacting to indirect and direct fire, clearing minefields, conducting convoy operations and operating the advanced FA tactical data system (AFATDS).

During a brief stay in Kuwait, C Battery Soldiers trained on convoy operations, staged their equipment and prepared for their security and communications mission along the supply route



Soldiers from C/3-178 FA with Iraqi school children during a "Backpacks for Iraq" gift drop.

with the largest volume of resupply in theater, Main Supply Route (MSR) Tampa, in the 197th FA Brigade area of operations (AO). The battery operated four emergency radio relay points (RPs) in southern Iraq along the MSR from the Kuwaiti border to Suk Ash Shuyukh, approximately 110 miles into Iraq.

Additional taskings included manning a quick-reaction force (QRF) along the MSR, providing intel support to the Kuwaiti border movement control team and providing extensive communications and cooperation with Danish and British units that patrolled the border. C Battery Soldiers worked diligently to expand, fortify and add watchtowers and sleeping areas to each RP. Their efforts produced a safer, cleaner and more defensible work area for Soldiers and their replacements.

The QRF team did an outstanding job throughout the deployment. When the battery arrived in country, there was a high level of civilian crime. The QRF engaged in many small arms incidents and interrupted five hijackings along the MSR. Its efforts reduced the crime rate in the AO by 95 percent.

C Battery was a key element in helping save the US government an estimated 120 million dollars in Coalition Force assets by securing transports broken down along the MSR.

The Soldiers of C Battery served 12 months securing the MSR for Coalition Forces as well as Iraqi nationals. They had strong support from their Family Readiness Group (FRG) and the com-

munity at home. Through the FRG's donations, Soldiers distributed school supplies, food, clothing and shoes to many of the local families in the AO. This helped establish the battery's rapport with the locals, which resulted in reports to the RPs regarding criminal activities in the area.

The British Army then conducted a large-scale cordon and search that helped decrease criminal activities. The Iraqi people took a more aggressive stance in policing their own area, as prompted by their interactions with C/3-178 FA.

During C/3-178 FA's OIF II deployment, six Soldiers were nominated for Bronze Stars, 22 for Army Commendation Medals and eight for Army Achievement Medals. Also during the deployment, 14 Soldiers received achievement coins from III Corp Artillery, the 197th FA Brigade, 160th Military Police (MP) Battalion and 3-178 FA. One Soldier received the Honorable Order of Saint Barbara.

The security of southern Iraq is vital to all operations within theater. If it were not for the Soldiers of C Battery keeping a vigilant watch over the MSR using conventional force as well as diplomacy, the highway would not have been a viable route for transporting supplies. C Battery made an impact in Iraq by securing, protecting and defending a mission-essential route for the Coalition Force as well as the Iraqi people.

As their crest reads, so the Soldiers of C/3-178 FA are and will remain *True and Tried*.

2004 Gruber Award Co-Winners

The Gruber Award was established in 2002 to recognize outstanding individual thought and innovation that results in significant contributions to or enhancement of the FA's warfighting capabilities, morale, readiness or maintenance. It is named after Brigadier General Edmund L. Gruber, 1879-1941, who, as a First Lieutenant in 1908, composed the *Caisson Song* that the Army adapted as *The Army Goes Rolling Along* in 1952. (For more information, see the link "Knox, Hamilton and Gruber Awards" on Fort Sill's website at <http://sill-www.Army.mil/awards/default.htm>.)

SFC William A. Covey C/3-319 FA, 82d Abn

Sergeant First Class (SFC) Covey, the Gunnery Sergeant, then Chief of Firing Battery (Platoon Sergeant) for C Battery, 3d Battalion, 319th Field Artillery (C/3-319 FA), 82d Airborne Division out of Fort Bragg, North Carolina, during its deployment to Afghanistan in support of Operation Enduring Freedom (OEF) III, is co-winner of the 2004 Gruber Award.

SFC Covey, from the *All American* 82d Division, is truly an *All American Redleg*. At 32, he hails from Mannington, West Virginia, and recently redeployed to Afghanistan for OEF V as Chief of Firing Battery for C/3-319 FA.

SFC Covey has served the artillery community with distinction for more than 12 years and has had a more positive impact on the artillery community than most Soldiers will have in 20 years.

Since he entered the Army in April 1992 as a Military Occupational Specialty (MOS) 13B Cannon Crewmember, he has held every cannoneer position from Advanced Party Man to Gunner. SFC Covey also has held every leadership position in the firing battery, including Howitzer Chief of Section,



SFC William A. Covey

Gunnery Sergeant, Chief of Firing Battery and Platoon Sergeant. He earned the Master Parachutist and the Air Assault Badges.

He has spent his entire career in the 82d Airborne Division with the exception of a tour at the Field Artillery Training Center (FATC), Fort Sill, Oklahoma. Never shy from taking on the tough jobs, he served as the Senior Drill Sergeant for 1-79 FA at the FATC from 1999 to 2001. That was the first year that female Soldiers trained at the ATC.

About serving as a Drill Sergeant for female Soldiers, SFC Covey said in the 26 May 2004 article "82d Honors Top Soldier, NCO" in the *Fayetteville Observer*, "...a Soldier is a Soldier, the bottom line. After the first two weeks, they all look exactly the same—rugged—and there with a specific goal in mind. That's to pass basic training and go to their National Guard or regular Army unit. It's our job to train them."

As Gunnery Sergeant of C/3-319 FA in support of OEF III, his battery was the first to fire lethal rounds in the Afghanistan theater—accurate and responsive for their *All American* infantry brethren, day or night and in all weather conditions.

The 26 May 2004 article describes

SFC Covey's first tour in Afghanistan: "He deployed from January to August 2003. Field Artillery Soldiers and their 105-mm howitzers did everything from shooting to harass [or kill] enemy Soldiers to firing illumination rounds to light an area at night."

In June 2004, his accomplishments and professionalism were recognized when he won both the 82d Airborne Division and the XVIII Airborne Corps NCO of the Year competitions. The competitions included the Army physical fitness test (APFT), rifle marksmanship, land navigation, written exam (testing everything from military history and current events to common warrior tasks knowledge) as well as hands-on warrior tasks. Each concluded with a board of senior NCOs.

"Smoke" Covey was selected to head the training team to convert the M119A2 battery into an M198 firing battery capable of conducting any mission in support of OEF VI. During this conversion, he was selected by the Sergeant Major of the Army to represent the Regular Army Component during the Secretary of the Army's and the Chief of Staff of the Army's Armed Services Committee hearings on Capitol Hill.

SFC Covey's other awards and decorations include the Bronze Star Medal, the Meritorious Service Medal (second Oak Leaf Cluster), the Army Commendation Medal (first Oak Leaf Cluster), the Army Achievement Medal (third Oak Leaf Cluster), National Defense Ribbon and NCO Development Ribbon (third award). He earned an Associate's Degree in General Education from Central Texas in 2003. He currently is working toward his BS in Education.

SFC Covey is an exceptional artilleryman, and his contributions to the Field Artillery and the US Army have been and continue to be significant. His dedication to duty and selfless service set the example for all Soldiers to follow.

Smoke is known for his passionate approach to being a NCO. As he has been heard to say on several occasions "Soldiers and soldiering are what it is all about. I love my duty to provide leadership and mentoring to any Soldier I can reach."

1-12 FA Vehicle Force Protection Project Team 17th FA Brigade

The Vehicle Force Protection Project Team of 1st Battalion, 12th Field Artillery (1-12 FA), 17th Field Artillery Brigade, III Corps Artillery Fort Sill, Oklahoma, is co-winner of the 2004 Gruber Award.

In spring 2003, the 1-12 FA *Raiders* deployed in support of Operation Iraqi Freedom (OIF) expecting to provide multiple-launch rocket system (MLRS) fires. Upon arrival, the battalion's mission became to recover and transport captured enemy ammunition (CEA) to demolition sites throughout the Sunni Triangle.

As the summer progressed, attacks against Coalition Forces increased, especially in the Sunni Triangle at sites known for their unrest: Fallujah, Ramadi, An Najaf and Samarah. The *Raiders* carried everything from small arms to 1,000 kilogram Air Force bombs, making the convoys an ideal target for insurgents.

The unit deployed with soft-sided high-mobility multipurpose wheeled vehicles (HMMWVs) and thin-skinned heavy expanded-mobility tactical trucks (HEMTTs). It soon became evident that these vehicles could not protect the force from small arms and fragmentation so common in roadside attacks. Additionally, like other MLRS battalions, 1-12 FA had a limited number of vehicles with weapons mounts.

In June and July 2003, the Army logistical community worked to provide steel vehicle hardening packages to units in the field, but the packages would not be fielded until late fall 2003. In regard to weapons mounts, ship dates were six to 10 months out, and anything ordered would not arrive in time. It was clear the battalion needed to improve vehicle force protection measures as soon as possible.

The battalion commander directed the formation of a Vehicle Force Protection Project Team consisting of Captain Travis A. Immesoete, the Battalion S4; Chief Warrant Officer Two Todd A. Cobb, the Battalion Maintenance Technician; and Sergeants John Blanshard and Ricky A. McConkey, Battalion

Welders. Their mandate was to pursue methods to improve vehicle protection and produce vehicle weapons mounts using the quickest and most efficient means obtainable.

The team contracted with local skilled labor to build the steel doors for HMMWVs and pedestal mounts for the HMMWVs or five-ton trucks. The team developed sketches and mock-ups and explained them to the Iraqis, despite language barriers. Then the bidding process with multiple local national vendors began.

Chief Cobb developed the mock-ups and sketches, working closely with Captain Immesoete, who negotiated with vendors to provide the products. Materials were evaluated to determine if they would suit the needs, given the vehicle capabilities, raw materials available on the local economy in enough quantities and the level of protection the materials could provide. Once materials were acquired, Sergeants Blanshard and McConkey provided countless hours of welding, using 42 bottles of oxygen acetylene in five months, an annual increase of 2,100 percent.

Captain Immesoete worked the acquisition process using purchase requests and contracts for purchases costing more than \$2,500 and field ordering officer (FOO) funds for all materials costing less than \$2,500. The initial prototype doors and pedestal mounts were bought using FOO money. Eight steel doors cost \$1,000 and three pedestal mounts cost \$2,100.

The products were field tested for survivability, compatibility with vehicles and protection levels. Some modifications were made, and then the main purchase requests and contract was let for 13 additional pedestal mounts (\$9,100) and 160 steel doors (\$20,000).

This initial project laid the ground work for steel cab improvements to HEMTTs and steel floor plates for



SGT John Blanshard welds armored doors onto a high-mobility multipurpose wheeled vehicle (HMMWV).

HMMWVs. The protection improvements were so successful that all battalions in the brigade used the designs.

The efforts of the Vehicle Force Protection Project Team were vital to Soldier survival in the battalion and continued during the deployment, resulting in more innovations. These projects enhanced force protection, making Soldiers safer as improvised explosive devices (IEDs) became more sophisticated. The team's innovations allowed the *Raiders* to fight through 15 IED attacks, four small arms attacks and one rocket propelled grenade (RPG) attack with zero casualties due to enemy action.

The *Raiders* traveled two million miles in Iraq, transporting more than 750 short tons of CEA, thus validating the importance of these vehicle force protection measures.

These vehicle improvements and several others were documented in a white paper that was shared with many units as well as the Army's Force Protection Project Team from Red Stone Arsenal, Alabama. The white paper is on the secure internet protocol network (SIPRNET) on the CounterStrike Task Force Webpage under "Current Ops: TTPs," dated 30 March, titled "Vehicle Force Protection Improvements in OIF."

The 1-12 FA Vehicle Force Protection Project Team truly made a difference—not only for the battalion and the FA, but also for the entire Army.

2004 Knox Award Co-Winners

The annual award is named for the first Chief of Field Artillery Major General Henry A. Knox, a Revolutionary War hero, and recognizes an outstanding Active Component (AC) battery based on specific criteria and a narrative of performance. A similar award was established in 1924 but was phased out in 1940 as World War II loomed. The Best Battery Award was reestablished in 2002. (For more information about the award and application and deadline for 2005, see the link "Knox, Hamilton and Gruber Awards" on the Fort Sill website at <http://sill-www.army.mil/awards/default.htm>.)

F/7 FAR 25th Infantry Division

F Battery, 7th Field Artillery Regiment (F/7 FAR), 25th Infantry Division (Light), Schofield Barracks, Hawaii, is the co-winner of the 2004 Henry A. Knox Best Active Component (AC) Battery Award. F/7 FAR's commander is Captain Brendan C. Raymond with First Sergeant Anthony D. Cortez as his senior NCO advisor.

FY04 marked a historic time for the 25th Division and F Battery. As the US continued the Global War on Terrorism, *Tropic Lightning* Soldiers received deployment orders to Operation Enduring Freedom (OEF) in Afghanistan and Operation Iraqi Freedom (OIF).

In October 2003, the *Big Guns* Battery received a unique mission: to provide lethal and nonlethal 120-mm M120 mortar fires in direct support (DS) of the 3d Brigade Combat Team (BCT) for OEF. F Battery leadership quickly developed the critical individual and collective task training to transform the M198 artillery battery into an M120 mortar battery that could fight and win in combat.

At Schofield Barracks, F/7 FAR instituted an extensive physical training program to prepare Soldiers for the rigors of combat. The program's success provided the ability to adapt to new climates

quickly and conduct combat operations.

F Battery deployed in December 2003 to the Infantry School at Fort Benning, Georgia, to train on the 120-mm mortar system. The firing platoons and their fire direction center (FDC) sections quickly mastered crew drills and technical fire direction and cer-

tified as 11C Mortarmen. Recognized as the elite firing battery of the 25th Division Artillery (Div Arty), F Battery quickly learned that its go-to-war mission as an M120 firing battery would split the battery and send it to four locations in Afghanistan.

In March 2004, F Battery began deploying to Afghanistan. 2d Mortar Platoon arrived and quickly occupied Forward Operating Base (FOB) Salerno in southeastern Afghanistan, 20 kilometers from the border with Pakistan. During the next three months, 2d Mortar Platoon conducted 22 combat missions, providing lethal and nonlethal fires in support of 1-501 Parachute Infantry Regiment (PIR).

In April, the remainder of the battery echeloned into theater with the Combined Task Force (CTF) Bronco, 3d Brigade, 25th Division. 1st Mortar Platoon conducted several combat operations in the Zabul and Arghandab Provinces and occupied Firebase Tycz in the Deh Rawod Province, providing fires in support of Special Forces operational detachment alpha (OD-A).

3d Mortar Platoon occupied FOB Lagman in the Zabul Province to provide fires in support of 2-35 IN. Finally, 4th Mortar Platoon and the Battery Headquarters occupied Kandahar Army Airfield with a primary mission of providing fires and a secondary mission of conducting mounted and dismounted patrols in Kandahar Province.

With only five months in country, F



Soldiers of F/7 FAR shoot from Forward Operating Base (FOB) Salerno, Afghanistan.

Photo by Staff Sgt. Bradley Rhem

Battery provided hundreds of safe, timely and accurate lethal and nonlethal fires in support of maneuver forces in contact.

The battery conducted joint combat and security operations with other government agencies, OD-A and Afghan Security Forces. The *Big Guns* represented the 25th Div Arty with distinction and conducted each mission with vigilance, professionalism and focus.

By mid-August 2004, operational needs compelled the division commander to order F Battery to employ its M198 howitzers in support of Coalition Forces in Regional Command East. F/7 FAR received its 155-mm M198 howitzers from Schofield Barracks and certified six howitzer sections and two FDCs in three days while simultaneously maintaining the ability to employ mortar systems in a DS role.

With the additional firepower, the battery made history by becoming the first American unit to fire a 155-mm artillery round inside Afghanistan. Collapsing all but 3d Mortar Platoon to perform the new M198 mission, F Battery deployed from Regional Command South to FOB Salerno in the Khowst Province. It remained there for the balance of its deployment, providing close supporting fires to 3/6 Marines, OD-A forces, other coalition and governmental forces and Afghan Security Forces along the Afghan-Pakistani Border.

3d Mortar Platoon deployed to FOB Asadabad in the Kunar Province to provide mortar fires in support of OD-A

and provisional reconstruction team units in Regional Command East.

During the past year, the Soldiers, NCOs and officers of F Battery have spent countless hours preparing for and executing combat operations. When taken at face value, this is exactly the task of the majority of units in the Army. However, this firing battery not only provided lethal fires, but did so on two weapons systems in a combat environment and has blazed a path of excellence for all batteries to emulate—one of flexibility and absolute dedication to accomplish the mission. *Big Guns!*

A/1-37 FAR, 3/2 SBCT

A Battery, 1st Battalion, 37th Field Artillery Regiment (A/1-37 FAR), 3d Stryker Brigade Combat Team, 2d Infantry Division (3/2 SBCT), Fort Lewis, Washington, is co-winner of the 2004 Henry A. Knox best AC Battery Award. The battery commander is Captain Matthew P. Lillibridge with First Sergeant Mark T. Council as his NCO leader.

The Soldiers of A/1-37 FAR epitomized the phrase “flexible, capable and loyal” throughout the last year during combat operations in Iraq in support of the Army’s first SBCT. The *Steel Battery* established the standard for excellence in the battalion and the Army as it developed emerging tactics, techniques and procedures (TTPs) for supporting an SBCT.

During an intensive train-up process at Fort Lewis and Udairi, Kuwait, Alpha battery set the standard for the bat-

talion in several areas. It demonstrated competence and motivation while training on both Field Artillery and maneuver-oriented tasks in preparation for movement into and sustained combat operations in Iraq. Knowing the operational environment would require additional skill sets, they aggressively trained to achieve tasks new to the battery.

Strong NCO leadership formed the core around which *Steel Battery* built a series of teams and consistently executed split-battery operations within the band of excellence. At any given time, the 60-man battery was assigned two to three tasks, each of which would have required the total focus of similarly manned and equipped units in the brigade.

During the brigade’s first combat operations in and around Samarra, the battalion selected *Steel Battery* to provide counterstrike for the brigade. The battery laid guns from other batteries on multiple azimuths-of-fire to support 6400-mil operations “on the minute.” It fired 65 missions, and on one occasion, its accurate fires forced the enemy to abandon 22 rockets prepared to engage a FOB. During the same time frame, the battery helped man a detainee processing facility for the 4th Infantry Division’s Operation Ivy Blizzard.

Steel Battery excelled while executing nonstandard missions during its deployment. Upon arriving in Mosul, the battery assumed responsibility for an area of operations (AO) larger than 1,500 square kilometers. Within this AO, it conducted direct actions capturing anti-Iraqi forces (AIF). It also conducted civil-military operations (CMO), working closely with local governments. Its joint operations with fledgling Iraqi police forces were significant in enhancing the professionalism and building the confidence of those forces.

2d Platoon operated independently and was geographically separated from the battery headquarters on a separate FOB. From January to June, it maintained security and supervised the largest fuel

transfer point in Iraq where local officials coordinated and supervised the reception and distribution of more than two billion liters of refined fuel valued at more than \$285 million. After the transfer of sovereignty, the battery taught, coached and mentored the staff of the Northern Iraq Oil Company.

2d Platoon’s mission, completed with outstanding professionalism, may prove to be the decisive reform of the economic campaign in Iraq.

A Battery’s Soldiers conducted combat patrols, countermortar and counter-rocket patrols, cordon and search missions, and stability and support operations (SASO). The battery’s successes significantly improved the quality of life for outlying towns in the Mosul area and established a foundation for a more secure region. The battery established health clinics, schools, water systems and electricity in towns that had never before had these services. It emplaced force protection measures for police traffic control points (TCPs) and barriers around government facilities and provided security for critical infrastructure.

In June 2004, the battery moved to FOB Endurance near Qayyarah, Iraq, and completed several critical, non-standard missions, including providing security for brigade communications assets in yet another split-battery operation, securing a large AO and providing a quick reaction force (QRF) for the FOB or anywhere in the AO.

Selected *Steel Battery* Redlegs trained 28 platoons—more than 1,100 Soldiers—in the new Iraqi National Guard (ING). Instruction included patrolling TTPs, clearing buildings and conducting other infantry tasks necessary to provide security for the region. The battery then conducted several combined operations with the ING, thus increasing the ING’s confidence and capabilities to serve Iraq in the future.

These combined operations captured many battalion targets and seized two large weapons caches. One of these was the largest operational arms cache seized north of Baghdad.

The Soldiers of A/1-37 FAR have demonstrated excellence across the spectrum of this conflict and are an outstanding example of what the Field Artillery can achieve. They continue to faithfully serve the big guns of the Army’s first SBCT.



Soldiers of B/1-37 FA fire at FOB Endurance, Iraq, 8 September 2004.