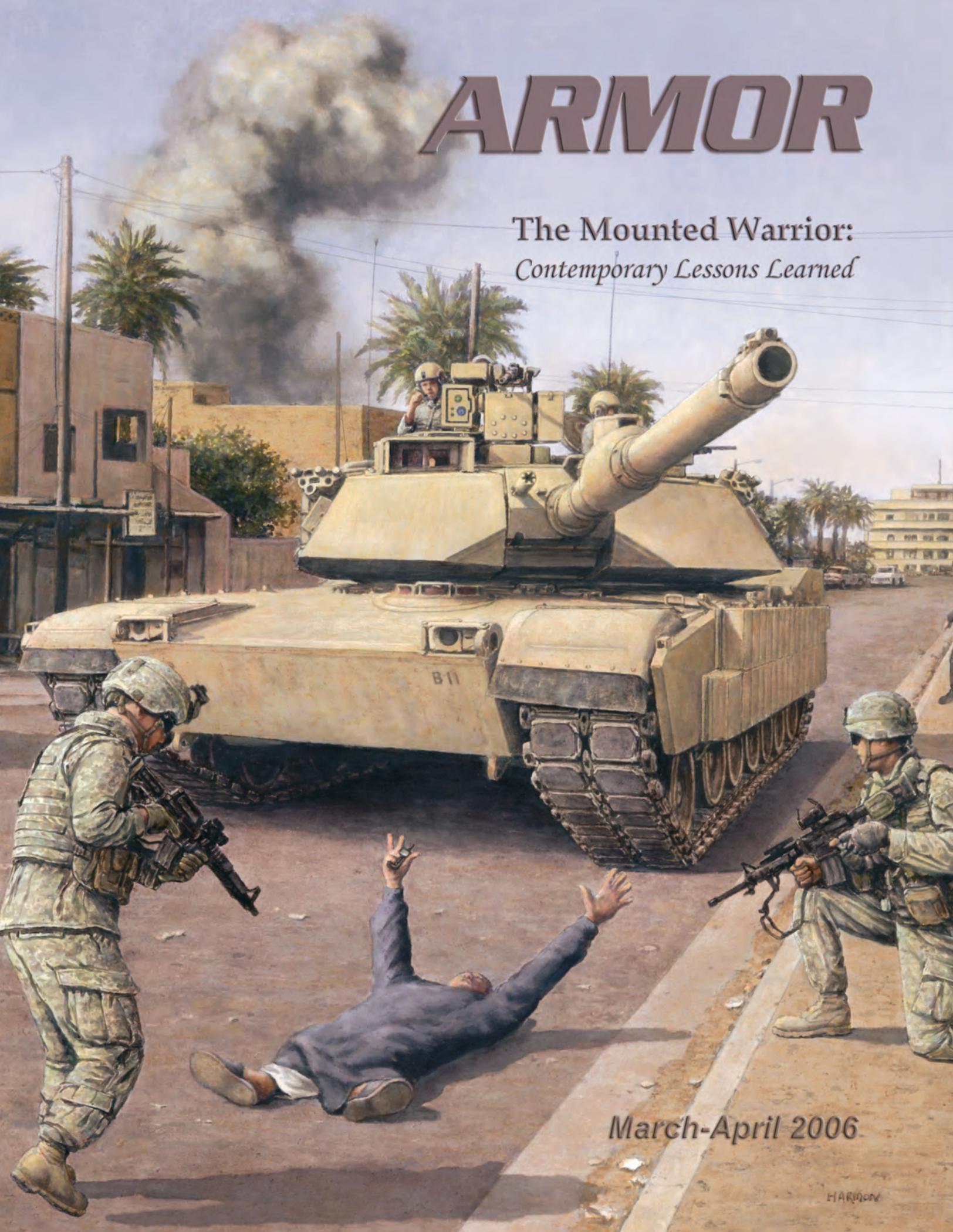


ARMOR

The Mounted Warrior:
Contemporary Lessons Learned



March-April 2006

HARQON

ARMOR

The Professional Bulletin of the Armor Branch PB 17-06-2

Editor in Chief
LTC SHANE E. LEE

Managing Editor
CHRISTY BOURGEOIS

Commandant
MG ROBERT M. WILLIAMS

ARMOR (ISSN 0004-2420) is published bi-monthly by the U.S. Army Armor Center, ATTN: ATZK-DAS-A, 201 6th Avenue, Ste 373, Building 1109A, Fort Knox, KY 40121-5721.

Disclaimer: The information contained in *ARMOR* represents the professional opinions of the authors and does not necessarily reflect the official Army or TRADOC position, nor does it change or supersede any information presented in other official Army publications.

Official distribution is limited to one copy for each armored brigade headquarters, armored cavalry regiment headquarters, armor battalion headquarters, armored cavalry squadron headquarters, reconnaissance squadron headquarters, armored cavalry troop, armor company, and motorized brigade headquarters of the United States Army. In addition, Army libraries, Army and DOD schools, HQ DA and MACOM staff agencies with responsibility for armored, direct fire, ground combat systems, organizations, and the training of personnel for such organizations may request two copies by sending a request to the editor in chief.

Authorized Content: *ARMOR* will print only those materials for which the U.S. Army Armor Center has proponentcy. That proponentcy includes: all armored, direct-fire ground combat systems that do not serve primarily as infantry carriers; all weapons used exclusively in these systems or by CMF 19-series enlisted soldiers; any miscellaneous items of equipment which armor and armored cavalry organizations use exclusively; training for all 19-series officers and for all CMF-19-series enlisted soldiers; and information concerning the training, logistics, history, and leadership of armor and armored cavalry units at the brigade/regiment level and below, to include Threat units at those levels.

Material may be reprinted, provided credit is given to *ARMOR* and to the author, except where copyright is indicated.

March-April 2006, Vol. CXV, No. 2

Features

- 6 **Armor in Urban Terrain: The Critical Enabler**
by Major General Peter W. Chiarelli, Major Patrick R. Michaelis, and Major Geoffrey A. Norman
- 12 **Task Force Iron Dukes Campaign for Najaf**
by Lieutenant Colonel Pat White
- 18 **Sadr City: The Armor Pure Assault in Urban Terrain**
by Captain John C. Moore
- 25 **Platoons of Action: An Armor Task Force's Response to Full-Spectrum Operations in Iraq**
by John P.J. DeRosa
- 31 **Light Cavalry Platoon — Armor Team Integration Procedures**
by First Lieutenant Jonathan Silk
- 36 **Task Force Death Dealers: Dismounted Combat Tankers**
by Captain Donald Stewart, Captain Brian McCarthy, and Captain James Mullin
- 40 **Death Before Dismount: Transforming an Armor Company**
by Captain Michael Taylor and First Sergeant Stephen Krivitsky
- 49 **“Checkmate on the Northern Front:”
The Deployment of TF 1-63 Armor in Support of Operation Iraqi Freedom**
by Major Brian Maddox
- 54 **3d Squadron, 7th U.S. Cavalry Up Front:
Operation Iraqi Freedom Lessons Learned**
by Major J.D. Keith
- 60 **Air-Ground Integration**
by Captain Shawn Hatch
- 65 **Reconnaissance Patrols in Baghdad**
First Lieutenant Gregory S. Hickerson
- 68 **Defeating the Threat in Iraq Through the Combined Arms Convoy Concept**
by Captain Klaudius K. Robinson
- 72 **Company-Level Cordon and Search Operations in Iraq**
by Captain Dale Murray
- 78 **Checkpoint and Traffic Control Point Operations**
by First Lieutenant Michael Gantert
- 80 **2006 Armor Warfighting Symposium:
“Mounted Warriors for a Nation at War”**
- 81 **2006 Armor Warfighting Symposium/Armor Trainer Update Schedule of Events**

Departments

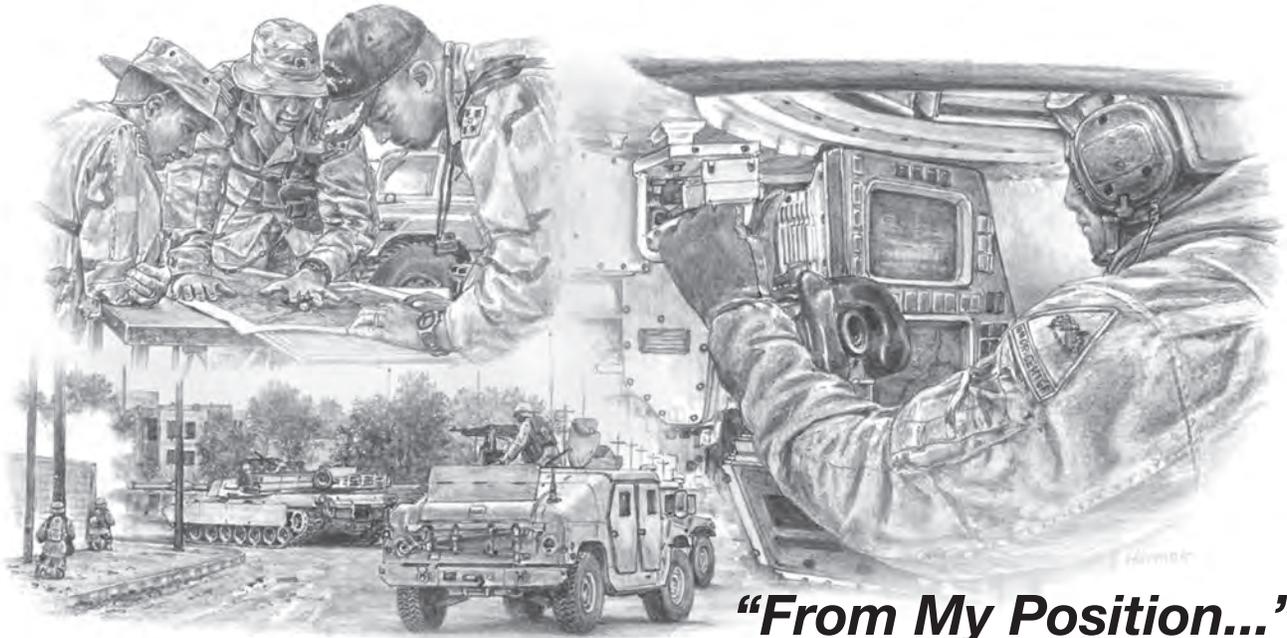
- 2 **Contacts**
- 3 **Letters**
- 4 **Commander's Hatch**
- 5 **Driver's Seat**



Periodicals Postage paid at Fort Knox, KY, and additional mailing offices. Postmaster: Send address changes to Editor, *ARMOR*, ATTN: ATZK-DAS-A, 201 6th Avenue, Ste 373, Fort Knox, KY 40121-5721.

Distribution Restriction: Approved for public release; distribution is unlimited.

USPS 467-970



“From My Position...”

“... politics is war without bloodshed while war is politics with bloodshed.”

Mao Tse-tung, *On Protracted War*, 1938

As Armor Soldiers serving during the Cold War, we learned to place the maximum amount of firepower at the decisive point on the battlefield to destroy our enemies as quickly as possible in the event deterrence failed. We learned to rapidly close with and destroy enemy forces using fire, maneuver, and shock effect. When deterrence failed during Operation Desert Storm, Saddam’s army learned the hard way what happens when you attempt to fight a well-equipped army that has had more than twenty years to perfect its ability to fight high-intensity wars. While some of our most senior military leaders made a few political decisions, our politicians played the largest role in determining the conditions for victory. The nature of this war allowed the majority of military leaders at the time to concentrate efforts on the application of violence alone.

Later on, during the mid-1990s, we learned how to keep the peace in places such as Bosnia-Herzegovina, Kosovo, Haiti, and Macedonia. These deployments were initially dubbed operations other than war (OOTW), as if this acronym made a clear distinction between the use of military forces in combat and the use of those same forces in less violent situations. Although using the armed forces in all of the situations described above was meant to achieve some political goal, we really saw the latter examples as something other than war. Military leaders during this period often made tactical decisions with profound strategic and political implications, but combat decisionmaking was rare. With few exceptions, most of us saw no middle ground between these two extremes.

Of course, our perceptions of the nature of war changed significantly once we were engaged in Afghanistan and Iraq. In both of these situations, we found ourselves fighting the “three-block war” that U.S. Marine Corps General Charles Krulak first addressed during the past decade. In other words, to paraphrase Mao, peacekeeping, high-intensity warfare, counterinsurgency, and deterrence are all forms of warfare. They only differ in the level of violence present and the tools available to the belligerents. In Iraq, many armor officers and noncommissioned officers have learned that their ability to teach people how to select a city council, turn on the electricity, or keep the streets clean is just as important as their ability to properly conduct a cordon and search operation or call for close air sup-

port. These young warrior-diplomats are performing their duties in ways that few American military thinkers envisioned 20 years ago, but are nevertheless very similar to how their 19th-century ancestors performed them on the Western frontier.

In short, our soldiers have not only had to adjust their tactics, but have also had to adjust their thinking. The Armor Conference that many of us were familiar with in the past has also changed to adapt to the war we are in now and may be fighting in the future, rather than the war we would prefer to fight. After a year-long absence, the Armor Conference has returned as the “Armor Warfighting Symposium.” Although visitors will see some similarities to past conferences, this year’s symposium will be fundamentally different.

Among the subject-matter experts at this year’s event will be armor leaders who have recently served in leadership positions from the tank/Bradley crew level to brigade command. They have conducted high-intensity, urban combat operations in Fallujah, and have retraced the footsteps of von Steuben, training Iraqi soldiers in Khaldiya. They are experts in counterinsurgency and mounted operations in urban terrain (MOUT). More importantly, these mounted warriors have successfully led soldiers fighting the three-block war and are more than willing to share their hard-won knowledge.

The 2006 Armor Warfighting Symposium, “Mounted Soldiers for a Nation at War,” will focus on soldiers in the ranks of staff sergeant through major. The reasons for this focus are simple. These soldiers are doing the armor force’s heaviest lifting in the current fight and they are learning the hard lessons while applying them on the ground. These soldiers are also the present and future leaders of the Armored Force. Unless peace is suddenly restored, and today’s experts are proven wrong, these soldiers will still be fighting this war when they are serving as the Army’s senior leaders. For these reasons, we will aim to capture their thoughts and experiences on warfighting and distribute them to the force while we still have the opportunity. Within a year’s time, the dynamics of the current battlefield could completely shift.

If there was ever a conference you should attend, it is this one. The Armor Force needs you here in May to share your experiences and ideas. You will not regret the time you spend here, and the force will be better for your efforts. See you there!

S.E. LEE

By Order of the Secretary of the Army:

PETER J. SCHOOMAKER
General, United States Army
Chief of Staff

Official:

Sandra R. Riley
SANDRA R. RILEY
Administrative Assistant to the
Secretary of the Army

0535601

Points of Contact

DSN prefix – 464-
Commercial prefix– (502) 624-

ARMOR Editorial Offices

Editor in Chief LTC Shane E. Lee E-mail: shane.lee@knox.army.mil	4087
Managing Editor Christy Bourgeois E-mail: charlotte.bourgeois@knox.army.mil	4582
Editor Vivian Oertle E-mail: vivian.oertle@knox.army.mil	2610
Art Director Mr. Jody Harmon E-mail: jody.harmon@knox.army.mil	3923
Editorial Assistant Kathy A. Johnson E-mail: kathy.johnson@knox.army.mil	2249

ARTICLE SUBMISSIONS: To improve speed and accuracy in editing, manuscripts should be originals or clear copies, either typed or printed out double-spaced, with a 3½-inch disk in Microsoft Word, Rich Text Format, or ASCII (please indicate wordprocessing format on disk or cover letter). Tape captions to any illustrations or photos submitted. Additionally, we accept articles as e-mail or attachments at:

ArmorMagazine@knox.army.mil

When sending articles via e-mail, please include a complete mailing address and daytime phone number.

SUBMISSION POLICY NOTE: Due to the limited space per issue, we will not print articles that have been submitted to, and accepted for publication by, other Army professional bulletins. Please submit your article to only one Army professional bulletin at a time.

GRAPHICS AND PHOTOS: We prefer conventional photo prints, but will accept electronic graphic and photo files in no less than 300 dpi format. (Please do not send photos embedded in PowerPoint and Word.) If you use PowerPoint for illustrations, please try to avoid the use of excessive color and shading. If you have any questions concerning electronic art or photo submissions, call Vivian Oertle at the phone number above.

ADDRESS CHANGES, PAID SUBSCRIPTIONS, AND ST. GEORGE-ST. JOAN AWARDS: For paid subscription service, address changes, and delivery problems, or for awards information, contact Connie Stiggers or Connie McMillen, United States Armor Association, P.O. Box 607, Fort Knox, KY 40121; E-mail: *Brightcg@bbtel.com*; phone (502) 942-8624; or FAX (502) 942-6219. You can also access the Association through their web site at *www.usarmor-assn.org*.

UNIT DISTRIBUTION: To report unit free distribution delivery problems or changes of unit address, e-mail us at *ArmorMagazine@knox.army.mil*; phone DSN 464-2249, commercial (502) 624-2249; or FAX DSN 464-5039, commercial (502) 624-5039. Requests to be added to the official distribution list should be in the form of a letter or e-mail to the Editor in Chief.

EDITORIAL MAILING ADDRESS: ARMOR, ATTN: ATZK-DAS-A, Bldg 1109A, 201 6th Avenue, Ste 373, Fort Knox, KY 40121-5721.

ARMOR MAGAZINE ONLINE: Visit the ARMOR magazine web site at *www.knox.army.mil/armormag*.

ARMOR HOTLINE — DSN 464-TANK: The Armor Hotline is a 24-hour service to provide assistance with questions concerning doctrine, training, organizations, and equipment of the armor force.

U.S. Army Armor Center

Commanding General MG Robert M. Williams E-mail: robert.m.williams@knox.army.mil	(ATZK-CG) 2121
Deputy Commanding General BG Albert Bryant Jr. E-mail: albert.bryant@knox.army.mil	(ATZK-DCG) 7555
Chief of Staff COL Russell Gold E-mail: russell.gold@knox.army.mil	(ATZK-CS) 1101
Command Sergeant Major CSM Otis Smith E-mail: otis.smith@knox.army.mil	(ATZK-CSM) 4952
Command Sergeant Major to DCG CSM Joseph P. Zettlemoyer E-mail: joseph.zettlemoyer@knox.army.mil	(ATZK-DCG-CSM) 7091
Special Assistant to the CG (ARNG) COL Marlin Levendoski E-mail: marlin.levendoski@knox.army.mil	(ATZK-SA) 1315
Directorate of Training, Doctrine, and Combat Development COL Richard G. Piscal E-mail: richard.piscal@knox.army.mil	(ATZK-TD) 8247
TRADOC System Manager for Abrams COL John M. Shay E-mail: john.shay@us.army.mil	(ATZK-TS) 7955
Experimentation and Analysis Directorate COL Douglas L. Fletcher E-mail: douglas.fletcher@knox.army.mil	(ATZK-UAE) 7809
TRADOC Capability Manager, Platform Battle Command/Combat Identification COL Alan Mosher E-mail: alan.mosher@knox.army.mil	(ATZK-PBC-CID) 4009
Office, Chief of Armor Aubrey Henley E-mail: aubrey.henley@knox.army.mil	(ATZK-AR) 5155 FAX 7585
Unit of Action Maneuver Battle Lab Joe Hughes E-mail: joe.hughes@knox.army.mil	(ATZK-UA) 5050
Assistant TRADOC System Manager Soldier - Mounted Warrior MAJ Bryan Salyers E-mail: bryan.salyers@knox.army.mil	(ATZK-ATS) 3519

U.S. Army Armor School

Director of the Armor School COL Robert Valdivia E-mail: robert.valdivia@knox.army.mil	(ATZK-DAS) 1050
1st Armor Training Brigade COL Peter D. Utley E-mail: peter.utley@knox.army.mil	(ATZK-BAZ) 8736
16th Cavalry Regiment COL Michael W. Alexander E-mail: michael.alexander@16cav.knox.army.mil	(ATZK-SBZ) 7848
NCO Academy CSM Samuel Wilson E-mail: samuel.wilson@knox.army.mil	(ATZK-NC) 5150

LETTERS

Canister Round a "Hit"

Dear *ARMOR*,

This letter is in response to the article by Major (now LTC) Benjamin Harris, titled "Gunner, Canister, Troops," published in the November-December 2005 issue of *ARMOR*. The article focuses on several different areas related to this round, including the rapid acceleration of the type classification and materiel release milestones, as well as the production of the cartridges fielded. This was made possible by the efforts of both government and industry — truly a remarkable team accomplishment.

Recently fielded in Iraq, tankers from both the U.S. Army and the U.S. Marine Corps have been conducting familiarization training over the past couple of months, normally prior to their planned deployments to Kuwait and Iraq. During this familiarization training, units have been firing at various ranges from 50 to 300 meters with very positive results. Troop type formations and various types of wall obstacles have been included in the target sets. Again, while results at various ranges differ slightly, the overall effects were devastating and certainly showed the unique capability of the canister round. As one soldier recently said after witnessing a canister round fired, "The enemy can still run but the canister round will make his hiding places even smaller!"

Additionally, the design and manufacture of a dummy round for loader training and familiarization is nearly complete. As units continue to familiarize or employ the M1028, they learn more about the canister round; they learn just how devastating it is at close range. As LTC Harris said, "Gunner, Canister, Troops!"

WAKELAND KUAMOO

Dear *ARMOR*,

Hip-hip hooray!!! The long-awaited and sorely needed tank canister round is close to reality!!! In Vietnam, our M48 medium gun tank's basic load was usually close to 50-percent canister. Our tanks primarily used canisters. There were many enemy soldiers in the open that our machine guns could not engage as effectively. And even when we were in the deep woods or jungle, we would use canister rounds to clear a hole in the vegetation for a high-explosive round to follow.

JOHN WEAR
Former SGT, USMC

"Big 12" Should Include Tactical Competence, Intelligence, Courage

Dear *ARMOR*,

I would like to address two of your articles in the January-February 2006 issue of *ARMOR*. Regarding Lieutenant Drohan's article, "An Integrated Approach: British Political-Military Strategy in the Malayan Emergency," we must remember that most of the insurgents were Chinese communists. They were outsiders in Malaysia. Dramatically different from the situation in Vietnam, where the United States supported a Catholic regime associated with the French colonialists and later the Japanese col-

laboration. There was no sanctuary, no North Vietnam, Cambodia, Laos, Iran, or Syria in where they could recover and reorganize. We must be cautious of which lessons we take from this successful counterinsurgency.

The main thrust of this letter responds to Lieutenant General Ulmer's article on leader behavior, specifically at the division command level. It is incomprehensible to me that the "Big 12" does not include tactical competence (generalship), intelligence, and courage. In war, that is the bottom line.

The English soldiers in the Peninsula referred to Wellington as "that long-nosed bastard who beats the French." He despised his own soldiers' behavior, but admired and relied on their fighting qualities. Aside from his immediate coterie, his officers did not much care for him. The men certainly did not love Wellington the way Napoleon's soldiers loved him; however, before a battle, they would turn and look for him until they saw him. Then they would settle in. Wellington delivered victory.

Most of Jackson's officers thought he was certifiable. He never shared his plans, he was ruthless about march discipline, and he was hardly charismatic. As a professor at VMI, he was dull and pedantic. However, he was one of the rare generals in the Civil War who understood a flank attack. During battle, he transformed from a plough horse to a war horse. McClellan, on the other hand, was much beloved in the Army of the Potomac, but tactically inept.

Not micromanage? Read Patton's instructions to the Third Army published in 1944. Men in war follow leaders who deliver victory. As a former coach at the National Training Center, I was astounded by the number of brigade commanders whose plan of attack consisted of a piecemeal frontal attack, leading with the light battalion at night in an unsupported fight. Early that morning the mech-heavy task force impaled itself on one of the MRCs. The tank-heavy reserve was committed to continued failure at the point where the mech-heavy force was destroyed. And during this operation, artillery did not provide support at the decisive point. By the time close-air support arrived, the battle was over. Granted, this was a training environment on a MILES battlefield, but it was nevertheless startling how many brigade combat teams did not apply basic U.S. doctrine.

In Russ Weigley's book, *Eisenhower's Lieutenants*, he states that in the ETO about one-third of division commanders were relieved of command. In its short 200-year history, the Army has been challenged to identify military talent in peacetime. If we are going to apply something like the Big 12 to this process, please let us start with tactical and technical competence, exceptional intelligence, and moral and physical courage.

PHILIP ALLUM
LTC, U.S. Army, Retired

"The Fetterman Fight"

(Ed. Note - The cover of the November-December 2005 issue of *ARMOR* illustrates "The Fetterman Fight," by J.K. Ralston. The painting was owned by Mr. and Mrs. Don Foote, who

bequeathed the painting to the Fort Phil Kearny/Bozeman Trail Association. The November-December issue does not give proper credit to the Association for the use of the famous oil painting. *ARMOR*'s staff wishes to apologize for this oversight, and on behalf of the Association, welcome new members from all over the United States.)

The Fort Phil Kearny/Bozeman Trail Association, formed in 1986, lobbied the Wyoming legislature for support for the staffing, operation, and maintenance of the Fort Phil Kearny and Fetterman battle sites. The association was instrumental in obtaining the gift of a building from First Interstate Bank, which became the Visitor's Center. They raised money to renovate the building, pay the staff, advertise, establish the annual Bozeman Trail Days celebration, and much more.

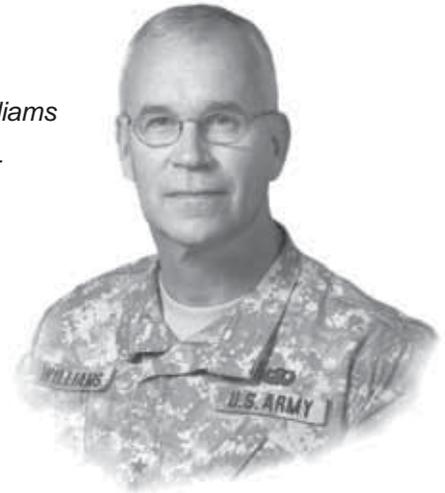
Later, the Association purchased about 24 acres at the Wagon Box site, which increased it from only 1 acre. Members from 26 states and 6 foreign countries contributed to that effort. The Association was the catalyst for the land trade with Texaco, giving the state an additional 15 acres at the fort site and an additional 11 acres at the Fetterman site. The Foundation was formed primarily to preserve more land around the sites, and over \$152,000 was raised to purchase the lots on Sullivant Hills north of the fort — again, spurred by a \$60,000 challenge grant from the Peter Kiewit Foundation. Association members from 30 states and 9 foreign countries donated to the effort. The Association has contributed close to \$1 million dollars, based on today's values, in land, a building, artifacts, dioramas, archaeology, art, and books. Once purchased by the Foundation, the land was gifted to the Association.

Fort Phil Kearny is believed to be the largest military-built stockade fort west of the Mississippi. Today, visitors can gaze out from the fort and the Battle Ridge and see what the soldiers, Indians, and civilians saw in 1866. Land under negotiation includes the Fort Phil Kearny cemetery location, once a national cemetery where the dead from the Fetterman battle were originally buried and where some bodies may still remain; the sites of the homes of Wheatley and Fisher, civilians killed at the battle; two sawmill sites; blockhouse sites; the fort brickyard site, and more. To the north is Sullivant Hills with life-sized Indian silhouettes on the horizon. To the east is the John Phillips monument, a tribute to his famous 236-mile ride to alert the command at Fort Laramie after Fetterman's tragic fate. Pilot knob is visible to the south. From this site, soldiers signaled the fort of the attack on the wood wagons, which precipitated the Fetterman disaster. The earliest route of the famous Bozeman Trail goes through this area and the Bozeman Trail story is integral to the history of the fort. There are teepee rings and other sites, which are virtually undisturbed.

Requests for information may be sent to Fort Phil Kearny/Bozeman Trail Association, P.O. Box 5013, Sheridan, WY 82801 or visit the web site at <http://www.philkearny.vcn.com>.

LARRY LEWIS
President, FPK/BTA

Major General Robert M. Williams
Commanding General
U.S. Army Armor Center



“Mounted Warriors for a Nation at War” — 2006 Armor Warfighting Symposium

In light of the upcoming Armor Warfighting Symposium in May, this issue of *ARMOR* Magazine is a special edition focused on this year's theme, “Mounted Warriors for a Nation at War.” In this issue, you will find a detailed agenda of the conference, instruction on how to submit nominees for the Frederick Franks Award, and a number of specially selected past articles that support the symposium's theme.

These premier articles cover a wide variety of topics from authors with a broad spectrum of experience; however, they are all connected. First, each article demonstrates the continuing necessity of mounted forces in today's environment. Mounted warriors in tanks and Bradleys led the way during the initial invasion of Iraq and performed superbly. As we transitioned to the subsequent “Phase IV,” we quickly discovered that armored vehicles, including Abrams and Bradleys, were just as important at the lower spectrum of conflict as they were during the drive to Baghdad. Mounted warriors from both the U.S. Army and Marine Corps are critical to our success in Iraq and they will remain a key component of our force until our mission is complete.

The articles are also connected by the experiences of young leaders learning to adapt their organizations and tactics, techniques, and procedures to the environments they may face. You can see the evolution of the authors' challenges and so-

lutions by the dates the original articles were written. The earliest articles deal with facing a conventional threat during the initial invasion of Iraq and a subsequent high-intensity phase. The articles from 2004 and later deal increasingly more with stability and reconstruction operations and security threats posed by an insurgency. In each article, leaders find creative and innovative solutions to complex operations.

Our mission at the Armor Center is to determine how to best prepare our Army's mounted Soldiers for continued success on today's complex battlefields and share that invaluable information with the operational force. The 2006 Armor Warfighting Symposium directly supports that mission. The heart of the symposium will be daily subject-matter-expert briefings, as well as a series of focused discussion panels. These discussion panels are made up of Soldiers ranging in rank from staff sergeant to colonel and cover a number of current and relevant topics. My mission for these discussion panels is to determine how we continue to defeat the creative, asymmetrical enemy we fight today and expect to fight in the future. I have requested the Armor Force's best Soldiers to participate because the true benefit of this symposium will be the lessons these panel members develop and take back to share with fellow Soldiers. This symposium is a once-a-year opportunity for the Armor Force to come together and learn from each other. I en-

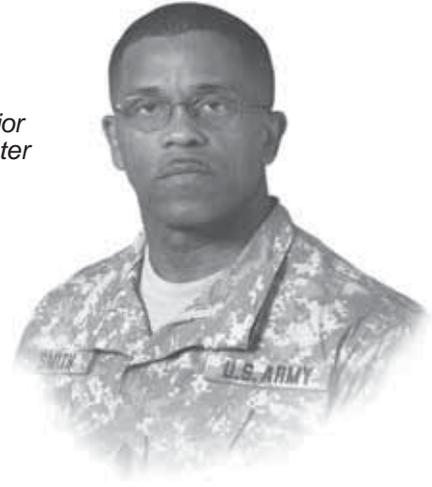
courage everyone to take advantage of this opportunity.

I would like to remind our readers that the Frederick Franks Award is a great chance to recognize someone who has worked hard to make our branch and our Army better. The award recognizes an active duty or reserve officer, noncommissioned officer, or Department of the Army Civilian who has demonstrated a long time contribution to the warfighting capabilities of the U.S. Army. In keeping with the theme “Mounted Warriors for a Nation at War,” this year we will give special consideration to the nominees' contributions toward the tactics, techniques, and procedures in today's current operating environment. I ask everyone to consider who in your organization might be a good nominee.

Our mounted force is the best our nation and our world have ever seen, and events such as this symposium will only make it stronger. I am confident that all of us will depart the Armor Warfighting Symposium better prepared to defend our nation. I am proud of the great work our Armor Soldiers are doing around the world and I am proud to be your branch chief. You are truly making a difference and the legacy of your accomplishments will live for years. The 2006 Armor Warfighting Symposium will be a great event and I look forward to seeing you in May.

FORGE THE THUNDERBOLT!

CSM Otis Smith
Command Sergeant Major
U.S. Army Armor Center



Training the Stryker — Forging Into the Future

In keeping with the theme of this year's Armor Warfighting Symposium, "Mounted Warriors for a Nation at War," I would like to update the force on the status of the Stryker vehicle and the current training program being conducted at Fort Knox to ensure Armor Soldiers have a thorough understanding of the vehicle and how to employ it effectively in the Global War on Terror.

Of the ten different variants of the Stryker vehicle, Fort Knox is the proponent for the reconnaissance vehicle (RV), the command vehicle (CV), and the mobile gun system (MGS). The Fort Knox Stryker New Equipment Training (NET) Team has the responsibility of overseeing training conducted by the General Dynamics Land Systems (GDLS) contractors at the unit and crew levels. All of the personnel assigned to the Fort Knox Stryker NET Team are certified instructors on the RV and CV, and will be certified on the MGS when that program comes online in early 2006. This certification is conducted in conjunction with the GDLS contractors and instructors who are already on hand and have teaching experience.

Units being outfitted with the Stryker vehicles undergo quite a bit of training and reorganization. Some of these units are former light infantry, which have very little, if any, experience with heavy vehicles. For these Soldiers, it is a big change. For others, mainly the scouts (19D series), it is not much of a change since they are familiar with Bradleys and HMMWVs.

During the period of instruction, crews receive a class on the basic characteristics and capabilities of the Stryker. Most students find this one of the more interesting classes they receive during the NET

process. They learn how to conduct thorough preventive maintenance checks and services on the vehicle and identify the location of key components that must be checked daily. The crew also receives classes in recovery operations, which make units more self-sufficient.

The crews also undergo an extensive driver's training course, which requires every crewmember to operate the Stryker over various types of terrain and through various types of weather conditions. The Stryker is equipped with the new driver's vision enhancer (DVE), which can be used during both day and night driving operations. Once the crew has completed the 40-hour driver's training requirement, crewmembers can be licensed to operate the vehicle.

Training requirements on the CV are extremely stringent due to the vast amount of electronics equipment contained inside the vehicle. If the equipment is not powered up properly, the entire system could short-out and cause loss of important communications on the battlefield. The training requirements include complete shutdown of the vehicle's system, bringing it back online, and sending messages through Force XXI battle command brigade and below (FBCB2) and over the tactical internet via satellite uplinks.

The last portion of the NET includes going to the range and becoming familiar with firing various weapons from a new platform. For the RV, this includes firing the M2 heavy barrel flex .50-caliber machine gun and the 40mm MK19 grenade launcher. The CV, which is outfitted with the remote weapons station, is capable of firing from both closed and open hatch positions — a new event for

most Soldiers. Firing a .50-caliber machine gun at a target located behind a window at 1,500 meters, and hitting that target with a single shot, is pretty amazing as well.

In addition to the NET Team, 5th Squadron, 15th Cavalry, 1st Armor Training Brigade, at Fort Knox, provides RV training to advanced individual training (AIT) Soldiers who will be assigned to Stryker brigades once they have successfully completed basic training and advanced individual training. This is accomplished through a two-week add-on course where the Soldiers will receive condensed classes, which include vehicle operations and driver's training.

Once the MGS fielding program is established, the Stryker NET Team will assume that role as well. For many tankers, going from a 68-ton tracked armored vehicle down to an 18-ton wheeled armored vehicle is hard to grasp and appreciate. However, with its 105mm main gun, the MGS will undoubtedly get a chance to prove itself in the role of infantry support in the Global War on Terror. The first units are scheduled to begin receiving their MGS vehicles sometime in 2006. Part of the MGS NET will include shooting combat tables IV through VIII, which will be tested and validated at Fort Knox in the early part of 2007. The 19K Soldiers assigned to the Stryker NET Team are preparing to begin the training and certification processes so we can get this much desired vehicle out in the inventory.

The Armor Warfighting Symposium promises to be the best yet! I am looking forward to seeing you there.

Armor in Urban Terrain: The Critical Enabler

by Major General Peter W. Chiarelli, Major Patrick R. Michaelis, and Major Geoffrey A. Norman

(Reprinted from March-April 2005)

“...tanks and mechanized Infantry face problems in confines of urban areas that place them at a severe disadvantage when operating alone. Only together can these forces accomplish their mission with minimal casualties...”¹

Task Force (TF) Baghdad’s adaptation to fighting in the urban canyons of Al Tharwa (Sadr City) and the cemeteries of An Najaf has been both remarkable and significant. It has proven the reality of urban combat — we can win and we can win decisively.

The new fight brings to light a cautionary message to the force — be wary of eliminating or reducing the option of heavy armor; it has proven decisive and has been the critical enabler that allowed TF Baghdad to win every fight, everyday. The enemy we fight in streets and crypts is not connected by a vast suite of electronics packages; instead, they use proven kinetic techniques, such as the rocket-propelled grenade (RPG), the command-detonated improvised

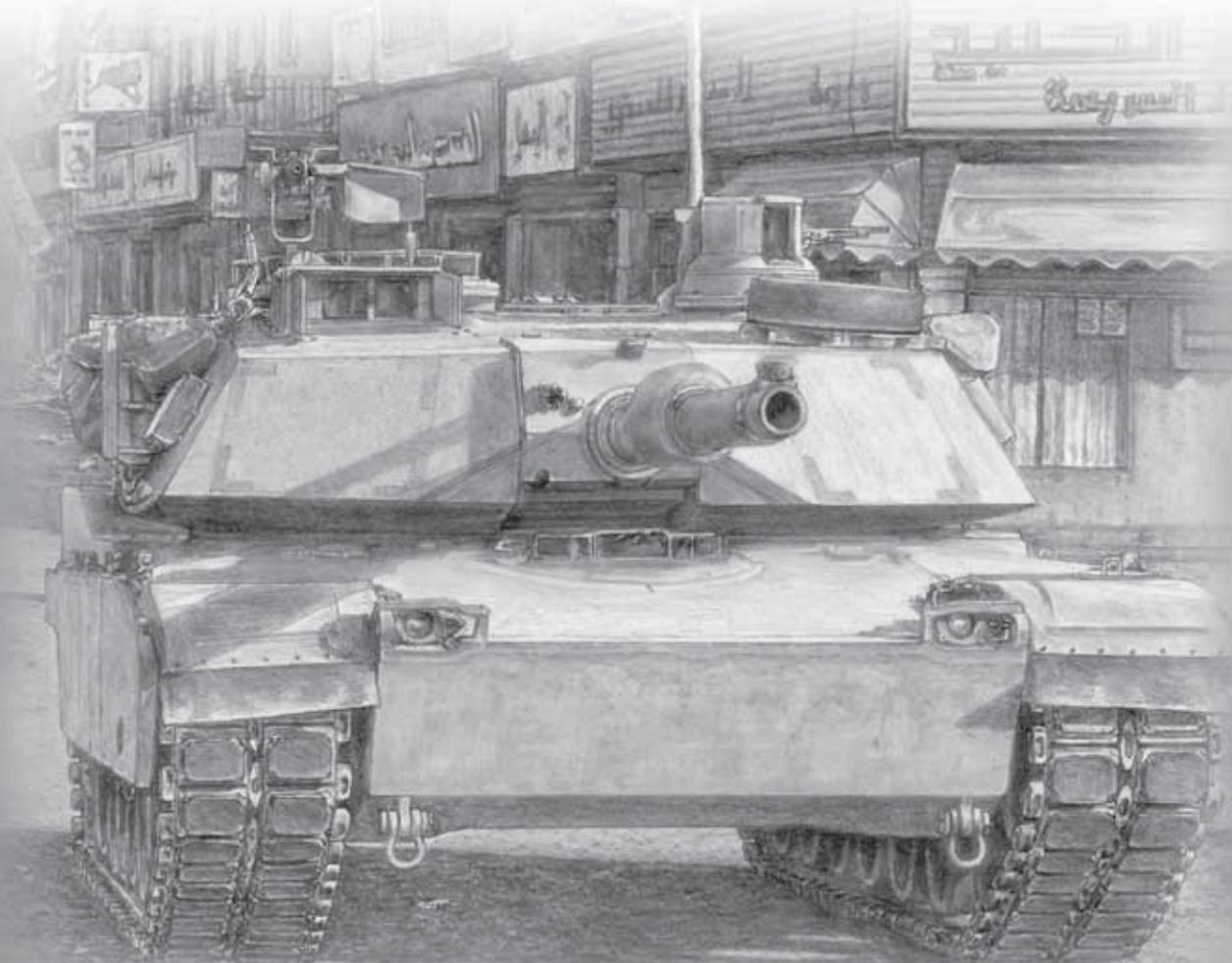
explosive device (IED), the mortar, and the AK47 in an asymmetric fashion, using the concrete valleys of the cityscape to their advantage.

This evolution in warfare is not a side note in history; it is a foreshadowing of operations to come. The mass migration of humanity to cities and the inability of third-world nations to keep abreast of basic city services relative to growth, breeds discontent. It is a harvesting ground for fundamentalist ideologues.

This article should serve as a note of concern to the force. Eliminating or reducing heavy armor systems from inventory will remove valuable assets that prove decisive when moving from a maneuver war to a street war.

Al Tharwa: The Sadr City Box

During the April-June and August-October 2004 Shia uprising of Muqtada Al Sadr’s militia in Al Tharwa (Sadr



“The commander’s independent sight systems offset the protective measure of vehicles moving through the city with hatches fully closed. The second sight afforded another field of view, allowing the gunner to primarily observe enemy alleys. Instead of the commander being relegated to what the gunner was observing, or struggling to gain situational awareness through vision blocks, he became an integral part of the vehicle and patrol team by providing coverage of secondary enemy avenues of approach, oriented forward of the vehicle or toward the opposite flank vehicle’s immediate rooftops, providing high-angle coverage.”



City) and An Najaf, it became clear that the ultimate task organization of choice depended on the enemy threat. Patterns of employment of the combined arms team that both solidified and challenged existing doctrine were also made clear.

The grid-like pattern of Al Tharwa presented an interesting tactical challenge to the soldiers and leaders of 2d Battalion, 5th (2-5) Cavalry Regiment (TF Lancer), 1st Brigade Combat Team, 1st Cavalry Division, Fort Hood, Texas. As Muqtada’s militia began actively attacking coalition forces, TF Lancer worked rapidly to defeat the insurgent uprising while protecting its soldiers.

As its primary avenue of approach, the enemy chose side street alleys, which Bradley Fighting Vehicles (BFVs) and M1A2 system enhancement package (SEP) tanks could not negotiate due to sheer width and obstacles such as disabled civilian vehicles and air-conditioning units. As these vehicles progressed throughout the city, the militia would attack their flanks, seeking to disable them with IEDs, RPGs, and AK47s.

U.S. Army Field Manual (FM) 3-06.11, *Combined Arms Operations In Urban Terrain*, Appendix C, states: “If isolated or unsupported by infantry, armored vehicles are vulnerable to enemy hunter/killer teams firing light and medium antiarmor weapons. Because of the abundance of cover and concealment in urban terrain, armored vehicle gunners may not be able to easily identify enemy targets unless the commander exposes himself to fire by opening his hatch or by infantrymen directing the gunner to the target.”²

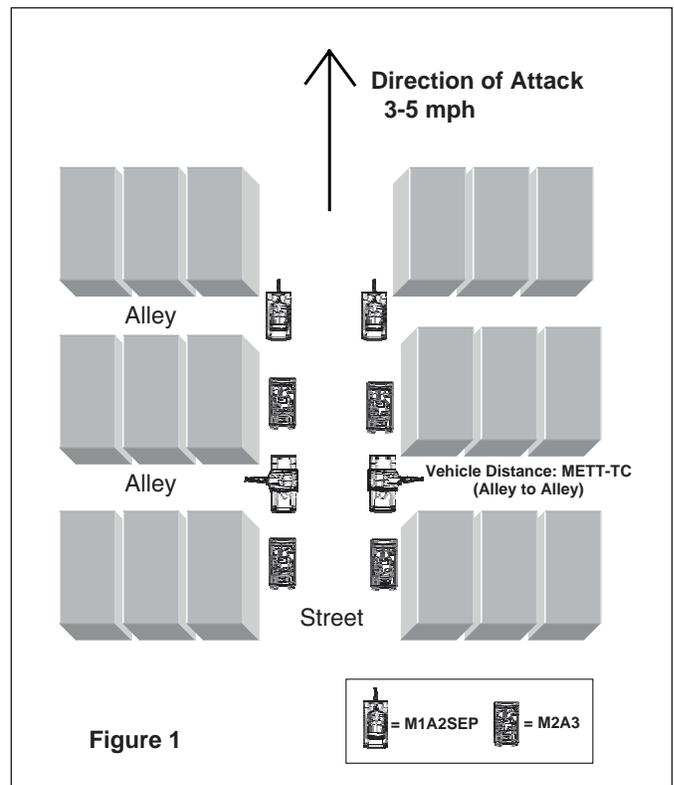
Initially, following standard doctrine, the task force moved throughout the city in column or staggered-column formations, assigning typical 360-degree sectors of fire to cover all enemy avenues of approach. However, with the vertical firing platforms of rooftops and the coordinated attacks on both flanks through use of alleys, the task force had to rapidly adapt to the emerging enemy threat.

The task force quickly learned to move throughout the city in protected mode (buttoned up) and maximize the capability of the dual sights provided by the M1A2SEP, equipped with the gunner’s primary sight and the commander’s independent thermal viewer (CITV), and the M2/3A3 improved Bradley acquisition subsystem (IBAS) with the commander’s independent viewer (CIV). As shown in Figure 1, their refined movement-to-contact formation resulted in a rolling battleship of armored vehicles in a “box” formation, moving in a deliberate, methodical progression through the main streets of Al Tharwa, maximizing the protection of the armor packages.³ Success relied on the skill of the

driver, the armor package of the M1A2 and the latest generation M2/3A3 and the dual sight capability afforded by the vehicle upgrades.

Moving buttoned up in a pure mechanized/armor formation, the combat patrol would reposition at the release point into a rectangular formation of at least six armored vehicles. Moving vehicles parallel to each other created an artificial set of interior lines to protect the exposed flank of the opposite vehicle and allow a full three-dimensional, 360-degree coverage of the constantly shifting battlespace.

The commander’s independent sight systems offset the protective measure of vehicles moving through the city with hatches fully closed. The second sight afforded another field of view, al-



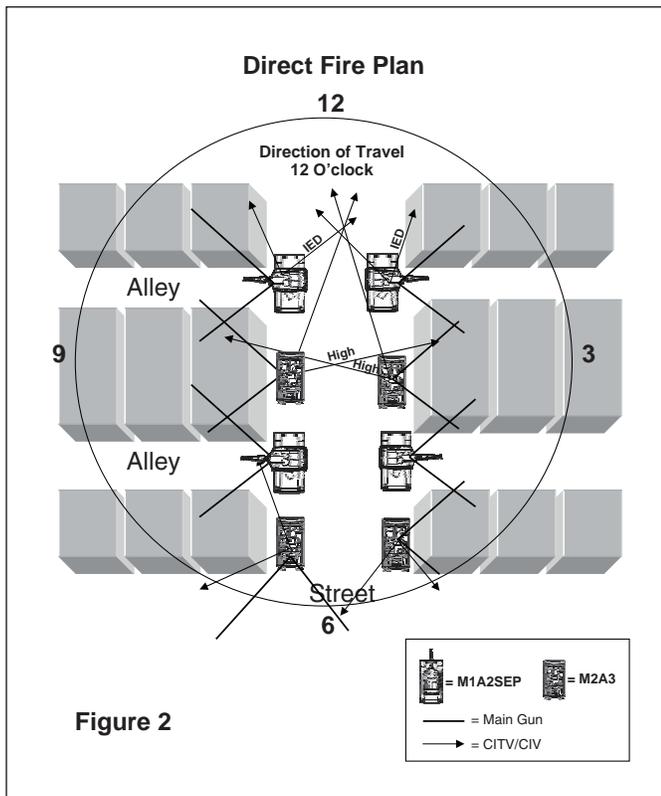


Figure 2

lowing the gunner to primarily observe enemy alleys. Instead of the commander being relegated to what the gunner was observing, or struggling to gain situational awareness through vision blocks, he became an integral part of the vehicle and patrol team by providing coverage of secondary enemy avenues of approach, oriented forward of the vehicle or toward the opposite flank vehicle's immediate rooftops, providing high-angle coverage. See Figure 2.

Moving block by block, the patrol would travel at extremely slow speeds to allow for acquisition of targets in the alleyways and proper handoff to subsequent vehicle gunners. Although not quite a 'steady platform' for the Bradley, the standard engagement was less than 200 meters — the proximity to targets allowed for successful coax engagements. The CIV and CITV were used to scan opposite rooftops, or forward and to the flanks of the gunner's primary sector to allow immediate target handoff.

Drivers keyed off the front left vehicle for rate of movement and worked as integral members of the team to identify targets, maintain proper dispersion, and move to predetermined locations. At short halts, drivers would establish a point of domination by immediately moving to overwatch the closest alley, which was the most likely enemy avenue of approach.

"Armored forces can deliver devastating fires, are fully protected against antipersonnel mines, fragments, and small arms, and have excellent mobility along unblocked routes."⁴

The success of the box in attriting enemy forces in Al Tharwa was causal to the armor packages of the M1-series tank and latest generation Bradley. This capability allowed absorption of the enemy's primary weapons system (IED), and protected infantry dismounts that spent many hours traveling in the backs of Bradleys, enslaved to the squad leader display to maintain situational awareness. This same technique, used with lighter skinned vehicles, would not have been effective in achieving the task

force's objectives during movement to contact due to asymmetric advantages the enemy retains by fighting on their turf.

As always, the enemy has a vote and began adapting to the successful employment of the Sadr City box. They began to move increasingly toward using IEDs to disable vehicles and subsequently cause a catastrophic kill by using RPGs and mortars. This prompted the task force to adopt a heavier stance in the lead elements, stressing the use of the M1A2SEP to lead each combat patrol. The tank, with its armor package, could take the brunt of the effect of IEDs laid throughout the route. In some cases, crews could identify detonation wires running from hidden IEDs through global positioning systems (GPS) and CITV. Once identified, the crews could 'disable' the IED by destroying the detonation wires with direct fire or by directly firing at the IED's point of placement. Stripping all unnecessary equipment from the bustle rack and moving buttoned up allowed follow-on Bradleys to service targets that succeeded in climbing on top of tanks or getting within their deadspace.

Because of the close range of engagements in the city, the primary weapons system on both the tank and Bradley became the coax, normally zeroed at about 200 meters. Recon by fire of suspected IED locations was authorized, but leaders always remained cognizant of collateral damage through positive identification of targets. Because of the desire to minimize collateral damage, a check in the system for using 25mm and 120mm was developed by the task force, which forced company commanders to clear fires for 25mm and battalion commanders to clear fires for 120mm.

"Armored vehicles can move mounted infantrymen rapidly to points where, together, they can dominate and isolate the cordoned area."⁵

In war, bad things happen. The enemy objective in both Al Tharwa and An Najaf was to disable a vehicle and exploit it for an information operations success. Moving through the streets of Baghdad, it was inevitable that a vehicle would become disabled, leading to specific battle drills within the task force. The remaining vehicles in the box would move to provide a wall of steel around the disabled vehicle; infantrymen would dismount from the backs of the M2s to cover deadspace, either by tying into the adjacent vehicles or occupying by force a strongpoint position. M88s, escorted by a quick reaction force (QRF) patrol, would move rapidly to the disabled vehicle and begin extraction. The screen established by the initial patrol would protect the M88 crew as they extracted the vehicle.

"Decentralized armor support greatly increases a small infantry unit's combat power. However, dispersed vehicles cannot be easily and quickly concentrated."⁶

An Najaf: The Combined Arms Patrol

In An Najaf, the terrain dictated different tactics while fighting the same enemy. What remained constant was the overwhelming domination of the armor/mechanized combination as *the enabler* to support the decisiveness of the mission.

In August, elements from the 2d Brigade Combat Team (Blackjack) and the 3d Brigade Combat Team (Greywolf), 1st Cavalry Division, rapidly moved south of Baghdad to An Najaf and fought the Muqtada's militia on different terrain. Task Force 1st

Battalion, 5th (1-5) Cavalry Regiment, 2d Brigade Combat Team, 1st Cavalry Division, faced unique challenges as narrow parallel trails through the cemetery and old city of An Najaf forced units to attack with multiple, section-sized elements along adjacent trails, which were often separated from mutual support.

A combined arms section became the preferred maneuver element. The section normally included a tank and Bradley attacking abreast, trailed by an M1114. The tank often advanced slightly ahead of the Bradley to absorb the initial energy of enemy ambushes. These ambushes and enemy engagements ranged from IEDs, mines, and RPGs, to mortars and snipers. The Bradleys would protect the flank and elevated shots against the tank, and the M1114 provided local and rear security for lead vehicles using its M240 machine gun. Dismounted soldiers from the Bradley and M1114 would disperse to the flanks of the section to eliminate enemy attempting to get into blind spots of the armored systems. Due to the restrictiveness of the cemetery's tombstones, mausoleums, and support buildings, maintaining visual contact with friendly forces was extremely difficult, requiring crews to maintain voice contact to keep vehicles and dismounted movement synchronized. Situational awareness was also critical in the clearance of fires, as both 120mm mortar and 155mm artillery were employed. See Figure 3.

At times, narrow trails forced the tank to move to a flank, based on traversing limitations, and allow the Bradley to engage and service targets. To mitigate risk to the tank, the infantry would move to the tank's flank to prevent the enemy from mounting from the rear. If infantry were committed or unavailable, a snip-

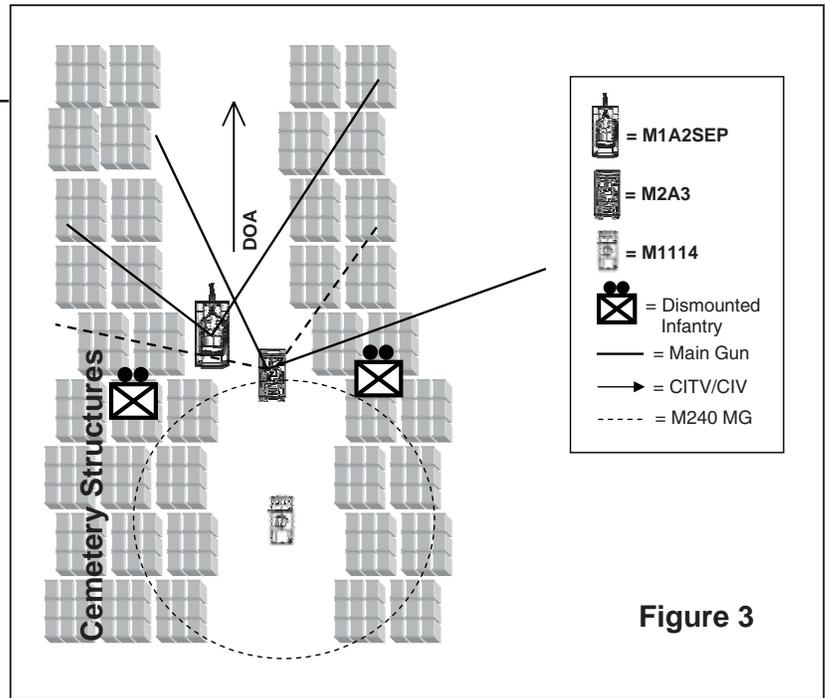
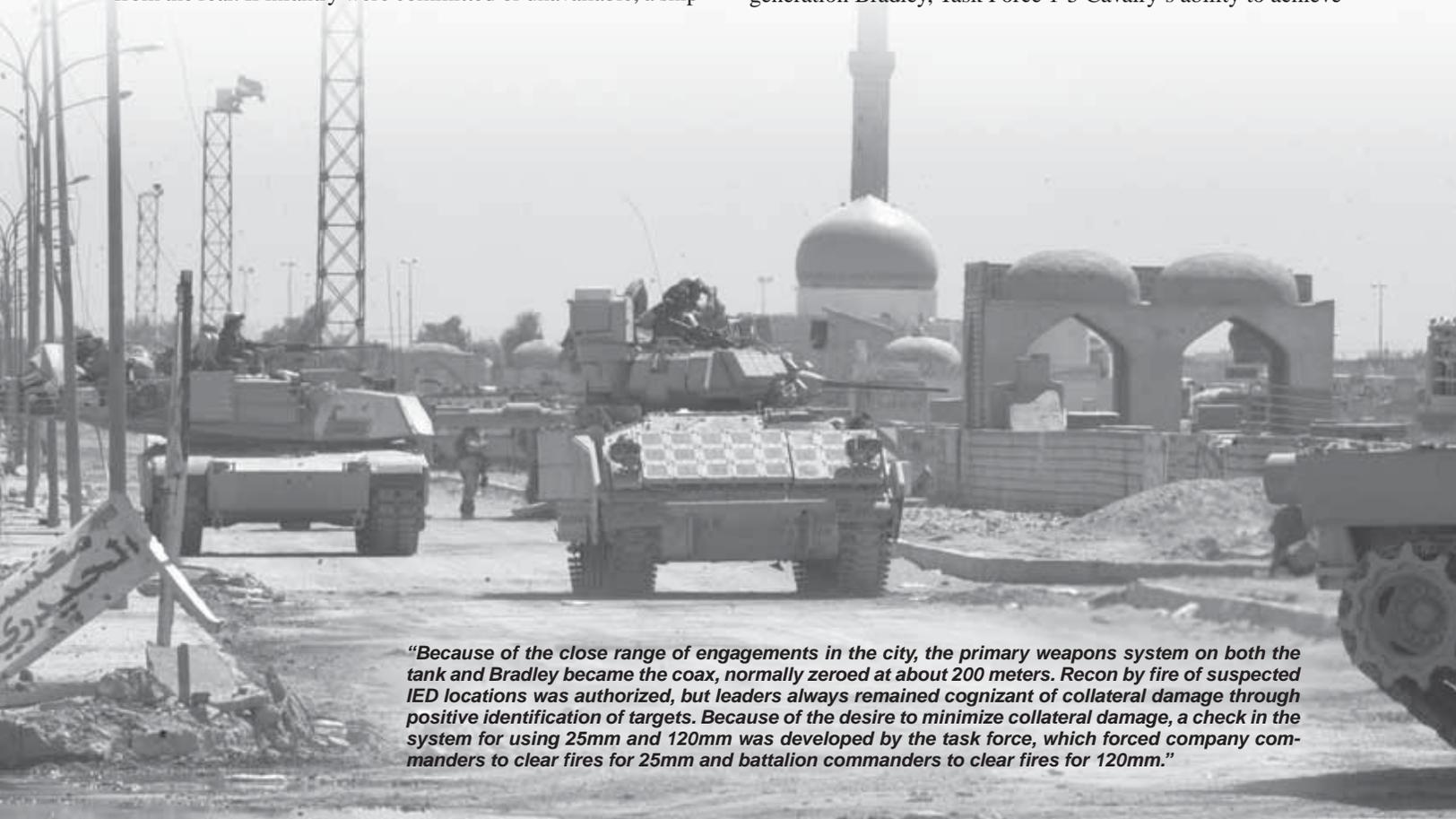


Figure 3

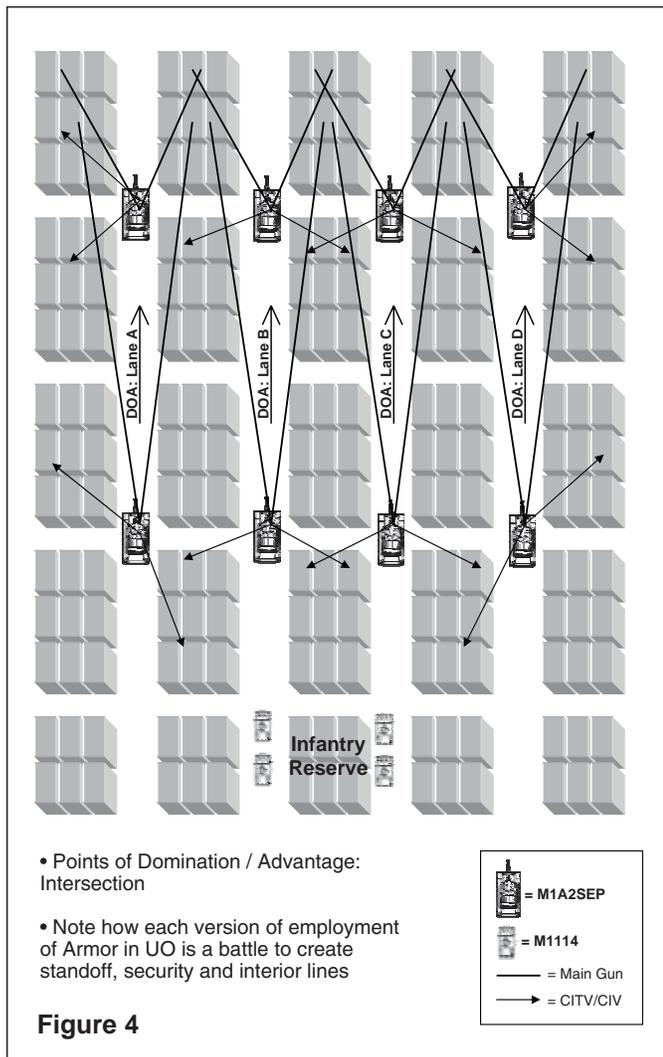
er was emplaced to overwatch the tank, providing the same protection and early warning. The final option was to use the M2A3's CIV to cover the tank's position.

Like units in Al Tharwa, Task Force 1-5 Cavalry generally fought buttoned up. The propensity for Muqtada's militia to engage through sniper fire or by dropping hand grenades on crews from above, forced this tactic. This tactic also allowed overwatch vehicles to engage targets that moved within the vehicle's dead-space to its immediate front.

Without the armor protection afforded by the tank and latest generation Bradley, Task Force 1-5 Cavalry's ability to achieve



"Because of the close range of engagements in the city, the primary weapons system on both the tank and Bradley became the coax, normally zeroed at about 200 meters. Recon by fire of suspected IED locations was authorized, but leaders always remained cognizant of collateral damage through positive identification of targets. Because of the desire to minimize collateral damage, a check in the system for using 25mm and 120mm was developed by the task force, which forced company commanders to clear fires for 25mm and battalion commanders to clear fires for 120mm."



decisive success in An Najaf would have been characterized by higher casualties and a longer campaign. Used in conjunction with a combined arms dismounted infantry team, the tank and Bradley, having devastating effects on Muqtada militia largely attributed to the protection afforded by their armor packages, forced the enemy's hand and led to capitulation by Muqtada al Sadr.

"Due to the length of the tank main gun, the turret will not rotate if a solid object is encountered."⁷

Southern An Najaf: The Lane Attack

Task Force 2d Battalion, 7th (2-7) Cavalry Regiment, attached to the 39th Brigade Combat Team, 1st Cavalry Division, was assigned to the southern sector of An Najaf, which was characterized by a narrow, residential grid-like road network that, unlike Task Force 2-5 Cavalry in Al Tharwa, prevented full lateral traversing of the M1A2SEP's main gun.

C Company, Task Force 3d Battalion, 8th (3-8) Cavalry Regiment, 3d Brigade Combat Team, 1st Cavalry Division, attached to Task Force 2-7 Cavalry, developed the 'lane attack' approach to application of armor in urban environments that characterized the unit's area of operations. To maximize the capabilities of the armor packages and the independent sights, the unit created section level *lanes* or directions of attack. Vehicles would

move to "points of domination" (the intersections) to maximize the ability to traverse the turret and use the CITV. The first tank would orient low, forward, and to an unprotected flank. The second tank would be two blocks back, clearing forward and high over the lead tank. The CITV would cover an unprotected flank and rear. One block over, on a parallel street, would be a second section-level direction of attack that would be occupied by a wing tank section. This lateral dispersion of forces in extremely canalized terrain created a set of interior lines that afforded lateral security. Up to two platoons would be put on line, along four lanes, with infantry (in M1114s) in a reserve role behind the center echelon tank sections. See Figure 4.

"Because of the complex terrain, defending forces can rapidly occupy and defend from a position of strength."⁸

Observation and Examination

Whether fighting enemy forces on home turf, on a commercial or residential grid pattern such as in Al Tharwa or southern An Najaf, or on irregular patterns of the cemetery or old city of northern An Najaf, leaders can benefit by observing and examining these three separate units and their invaluable successes:

Adaptable leadership. Throughout each experience, our leaders consistently and rapidly adapted to enemy tactics and maintained the initiative. Although there are similar doctrinal threads in the employment of the combined arms team in each instance, it is the development and implementation of an emerging set of tactics and techniques in direct relation to enemy employment that led to its defeat.

Confidence in equipment. Current armor packages, the M1A2 SEP and the latest generation M2/3A3 (with enablers) can take the brunt of enemy weapons systems. They can survive first contact, which is critical to tactical success. However, there is a small risk associated with employment of current armor packages — enemy forces will exploit what they perceive as weaknesses. Units must take this into consideration when occupying or creating a positional advantage.

Independent sights. We no longer have the standoff envisioned in fighting a war on the plains of Europe. Instead, we fight a dirty, close fight against an asymmetric threat that uses crude weapons. It drives units to move through the urban landscape buttoned up. The CITV and the CIV give back to the vehicle and unit commanders capabilities lost by operating in this posture. Units must train to conduct entire operations with hatches closed.

Points of domination. Vehicles, sections, and units move to and occupy positional points of domination (or advantage), normally an intersection, where they can best take advantage of the capabilities afforded by the M1A2 and latest generation M2/3A3 armor package (with enablers), the dual sights, and weapons systems.

Create standoff. Create reaction time to allow servicing of targets. In some cases, that 'standoff' is a function of location (see points of domination). In other cases, it is a function of speed. Slowing movement allows time for acquisition, drawing out enemy forces, and servicing targets in the close confines of the urban landscape.

Create interior lines. Offensive and defensive box formations create conditions to maximize the capability of the dual sights by eliminating the need to secure a flank, which is protected by the vehicle to the unobserved flank. This further offsets the en-

emy's propensity to execute simultaneous attacks from multiple surface and elevated avenues of approach.

We must continue the debate about the relevancy of armor. It would be wise to listen to some of our own doctrine when examining future combat systems. The trend is clear; the hardest place to fight and win — in the city — will dominate future U.S. Army operations. We cannot rely solely on a suite of electronics packages to offset the brunt of an enemy attack, which will be characterized by crude but effective weapons and an inherent terrain advantage due to the complexity of the city fight. The solution is good planning, the resolve of leadership, and the confidence that the equipment they fight in will protect our soldiers. The critical enabler is lethal and survivable M1 and M2/3 armored packages, coupled with increased situational awareness afforded by an independent commander's sight. These systems must remain in our inventory for immediate employment by deployed forces. Our tanks and Bradleys must not diminish in numbers but become more capable through continuous upgrades that protect our soldiers and allow them to dominate the unseen, often unnoticed enemy force that lurks in the shadows of alleys.



Notes

¹U.S. Army Field Manual (FM) 3-06.11, *Combined Arms Operations in Urban Terrain*, U.S. Government Printing Office, Washington, D.C., 28 February 2002, Appendix C.

²Ibid.

³The box formation is not new to the first team. In 1993, then Major General Wesley Clark introduced and trained the box formation as the division commander. He contended it offered the same advantages in the open terrain of the National Training Center in fighting an enemy that were used the wadis and IV lines to engage attacking forces from a position of advantage.

⁴FM 3-06.11, Appendix C.

⁵Ibid.

⁶Ibid.

⁷Ibid.

⁸U.S. Army Field Manual (FM) 3-06, *Urban Operations*, U.S. Government Printing Office, Washington, D.C., 1 June 2003, p. 6-5.

MG Peter W. Chiarelli is currently serving as commanding general, 1st Cavalry Division and Task Force Baghdad, Camp Al Taheer, Iraq. He received a B.S. from Seattle University, an M.P.A. from the University of Washington, and an M.A. from the United States Naval War College. His military education includes Armor Officer Basic Course, Infantry Officer Advanced Course, the United States Naval Command and Staff College, and National War College. He has served in various command and staff positions, to include commander, 2d Battalion, 1st Infantry, 9th Infantry Division, Fort Lewis, WA; G3 (Operations), 1st Cavalry Division, Fort Hood, TX; Deputy G3 (Operations) and Director for Plans, Training and Mobilization, III Corps, Fort Hood, TX; commander, 3d Brigade, 2d Infantry Division, Fort Lewis; executive officer to the Supreme Allied Commander Europe, Supreme Headquarters Allied Powers Europe, Belgium; assistant division commander (support), 1st Cavalry Division, Fort Hood; and director, Operations, Readiness and Mobilization, Office of the Deputy Chief of Staff, G3, United States Army, Washington, DC.

MAJ Patrick Michaelis is currently serving as battle command officer, 1st Cavalry Division and Task Force Baghdad, Camp Al Tahreer, Iraq. He received a B.A. from Texas A&M University and an M.P.A. from Harvard University. His military education includes Armor Officer Basic Course, Armor Officer Advanced Course, Cavalry Leaders Course, Scout Platoon Leaders Course, Combined Arms and Services Staff School, Airborne School, Air Assault School, and Ranger School. He has served in various command and staff positions, to include assistant professor, U.S. Military Academy, West Point, NY; S4, A Troop commander, and headquarters and headquarters troop commander, 1st Battalion, 7th Cavalry Regiment, 1st Cavalry Division, Fort Hood, TX; assistant S3, 1st Squadron, 4th (1-4) Cavalry, 1st Infantry Division, Schweinfurt, Germany; tank platoon leader, scout platoon leader, and troop XO, 1-4 Cavalry, Schweinfurt and Bosnia.

MAJ Geoffrey Norman is currently serving as course manager, Armor Captains Career Course, 3d Squadron, 16th Cavalry Regiment, Fort Knox, KY, and recently returned from service with 2d Brigade Combat Team, 1st Cavalry Division, Baghdad, Iraq. He received a B.S. from the United States Military Academy. His military education includes Combined Arms and Services Staff School, Armor Officer Advanced Course, Armor Officer Basic Course, Cavalry Leaders Course, Airborne School, and Air Assault School. He has served in various command and staff positions, to include small group instructor, Armor Captains Career Course, Fort Knox; observer controller, Cobra Team, National Training Center, Fort Irwin, CA; troop commander, A Troop, 4th Squadron, 7th Cavalry, Camp Garry Owen, Korea; tank platoon leader and battalion S4, 1st Battalion, 12th Cavalry Regiment, Fort Hood, Texas.



“Due to the restrictiveness of the cemetery’s tombstones, mausoleums, and support buildings, maintaining visual contact with friendly forces was extremely difficult, requiring crews to maintain voice contact to keep vehicles and dismounted movement synchronized. Situational awareness was also critical in the clearance of fires, as both 120mm mortar and 155mm artillery were employed.”

Task Force Iron Dukes Campaign for Najaf

by Lieutenant Colonel Pat White

(Reprinted from November-December 2004)

On 22 April 2004, Task Force (TF) 2d Battalion, 37th Armor, 1st Brigade, 1st Armored Division, the 'Iron Dukes,' assumed mission from 3d Brigade, 1st Infantry Division, in the holy city of An Najaf, Iraq. The enemy, known as Muqtada's militia, controlled An Najaf and neighboring Al Kufa. The mission statement appeared simple: destroy the militia and restore order to An Najaf/Kufa to allow transition of authority to a legitimate Iraqi government; and, on order, transfer security responsibilities to Iraqi security forces (ISF).

When the fighting stopped and the smoke cleared on 4 June 2004, TF Iron Dukes had battled nonstop for five weeks and broken the enemy's will to fight, destroying over 600 militia and wounding countless others, capturing or destroying all types and calibers of weapons, successfully detaining two top aides to Muqtada al-Sadr, and seizing weapons caches in the holy cemetery and Sahla Mosque.

For the Iron Dukes, the road to An Najaf began on 28 May 2003. The Iron Dukes were cross attached to the 'Dragoons,' 2d Armored Cavalry Regiment (ACR). The Dukes accepted attachment of one light cavalry troop and one detached tank company. For the next 10 months, the Dukes would perform combat missions, peacekeeping missions, and recruit and train 500 Iraqi police and an Iraqi civil defense corps battalion in southern Baghdad.

Between 4 April and 10 April 2004, the Dukes fought in Sadr City, Baghdad, under tactical control of 1st Brigade, 1st Cavalry, followed by fights in Al Kut on 10 April and Ad-Diwaniyah on 17 April. These actions successfully prepared the Iron Dukes for one of the most intense urban battles since the Iraq ground war in 2003.

The fighting in Najaf began on 28 April 2004. Available combat potential for the fight included: two M1A1 Abrams integrated management (AIMS) organic tank companies, comprised of companies Aggressor and Crusader; two light cavalry troops, made up of Apache Troop, 1st Squadron, and Iron Troop, 3d Squadron; one Paladin battery with fire-finder radar, Assassin, 2d Battalion, 3d Field Artillery; one military police (MP) company (minus), Warbear, 2175th Battalion, Missouri National Guard; one MP platoon, Renegade, 66th MP Company, Fort Lewis, Washington; one light combat engineer company (CEC), 84th CEC, 2d ACR; one psychological operations team; two civil affairs teams; an electronic warfare platoon; and an organic headquarters and headquarters company.

The task force organized forces into four maneuver teams, as shown in Figure 1. These forces were arrayed across the battlespace in three forward operating bases (FOBs), separated by approximately 40 kilometers. Headquarters and headquarters company (minus) operated from FOB Duke, a dusty patch of ground

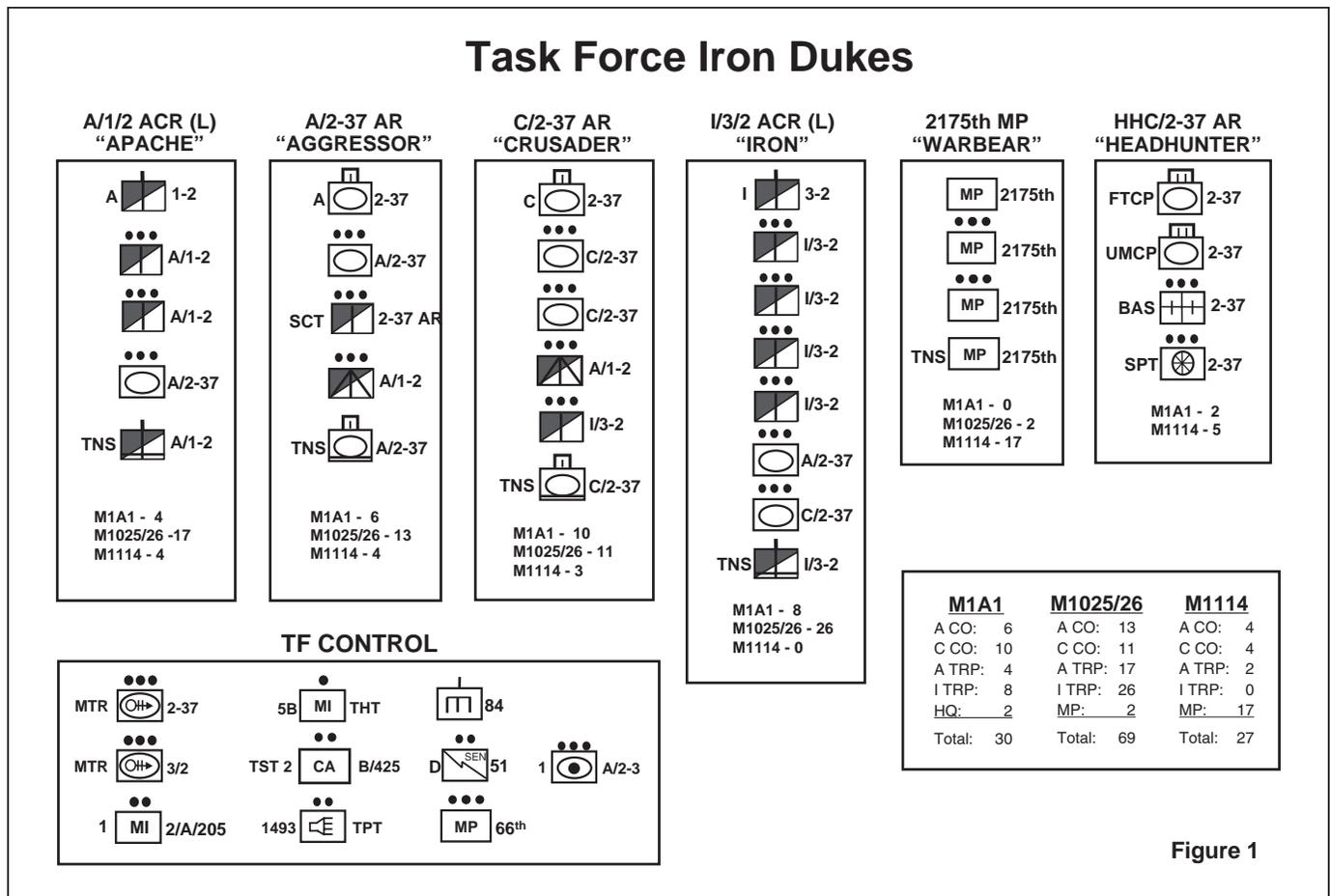


Figure 1

in the middle of the desert. One tank team and the Paladin battery were located at FOB Hotel on the northern outskirts of An Najaf. The rest of the task force collocated with an El Salvadorian battalion in the heart of An Najaf at FOB Baker/Golf. The task force also integrated into operations aerial scout weapons teams (OH-58D Kiowa Warriors), an AC-130 gunship, F-16 Fighting Falcons, unmanned aerial vehicles, Iraqi counterterrorism forces, and an operational detachment A (ODA) team already operating in An Najaf.

The enemy was made up of trained and untrained militia. The trained militia members were organized into four companies. Two companies were employed as defensive companies and controlled key terrain around the Ali Shrine and Kufa mosque, while two companies were employed as attack companies throughout Kufa and Najaf.

The untrained militia roamed the streets and executed 'opportunity attacks' on coalition patrols and Iraqi citizens. Additionally, throughout the city, Sadr lieutenants resided with personal security detachments,

and almost every mosque and school was being used as a cache for weapons or mortar firing points.

Again, the mission statement *appeared* simple. In reality, the task force would be challenged daily, balancing application of force with the complexities of the battlefield. First and foremost, consideration had to be given to collateral damage on holy sites, including the Imam Ali Shrine, which is a religious symbol for over 5 million Shi'ite worldwide and headquarters for Ayatollah Sistani, Cleric Muqtada al-Sadr, and more than 500 militia fight-



ers; and the Kufa Mosque, which is second only in religious significance to the Ali Shrine and is the stronghold of the militia with more than 600 fighters.

To the north of the Ali Shrine, lies the largest Shia burial ground in the world. This area was infested with insurgents from the Ali Shrine and Kufa, and was used as a weapons cache, and as the task force would later learn, a sensitive site requiring precision fires.

This article shares lessons learned and methods developed during the fight in Najaf/Kufa. Although, the fight will never be labeled a modern 72 Easting, or spearhead into Iraq by the 3d Infantry Division, the intensity, tempo, and constraints have application for future employment of armor forces in urban terrain.

Tempo and Campaigning

Understand the complexity of the battlefield. In the case of Najaf and Kufa, considering political backlash from damaging holy sites and creating unnecessary collateral damage was paramount in all planning and execution. Soldiers were well aware of the cascading effects a hole in the golden dome or a city block razed during counter fire would have on the Shia population; in essence, defeating the campaign's purpose. From the onset, these constraints became a leader challenge and commanders executed to perfection. Soldiers adapted engagement techniques and chose appropriate weapons systems to destroy the threat, with little or no damage to significant holy sites. The staff identified holy sites during the military decisionmaking process and planned around them by using precision fires, nonlethal fires, or bypassing the site.

Have a plan. On this complex battlefield, tempo is probably the most important factor a staff and commander consider when developing the campaign plan. Do not be overzealous; realize you will lose equipment, soldiers to wounded in action, and energy

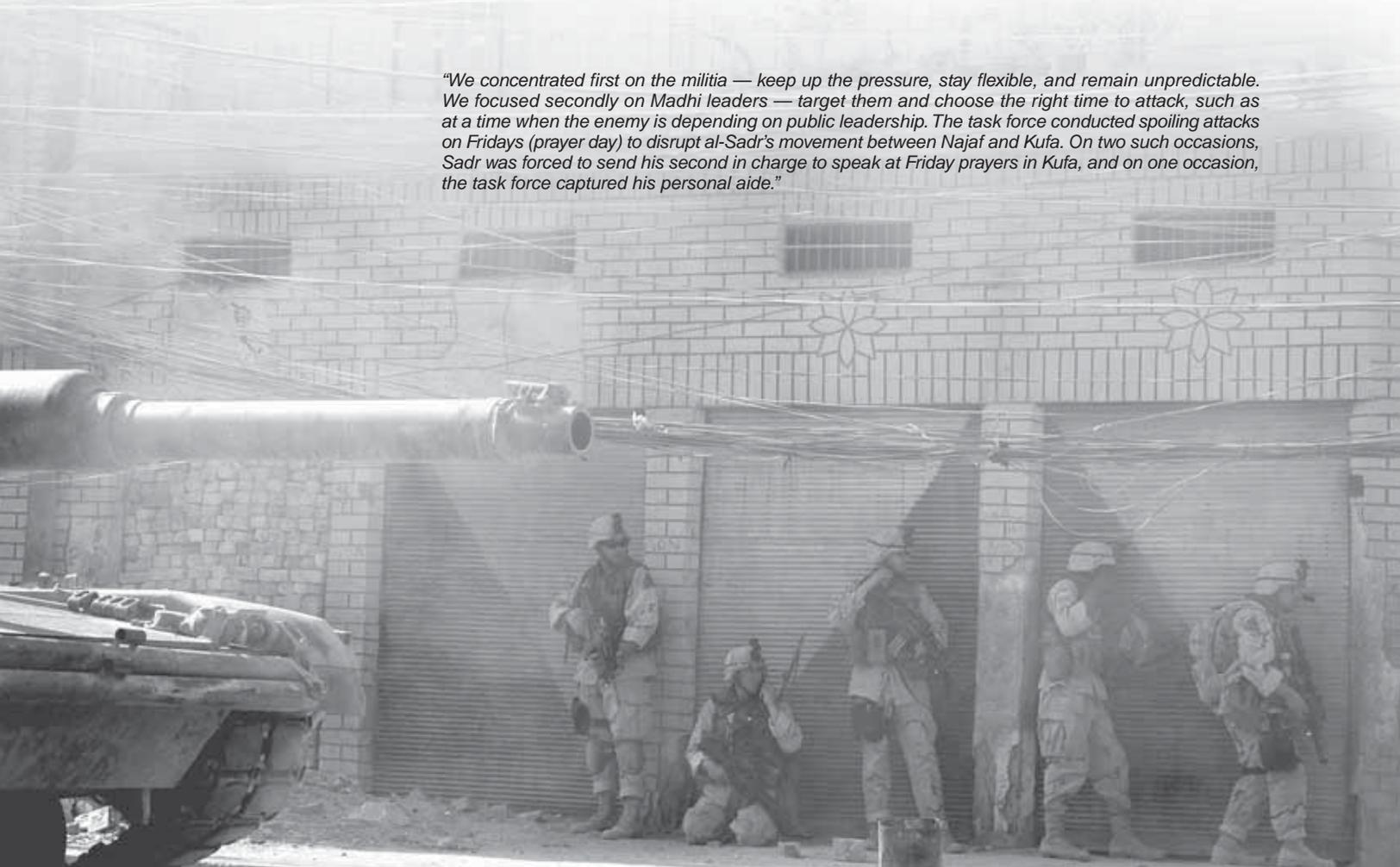
as you continue to fight, day after day. Take the end state, and shape your plan. In Najaf, we focused on three areas, and integrated these areas into continuous attacks.

We concentrated first on the militia — keep up the pressure, stay flexible, and remain unpredictable. We focused secondly on Madhi leaders — target them and choose the right time to attack, such as at a time when the enemy is depending on public leadership. The task force conducted spoiling attacks on Fridays (prayer day) to disrupt al-Sadr's movement between Najaf and Kufa. On two such occasions, Sadr was forced to send his second in charge to speak at Friday prayers in Kufa, and on one occasion, the task force captured his personal aide. Even when unsuccessful in capturing high-value targets, the fact the task force disrupted enemy movement and communications became crucial for follow-on missions. For example, about two weeks into the campaign, the task force began targeting Muqtada and his top three lieutenants. Our end state was capture, but in the process, we found that we directly affected the enemy's ability to coordinate, communicate, and maintain the initiative, which allowed the task force freedom of maneuver throughout the area of operation. Finally, we concentrated on weapons caches. We specifically targeted enemy supply lines and ammunition caches.

In effect, these three areas caused the militia to fight in multiple directions, and forced him to choose priorities. By forcing the enemy to make choices, we gained the initiative, forcing the enemy to consolidate his forces to protect his high payoff targets, allowing the task force to focus on destroying the militia. If a commander fails to campaign, the task force can easily become mired in reactive mode and lose focus on the end state.

Watch your soldiers and equipment. We have the best soldiers in the world, and they are 'can do' all the time. Rely on platoon leaders and platoon sergeants to gauge soldier effectiveness. We stared hard and aggressive, and within a week, we were losing the

"We concentrated first on the militia — keep up the pressure, stay flexible, and remain unpredictable. We focused secondly on Madhi leaders — target them and choose the right time to attack, such as at a time when the enemy is depending on public leadership. The task force conducted spoiling attacks on Fridays (prayer day) to disrupt al-Sadr's movement between Najaf and Kufa. On two such occasions, Sadr was forced to send his second in charge to speak at Friday prayers in Kufa, and on one occasion, the task force captured his personal aide."



"We have the best soldiers in the world, and they are 'can do' all the time. Rely on platoon leaders and platoon sergeants to gauge soldier effectiveness. We stared hard and aggressive, and within a week, we were losing the attention-to-detail battle. We began pacing operations so that a troop/company had a 12-hour period in which to rest and refit. The campaign plan took this timeline into consideration, and allowed the company/troop to execute company-level offensive operations as well as task force operations."



attention-to-detail battle. We began pacing operations so that a troop/company had a 12-hour period in which to rest and refit. The campaign plan took this timeline into consideration, and allowed the company/troop to execute company-level offensive operations as well as task force operations. The task force chaplain and medical platoon are also excellent sources for determining the effect of continuous operations on soldiers.

The battalion maintenance office and battalion maintenance technician are important in predicting Class IX needs and surging mechanics. Over the first three weeks, task force tanks began chewing up track, hubs, and road arms. The task force XO sent up a red flare and we received phenomenal support from 1st Armored Division and theater assets.

Precision Engagement, Lethal Fires, and Shaping the Battlefield

The most precise weapons system in the task force was the M1A1 main battle tank. The coaxial-mounted M240 machine gun is precision at its best. Outrange the enemy RPG gunner and you can conduct precision recon-by-fire in urban terrain while minimizing collateral damage. The tank also has the most accurate and deadly system available — the 120mm main gun. Tank commanders learned early on that firing a multipurpose anti-tank (MPAT) round, a high-explosive antitank (HEAT) round, or an obstacle-reducing (OR) round immediately silenced enemy massed formations due to tremendous psychological effects. A tank can fire a main gun round through a window and destroy the enemy while damaging only one room, minimizing collateral damage. Tanks can also create entry points for scouts or infantry by firing a main gun round into the wall of a school or directly into the side of a building. OR and MPAT rounds are ef-

fective in destroying hasty obstacles, and the task force even used the MPAT round to suppress enemy dismounts on the street.

The task force relied on main gun after experiencing the effects of the tank commander's .50-caliber in close urban terrain. Armor piercing incendiary (API) .50-caliber rounds are devastating and accurate, but cause a significant amount of collateral damage. The API round will pass through four to five buildings without slowing down. The round demolishes concrete structures and sets flammable materials, such as palm and date trees, ablaze. During one fight, an RPG gunner was hiding behind an Alaska barrier, which is concrete, reinforced with rebar, and 12 feet high, and instead of using a main gun round, he shot 50 rounds of API into the base of the Alaska barrier, killing the RPG gunner and clearing the area.

During rehearsals, commanders focused on weapons system employment, integrating fire control measures, such as main gun tight from target reference point (TRP) 1 to 2, and .50-cal tight TRP 3. You still have the loader's M240 for suppressive fires down alleyways, and each loader and tank commander carried M4s on top of the turret, which we used multiple times in killing or suppressing an enemy rifleman or intercepting an RPG approaching the tank from an adjacent alleyway.

Snipers are critical in the urban fight. This is common sense, but a tank battalion does not have snipers, so we developed our own by using soldiers that were 'long shooters' or we integrated trained snipers from an attached light cavalry troop. In Najaf and Kufa, we could not position snipers in town unless the area was cleared and supporting forces were available for extraction. Our method was to move into an area, clear a building, drop the team, and continue forward movement. The sniper team was assigned

specific targets, and time on station. Snipers were very effective in destroying RPG gunners along the walls of the mosque or in the minarets.

Use every combat system available. During the Dukes' five-week fight in Najaf/Kufa, the task force employed AC-130 gunships, Kiowa Warriors with Hellfire missiles, and Copperhead, as well as variable time (VT) and time fuse delayed (TFD) 155-mm and 120mm. Each had a specific purpose built into the plan. AC-130 fires were deadly for clearing bunkers, destroying RPG gunners in the palm groves, and in canalizing the enemy. After the first few engagements, the enemy decided it was not wise to stay outside while the sound of the AC-130 circled overhead. We used this advantage in either driving the enemy back inside to allow us closer maneuver, or keeping him off station while an unmanned aerial vehicle (UAV) located a strongpoint, passed grid location, then called in the AC-130 to destroy his strongpoint.

The Kiowa Warrior has a fantastic weapons platform. When resourced with Hellfire, a commander can engage those hard-to-reach targets. Additionally, an armed UAV becomes the weapon of choice when engaging an enemy moving around urban terrain. During one of the task force's last battles, an enemy mortar man, using a pickup truck with a 82mm mortar in the back, was conducting attacks on FOB Golf. The UAV was brought in; it identified, followed, and when conditions were right, destroyed the mortar, mortar man, and truck, with absolutely no collateral damage.

Paladin fires were critical to our success. We fired all types of munitions. Later in the campaign, the enemy developed his own methods to counter traditional 'fire for effect' high explosive rounds. The enemy would remain inside buildings or along the roofs of sensitive targets. On occasion, we would engage enemy on rooftops or engage an enemy mortar man near a built-up area with VT. In one instance, there were enemy RPG gunners and riflemen across the river inside a second-story building preventing a troop from maneuvering into a support-by-fire (SBF) position. Six TFD rounds later, the troop established the SBF and the mission continued with the enemy destroyed.



Early in the campaign we used Copperhead with OH-58D to destroy bunkers along narrow streets and in palm groves. The system works, with practice, and allows the maneuver commander freedom of movement along lateral routes. The task force also had an opportunity to employ an Iraqi counterterrorism force, which was impressive. The enemy believed the coalition would not enter mosques because their information operations campaign had convinced them of such. The enemy's information was correct! The coalition did not enter the mosque — the Iraqi counterterrorism force did, destroying five enemy riflemen and locating and confiscating a cache of mortars, RPGs, AK47s, and hand grenades.

The impact of nonlethal fires is integral to any campaign. The task force was well armed with a tactical psychological team (TPT), two civil affairs (CA) teams, two attack/bomb dog teams, PROPHET, engineers, and several media sources. For example, the task force would target neighborhoods identified by electronic warfare assets that indicated local people were undecided on coalition support. We would move in and project a positive message with the TPT, followed by CA teams, who developed projects on the ground. We also sent in the TPT and CA teams during the 'mitigation phase' of operations to assess public sentiment and collect information on collateral damage.

The bomb/attack dog teams were used on every operation involving suspected arms caches or mortar firing positions, and the engineers were critical in building force protection around FOBs, Iraqi police stations, and other highly sensitive targets. The task force also used the engineers to recover jersey barriers employed by the enemy along trench lines and to fill in enemy trench lines and fighting positions.

The media should be treated like family because they target the international community and keep higher echelons of command happy. The information provided before and immediately following the operation determined how successful the story got out. Normally, the task force commander briefly described the operation, concept and target, and placed the reporters in a vehicle (M1114 or M113), which trailed one of the companies. After the fight, a quick recap of what happened, maybe an interview for clarification, and the story is done. In some instances, commanders need to 'go live' during a fight, to ensure the press does not make assumptions. In all cases, treating the press with dignity and respect paid huge dividends.

"The most precise weapons system in the task force was the M1A1 main battle tank. The coaxial-mounted M240 machine gun is precision at its best. Outrange the enemy RPG gunner and you can conduct precision recon-by-fire in urban terrain while minimizing collateral damage. The tank also has the most accurate and deadly system available — the 120mm main gun. Tank commanders learned early on that firing a multipurpose antitank (MPAT) round, a high-explosive antitank (HEAT) round, or an obstacle-reducing (OR) round immediately silenced enemy massed formations due to tremendous psychological effects."

"Snipers are critical in the urban fight. This is common sense, but a tank battalion does not have snipers, so we developed our own by using soldiers that were 'long shooters' or we integrated trained snipers from an attached light cavalry troop. In Najaf and Kufa, we could not position snipers in town unless the area was cleared and supporting forces were available for extraction."

Combat Leaders

Lead by example. In urban terrain, commanders discover that to visualize the battlefield, they absolutely have to be in the middle of the fight. A commander can best gauge intensity and tempo by being in the middle of the decisive effort and the company's main effort. This has implications, and subordinate commanders will need a while to become familiar with this course of action, but it was successfully employed in Najaf.

Never be without communications. Commanders have a need to dismount in urban terrain — yes, even tank battalion commanders. Get caught without coms while on the ground and you instantly lose situational understanding and the information passed on the command net between crosstalking company commanders.

Rule one: The command net is the command net. This takes practice. The main function of the command net is to facilitate commanders' crosstalk. The tactical operations center (TOC) monitors and passes necessary intelligence updates or announces combat multipliers arriving, but it should not be used for the battalion XO, battalion S3, and battalion commander to carry on conversations about the fight.

Rule two: During the fight, the visible commander on the battlefield helps steady the force. This is not as obvious as one might think — based on personal experience, it is a learned skill. It is much harder for a commander to be present and commanding during the fight, than when executing simulations or training at combat training centers. Commanders must be mentally prepared before the fight, visualize where they want to be to influence the fight, then adjust fire if the fight shifts.

Confidence and demeanor. Never doubt yourself, your commanders, or your soldiers. Maintain confidence in your equipment and the ability of your entire team to keep combat systems in the fight. We train on intent, and we succeed by sticking to what works. A leader who micromanages in battle will produce disastrous results. Let your subordinate commanders develop and execute their plan in conjunction with your commanders' intent; no matter how much you want to, do not tell a subordinate how to "suck the egg."

Know your subordinates' abilities — can do; can't do (but really can). This is something that is developed over time. Commanders already have an 80-percent solution on how subordinate commanders react under stress. The battlefield reveals how they react to success or to losing a soldier. Learn and apply this knowledge in future fights. An aggressive commander may push too far when success is achieved quickly in his sector, not seeing the entire battlefield. A commander may even hesitate if he loses a soldier or vehicle, not understanding the impact of this



delay on adjacent units. Most of these issues should be addressed in the task force combined-arms rehearsal, but the task force commander will ultimately make his decisions based on an intimate understanding of his subordinate's capabilities and limitations.

The three most important lessons learned in the fight for Najaf will be applicable in future battles. Commanders and staffs must first develop a campaign plan, taking into consideration a realistic timeline for achieving the end state, then visualizing the pace or tempo required to sustain the fight. Consideration must be given to combat potential, applied in a deliberate fashion, and integrated into the campaign's end state. Additionally, the U.S. Army's combat systems are unbeatable. Every system applies precision and becomes deadly when properly employed with a little ingenuity. Finally, combat leaders bring everything together. Technically and tactically proficient commanders and soldiers win the day, but they are not tireless, and they will make mistakes. A commander must constantly gauge the effectiveness of his soldiers and leaders, a knowledge gained through experience and trust.

The fight for Najaf was an intense and bloody affair. The five-week battle again validated that our soldiers and leaders are the best in the world, we have the best equipment, and doctrine is just that, doctrine! Most importantly, the Najaf fight proved armor remains relevant and is a lethal force in urban terrain.



Lieutenant Colonel Pat White is currently the G3, 1st Armored Division (1AD), Wiesbaden, Germany. He received a B.A. from Claremont College and an M.S. from Central Michigan University. His military education includes Armor Officer Basic Course, Field Artillery Officer Advanced Course, U.S. Army Command and General Staff College, and Joint Professional Officer Course. He has served in various command and staff positions, to include commander, Task Force (TF) Iron Dukes, 2d Battalion, 37th Armor, 1AD, Operation Iraqi Freedom; chief, current operations, J3, Joint Forces Command, Norfolk, VA.; S3 and XO, 2d Battalion, 70th Armor Regiment, 3d Brigade, 1AD, Fort Riley, KS; opposing force tank company commander, D Company, 1st Battalion, 4th Infantry, Combat Maneuver Training Center, Hohenfels, GE; and commander, C Company, 2d Battalion, 32d Armor Regiment, 1st Brigade, 1AD, Kirchgoens, GE.

Sadr City: The Armor Pure Assault in Urban Terrain

by Captain John C. Moore

(Reprinted from November-December 2004)

Baghdad, Kut, and An Najaf were scenes of concerted attacks by the Mahdi army throughout Iraq on 4 April 2004. On that afternoon, elements of the Mahdi army engaged multiple elements of 2d Battalion, 5th Cavalry Regiment (2-5 CAV), 1st Cavalry Division, nearly simultaneously throughout Sadr City in northern Baghdad. Twenty soldiers from Comanche Red Platoon, 2-5 CAV, had become isolated in the northern central portion of Sadr City, and available vehicle assets prohibited the unit's exfiltration. Soldiers from C Troop, 2d Battalion, 37th Armor (Crusaders), attached to the 2d Armored Cavalry Regiment (ACR), conducted a hasty attack into Sadr City to relieve the isolated infantry platoon.

The Crusaders had been operating in Sadr City since October of 2003 when an ambush in the city killed and wounded a number of troopers from 2d Squadron, 2d Armored Cavalry Regiment (2/2 ACR). From October 2003 to April 2004, constant operations in Sadr City had familiarized the 2d Battalion, 37th Armor (2-37 AR) with the local terrain, which proved vital during the attack.

The 2/2 ACR redeployed to Fort Polk, Louisiana, in March, and the Crusaders began to work for 2-5 CAV (Lancer), which had assumed responsibility for Sadr City. The Crusader's carried out two major combat operations to relieve Comanche Red, which led to a 3-kilometer fight out of Sadr City to evacuate the platoon and their casualties.



The Initial Attack by Crusader Blue Platoon

Crusader's third platoon, with four M1A1 tanks, stood by as a quick reaction force (QRF), on order from the commander of 2-5 CAV, as a result of perceived higher tensions in Sadr City.

At approximately 1630 hours, following Lancer's decisive contact throughout Sadr City, Lancer Main called Crusader X-ray and informed Crusader to ready the QRF immediately and send it northeast of routes DELTA and COPPER to relieve Comanche Red, which had suffered casualties and was isolated and in continued contact. Crusader Blue left its operations base at the Martyrs' Monument within 10 minutes and proceeded northeast along route AEROS and then northwest along route FLORIDA to begin its attack northeast up DELTA to relieve Comanche Red. Crusader Blue turned northeast on DELTA and had initial contact just north of the district advisory council (DAC).

Crusader Blue fought for several minutes traveling northeast up DELTA toward route GOLD and received several rocket-propelled grenade (RPG) rounds from the buildings on the eastern side of DELTA, none of which hit the tanks. Small-arms fire was very intense however and came from both sides of the street. All four Crusader Blue tanks engaged the enemy on both sides of the road with coax, .50-caliber, and M240 loader's machine guns, M4 carbines, and M9 pistols. Many of these attackers were dressed in Iraqi police uniforms, and third platoon substantially reduced the attackers' numbers.

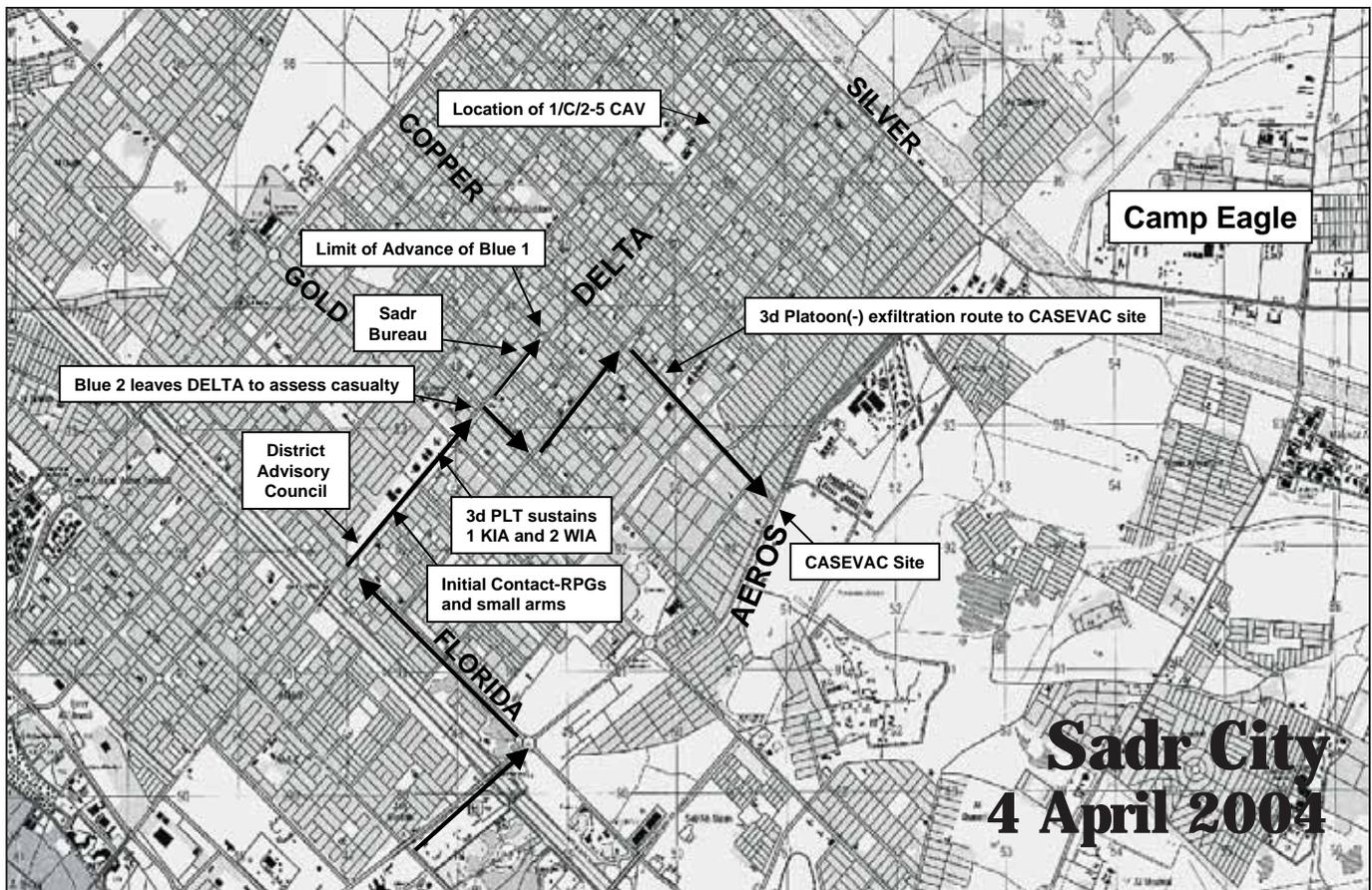
Blue 1 ordered the platoon to continue to fight north. After fighting past route GOLD, RPG and small-arms fire continued, and about 500 meters northeast of GOLD on DELTA, Crusader Blue suffered three casualties. Blue 2 decided to move off of

DELTA to get to a position where he could assess the casualties. He turned southwest off of DELTA between route GOLD and the Sadr Bureau, then traveled southeast to route CHARLIE. Crusader Blue followed his move. Blue 1 ordered his platoon to follow his move back to route DELTA and continue the attack. At the same time, Crusader 5 informed Crusader Blue that they should move their casualties to a hasty casualty collection point (CCP) at the intersection of routes AEROS and COPPER. Blue 1 brought his tank back to DELTA and turned northeast, but the remainder of the platoon continued to the hasty CCP. Blue 1L informed Blue 1 that the other tanks in the platoon had not followed. Blue 1 immediately ordered the tanks to consolidate at the DAC and continue their attack.

The platoon's other three tanks moved to the CCP to conduct casualty procedures. After the casualty exchange and receiving several hundred rounds of 7.62mm ammunition from Crusader White in an up-armored high mobility, multipurpose wheeled vehicle (HMMWV) platoon, the three Crusader Blue tanks returned to the DAC and consolidated with the unit. As the C Troop commander, I was at Camp Cuervo, battalion headquarters, during this operation and immediately returned to the Martyrs' Monument to ready the three remaining tanks to join Crusader Blue to form a larger element with which to conduct a subsequent company attack.

Crusader Attacks

On arrival at Martyrs' Monument, I mounted my tank with my crew and proceeded to the DAC using the same route as Crusader Blue. A section of two tanks from Crusader Red also arrived, bringing the company's strength to seven tanks. Both ra-





"Gunners on the forward four tanks killed at least 15 enemy soldiers, all at ranges under 100 meters. Blue 1 and I engaged attackers in the south with carbines as close as 20 to 30 meters, while the infantry platoon readied to load on our tanks. Duke 6 arrived with his tank and distributed ammo to our tanks as we were going black on both 7.62mm and .50-caliber ammo. I remained on the ground and went back to the infantry platoon and supervised as casualties were loaded onto my tank. Comanche Red had three HMMWVs; one had been destroyed and burnt to its frame."

dios on my tank were not working, so I jumped to Blue 1's tank, which had communications on both company and battalion nets. Blue 1 became my loader and Blue 1L went to my tank. I knew Comanche Red had been isolated for almost an hour and wanted to start the attack immediately. After Blue 1 explained the situation, the company was organized into a staggered combat column, which I led on the left and Red 1 led on the right. I organized the platoon sergeants to follow with their tanks to bring up the rear of the six-tank staggered combat column. Crusader Blue 3 remained at the DAC to secure the site, which had a number of 2-5 CAV soldiers there with one of their HMMWVs destroyed. I called Lancer 6 and gave him my capabilities concerning vehicles, weapons, and ammunition and requested permission to attack. Lancer 6 gave the order to attack northeast up route DELTA. We attacked immediately.

We came under intense small-arms contact 300 meters north of the DAC from both sides of the road, just as Crusader Blue had experienced earlier. We fired coax and .50-caliber to kill and suppress the enemy and continued to move. Two to three hundred meters south of route GOLD, we received RPG fire, and small-arms fire began to accurately hit our tanks. Red 1G returned fire with 120mm high explosive antitank (HEAT) rounds at RPG positions on the southeast side of DELTA, 500 meters to our front.

The hydraulic servo valve (Delta P) went out on my tank and I was forced to fight in emergency mode, which meant stopping to stabilize the main gun and coax machine gun for the gunner. Given the constricted terrain and better position for command and control at the front, I was not willing to send another tank to assume the lead of the left file. After we passed GOLD, fire intensified with the company receiving more than a dozen RPGs, none of which hit. All of them seemed to hit short and the overwhelming majority of them came from ground level. There was an attempted top attack on my tank from the southeast that missed long.

The enemy primarily concentrated on using alleyways, shop windows, and low roofs of one-story buildings to assault. They were very persistent and were very difficult to suppress. Many of them had good tactical patience and waited until we were within 150 meters to fire. Their fires were more effective, but their close proximity meant they usually could not escape down alleyways or through shops before we engaged with either .50-

caliber or coax fire. We fired three HEAT rounds during this portion of the fight. They almost always engaged from the front flanks in the more open terrain southwest of the Sadr Bureau.

This changed as we approached the Meredi market area and the large traffic circle with the large al-Sadr mural north of the Sadr Bureau. In this area, there are a large number of kiosks and commercial stands that encroach on the street, providing cover and concealment for the enemy. I fought open hatch the whole way and ordered Red 1 to do the same, as we were very vulnerable from the flanks as we approached the market and could not traverse our turrets well there. Blue 2 also went open hatch because he was ordered to bypass on the left and establish a support-by-fire (SBF) position on the company's left flank to facilitate left flank security as we inclined to the right up DELTA toward the mural.

The dense shop stands forced our company into a file on the northeast side of DELTA as we proceeded to the northeast. The market area was the scene of very heavy fighting with coax, .50-caliber, M4 carbines from turrets, M240 loader machine guns, and M9 pistols. We received heavy small-arms fire and engaged and destroyed the enemy as close as 20 meters on our flanks as we broke out of the market to the northeast. Blue 2's SBF allowed Red 1 to take the lead from the right and I followed though the canalized section of DELTA at the Meredi market. Blue 2, Red 4, Blue 4, and Crusader 6G followed in file until we could break out to the northeast and resume a staggered combat column.

During this time, we received confirmation of Comanche Red's location in a section of buildings northwest of DELTA. I coordinated with Comanche Red 1 on the battalion command net for our arrival and he updated me on the situation. We coordinated nonstandard casualty evacuation, which would be done on our tank turrets, and prepared his platoon for our arrival. We continued the attack to Comanche Red's position under intense fire. The sun had started to go down when we began the Meredi market fighting and it was very near end evening nautical twilight (EENT) when we arrived at Comanche Red's location. The fight through the market near the Al Thawra Iraqi police station was brutal and very close to a great number of barriers and burning barricades.

The company attack from the DAC to Comanche Red's location was four kilometers and it took us over an hour and a half to fight. My primary concern was to preserve my force and remain focused on killing the enemy and clearing the route for any additional casualty evacuation or recovery efforts. Comanche Red 1 confirmed that none of his four wounded were urgent. Additionally, DELTA had very poor trafficability with dozens of burning roadblocks and roadblocks consisting of large metal objects such as air conditioners and refrigerators. These obstructions caused us to set multiple SBFs along the route to allow either Red 1 or me to maneuver on the obstacle and attempt to reduce it with our tracks. The roads and alleyways that ran perpendicular to DELTA all had to be cleared by gunners before the column could advance because we identified early that the primary RPG threat was to the flanks.

On arriving at Comanche Red's location, I set far side security with four tanks and two of my tanks provided center sector and

rear security. Fire at this location remained intense for several minutes. The enemy assailed us from windows and rooftops. Our most effective weapons were carbines and loader's M240 machine guns in the center and to the south. I dismounted and ran down the alleyway where Comanche Red Platoon was defending.

I assessed the situation and informed Comanche Red 1 to account for his men and equipment, and I would load the casualties onto my tank and lead the way out. My tank was also in closest proximity to the alleyway where they had established a platoon defense. Contact remained constant and intense to the northeast. After I dismounted my tank to coordinate with Comanche Red, Blue 1 reappportioned our defense, relocating Blue 4 to cover an exposed alley across the street on DELTA from the alleyway in which Comanche Red was defending. Blue 4 killed many enemies in this alley that had been firing down the alley at Comanche Red and me.

Gunners on the forward four tanks killed at least 15 enemy soldiers, all at ranges under 100 meters. Blue 1 and I engaged attackers in the south with carbines as close as 20 to 30 meters, while the infantry platoon readied to load on our tanks. Duke 6 arrived with his tank and distributed ammo to our tanks as we were going black on both 7.62mm and .50-caliber ammo. I remained on the ground and went back to the infantry platoon and

supervised as casualties were loaded onto my tank. Comanche Red had three HMMWVs; one had been destroyed and burnt to its frame.

The enemy continued to attack from the north as we were stationary. They attacked three times using cars or vans, all of which were destroyed and their occupants killed. The enemy attempted drive-by shootings with their lights off, but they did not drive quickly and were easy targets for coax engagements. Civilian cars blocked Comanche Red's path from the alleyway. They had to use their HMMWVs to push these cars out of the alleyway, which took a long time. It took us about 30 minutes at this location to develop and brief the plan, conduct casualty evacuation, and clear the alleyway to get the HMMWVs. We were in contact with the enemy the entire time.

After we accounted for all friendly personnel and equipment, we continued to attack northeast up DELTA to turn southeast down SILVER to return with casualties to Camp War Eagle. Route SILVER is very narrow, so I ordered the company to close to a file and follow. I attacked with Blue 2, Red 1, and Red 4 behind me. Two of the 2-5 CAV HMMWVs followed the four lead tanks. Blue 4, the third 2-5 CAV HMMWV, and then Crusader 6G was in the rear. Contact on SILVER was as intense as it was on DELTA. On the northeast (left, given direction of attack) of SILVER is a canal with generally open fields of fire.

"API was penetrating too far and there was too much of a risk of killing innocents. HEAT causes a great deal more structural damage, but dissipates after one or two rooms, killing everybody at the point of impact. We need to think of collateral damage more in terms of innocent civilians being killed, rather than reconstructing buildings used by the enemy. Using 120mm HEAT has more of a decisive tactical advantage and limits unnecessary deaths."



To the southwest (right) there are a row of houses and shops. We had heavy contact at the intermittent shops, but little from the houses.

B Troop, 2-37 AR (Battlecat) had set a defensive position at the intersection of routes SILVER and AEROS, which was to our front, so we could only engage with coax once we were fairly close to their position. Carbine engagements from tank commanders' hatches on the right side of the tank turrets proved most effective. The first five tanks and two HMMWVs fought all the way to Camp War Eagle using this method.

The infantry fought amazingly with multiple tires shot out on their HMMWVs. It was a great help to have the infantry on the turrets; they easily and effectively engaged the enemy. The last HMMWV broke down and Crusader 6G pushed the HMMWV with his tank at speeds of about five miles per hour for two kilometers to Camp War Eagle. About two-thirds of this distance was along SILVER where contact persisted. Crusader 6G engaged enemy on roofs and in alleyways with his M9, M16, M203, and .50 caliber, while commanding the tank and instructing the driver on how to safely push the HMMWV. Blue 4 returned to provide security to Crusader 6G and Duke 6 followed our march element to provide rear security.

When we arrived at Camp War Eagle, we downloaded the casualties from Comanche Red and entered Camp War Eagle to refuel and rearm. We also received some equipment that White 1 had brought to us, including more night-vision devices and a .50-caliber machine gun to replace the one that had been destroyed during the fight. I proceeded to the tactical operations center and debriefed Lancer 6 as my men refueled and rearmed. I then conducted adjacent unit coordination with Comanche Blue Platoon for a subsequent mission to move in and secure the Al Thawra Iraqi police station. This would begin the sixth day of constant intense night defenses of Iraqi police stations in Sadr City.



"Naturally, there are terrain considerations in Iraq that would affect this, but even when surrounded by buildings three or four stories tall, it proves to be most effective, as you can fire rifles and carbines out of your turret hatches without exposing the loader and tank commander. The enemy fought primarily from ground level."

The Power of Experience

The company attack, relief of Comanche Red, and attack to Camp War Eagle lasted over three hours. We were in constant contact the entire time. There were many salient lessons learned from this attack:

Reconnaissance by fire is very effective against strong dismounted opposition in urban terrain. The Mahdi army fought very courageously and demonstrated good tactical patience waiting to engage until we were within effective range of their weapons systems. However, the Mahdi army was not disciplined once engagements began. They rarely waited for flank shots with their RPGs, electing instead to fire at our oblique fronts so that they still had time to escape. Their positions offered little or no mutual support and they had a tendency to break contact or relocate when we conducted recon by fire. This was especially critical at the Meredi market where both main gun and coax machine gun fire flushed many of the enemy out of the cover and concealment they took in the dense market stands. The enemy usually tried to exfiltrate away down alleyways, but often had to run from positions of concealment to these exfiltration routes, so it was easy for us to anticipate where to kill the enemy. Tanks in second positions of the combat column could cover these exfiltration routes as lead tanks flushed these enemy elements out of concealment and cover.

During military operations in urban terrain (MOUT), tank units without infantry support need to fight open hatch. Naturally, there are terrain considerations in Iraq that would affect this, but even when surrounded by buildings three or four stories tall, it proves to be most effective, as you can fire rifles and carbines out of your turret hatches without exposing the loader and tank commander. The enemy fought primarily from ground level. We killed a number of enemy on rooftops, but constant fire from our coax machine guns and .50-caliber machine guns kept them from putting together cohesive attacks from two- and three-story building rooftops. Reflexive fire from loaders and tank commanders with carbines accounted for a substantial number of enemy casualties on rooftops at ranges under 50 meters. During this and subsequent battles, the enemy fired almost constantly from the hip. They all fired on automatic and did not appear to aim their shots. Our loaders and commanders were exposed from the shoulders up, but could deliver very accurate fires at close range and showed the discipline to do so.

The close proximity of light poles, vending stands and buildings severely limited our ability to traverse the turret. The only way to cover our exposed flanks in this congested terrain was to fight out of hatch. Tank commanders and loaders were somewhat protected from the most common threat, which was ground-level fire. Tank units unsupported by infantry in MOUT need to assume the risk of tank destroying systems in constricted terrain. Tank commanders and loaders can also positively identify enemy and noncombatants if they can see them from the turret, thus limiting unnecessary deaths.

Once battle is joined, Mahdi army elements demonstrated incredible commitment to recover their casualties and equipment. Once we inflicted casualties

on the enemy, continuous coverage of the location where their soldiers were down proved key. Mahdi army soldiers would often try to assist their comrades and expose themselves to our fire when they tried to conduct casualty evacuation or recover weapons. This is specifically effective at night because the enemy often fought in squad-sized elements. If a crew only identified a few enemy troops, there were very likely more troops close by in cover or concealment.

Mahdi army elements are inexperienced with the RPG. There was a very high dud rate on our tanks and many of the near misses were duds as well. One RPG dud bent the lip of the turret ring on my tank, but that was all. Who knows whether they failed to properly arm the RPG or if it was just poor ammunition.

I saw three RPGs launched at my tank that initially appeared to be coming right at the front of the tank, but they all dropped short, one skipped under the tank, one exploded short, and one failed to explode as it skipped into our right track and deflected across the line of march of my right file of tanks.

Mahdi army elements set many burning roadblocks that had to be destroyed immediately. After contact, Mahdi army personnel continued to roll tires and combustible objects into roadblocks. Red 1's gunner killed at least one enemy improving a roadblock just 400 meters north of the DAC at the outset of our company attack. Construction or maintenance of such roadblocks during combat operations in a hostile combat environment constitutes hostile enemy intent. After the initial fusillade of RPGs from behind the thermal concealment of roadblocks, I ordered my company to destroy any enemy who was building or

reinforcing obstacles, whether or not they had observable weapons. Reconnaissance by fire at these locations is critical.

Mahdi army elements are intimidated by 120mm main gun engagements. As soon as we began destroying the enemy with 120mm main guns, the enemy broke and ran. These engagements were often at short ranges where the concussive effect of the cannon was lethal, even if the enemy was not directly hit by the rounds. This proved to be the case during the nights of continuous Iraqi police station defenses.

120mm HEAT is better than .50-caliber for limiting collateral damage. Commanders at all levels need to understand this. Tanks engaged snipers firing from windows with .50-calibers, and dust was flying from windows, six windows down from the point of impact. This was particularly true of tanks firing armor piercing incendiary (API).

We need .50-caliber ball with tracer. API was penetrating too far and there was too much of a risk of killing innocents. HEAT causes a great deal more structural damage, but dissipates after one or two rooms, killing everybody at the point of impact. We need to think of collateral damage more in terms of innocent civilians being killed, rather than reconstructing buildings used by the enemy. Using 120mm HEAT has more of a decisive tactical advantage and limits unnecessary deaths.

All tanks require two radios. Leaders need to be able to fight from any tank with dual-net capability. We have driven our tanks a fleet average of over 4,000 kilometers during this tour and maintenance is always intensive. The mileage requirements during a year of combat operations in Iraq are eight times the



"Lancer 3B told me when a Bradley QRF would be visible in the vicinity of Route GOLD, which enabled me to warn my unit that we would have friendly vehicles and potentially dismounted infantry to our right flank as we attacked northeast up DELTA. Lancer told us precisely where Comanche Red was isolated so we could adjust our fire-control measures to mitigate the risk of friendly fire casualties."

average annual mileage allotment. Tanks will be down for maintenance at a higher rate than usual. The decentralized nature of combat in urban terrain requires several units to operate on the battalion command net. Tanks need the ability to have one radio on the most relevant command net for combat action and one for internal coordination. This would not be expensive and would facilitate command and control.

Air ground integration (AGI) during company-level attacks is critical. Lancer Battalion (and particularly Lancer 3B) did a great job with AGI. Comanche Red was isolated, had casualties, and insufficient vehicles to exfiltrate. The intelligence received from the aero scouts on the battalion command net was essential for gauging whether we could remain force oriented in our attack northeast up DELTA. If it appeared that Comanche Red was in danger of being overrun, we would have to bypass very stiff resistance at great risk to relieve them immediately. Although Comanche Red was unable to move from its position, it was very defensible, and the aero scouts told me they did not appear to be in danger of being overrun, despite continued contact at very close quarters.

Communications net selection in MOUT must remain flexible. We fought the entire attack on the company command net. This was necessary as the compartmentalized terrain caused us to change formations frequently, making it impossible to keep platoons in set piece formations without fragmenting the attack's tempo. Also, given the proximity of the enemy with RPGs, we all needed to hear crews calling out new threats, if we could not kill the enemy immediately. There was not time for relaying information from platoon net to company.

The company executive officer listened to one net at our command post and determined what we needed to continue combat. This allowed me to take consolidated reports on company command regarding battle damage, as well as make class V requests without having to stop fighting. Crews cannot crowd this net. Tank crews fought and reported, but always cleared the net, just in case I had something critical. The tempo of close quarters urban fighting is too fast to relay traffic from wing tanks to platoon leaders/platoon sergeants and then to the commander or XO.

The battalion staff must constantly update maneuver commanders on the fluid friendly situation in urban terrain. Lancer Battalion's staff gave us advanced warning of each of the three times we gained visual contact with friendly forces in Sadr City. Lancer 3B told me when a Bradley QRF would be visible in the vicinity of Route GOLD, which enabled me to warn my unit that we would have friendly vehicles and potentially dismounted infantry to our right flank as we attacked northeast up DELTA. Lancer told us precisely where Comanche Red was isolated so we could adjust our fire-control measures to mitigate the risk of friendly fire casualties. We inflicted no friendly fire casualties and sustained none despite the intensity of this three-hour fight.

Commanders must constantly update their crews on rules of engagement (ROE) as the fight develops. Many of the situations we faced demanded the subjective decision to fire or not to fire. There was a large volume of civilians in the battlespace as this combat zone was a densely populated urban area. It is not always intuitive when to shoot or not shoot, and commanders need to assume the responsibility of ordering which targets are engaged and which ones are not.

The commander must constantly update fire-control measures in urban terrain. Frequent formation changes, shaped

by both the enemy and terrain, forced the commander to constantly reappportion fires to facilitate security. Tanks at the front of the march column must concentrate on the front, but threats from alleyways meant tanks had to handoff as they passed alleyways to ensure the enemy did not use them to assail our flanks. In these concealed locations, the enemy detected us as we passed, but usually did not engage lead tanks. The enemy moved to attack after our forward element passed, meaning the trailing tanks took the brunt of flank attacks. The enemy remained focused on approaching tanks and failed to realize the threat imposed by tanks that had already passed. The loaders and tank commanders on tanks that had already passed by the enemy took the enemy by fire as the enemy exposed their flanks to these tanks.

Commanders and platoon leaders should lead from the front of attack formation even when in file or column when fighting in urban terrain. Doctrine places leaders in the middle of the formation to facilitate command and control in most cases. But in urban terrain, where combat is all close quarters and only leader tanks have the ability to talk to higher headquarters, these tanks are the logical choices to lead from the front. This technique also inspires confidence in the men. This is especially the case during unplanned operations, such as quick reaction force missions during which subordinates may have a limited understanding of the situation as it evolves. During six task force attacks in An Najaf and Kufa in subsequent months, this also facilitated better adjacent unit coordination with sister companies and troops, as leader tanks with two radios could drop to the adjacent unit net or contact the adjacent unit on battalion command to establish that we had gained visual contact with them or audio contact of their fight.

Combat in urban terrain is very fast. Besides, the enemy gets to vote much quicker and it is not often possible to fight in accordance with the plan. A unit can accomplish any mission if everyone understands the task, purpose, and desired end state. Flexibility is the key to success. Commanders must cultivate a command climate where the most junior enlisted soldiers feel comfortable reporting on the company net. Given the tempo of the close quarters fight, commanders must also trust subordinates and empower them to act within the constraints of the commander's intent even before reporting to the commander what actions the element is taking. A challenge for commanders and leaders in the urban armored fight is to develop innovative techniques and ensure that soldiers understand them. Commanders must explain the necessity for adaptation to subordinates so that they clearly understand how the commander wants to fight.

This article is dedicated to the heroic actions and memory of three Crusaders: Staff Sergeant Mike Mitchell, Specialist Nick Zimmer, and First Lieutenant Ken Ballard.



Captain John C. Moore is a student at the Russian Basic Course, Defense Language Institute. He received a B.A. from San Diego State University. His military education includes Armor Captains Career Course and Armor Officers Basic Course. He has served in various command and staff positions, to include commander, C Company, 2d Battalion, 37th Armor Regiment, 1st Brigade, 1st Armored Division (1AD), Germany; tank platoon leader, battalion adjutant, and mortar platoon leader, 1st Battalion, 12th Cavalry Regiment, Fort Hood, Texas and Bosnia; battalion maintenance officer, 2d Battalion, 72d Armor Regiment, Camp Casey, Korea; brigade S4, 1st Brigade, 1AD, Germany; and S3 Air, 2d Battalion, 37th Armor Regiment, 1st Brigade, 1AD, Friedberg, Germany.

Platoons of Action: An Armor Task Force's Response to Full-Spectrum Operations in Iraq

by John P.J. DeRosa

(Reprinted from November-December 2005)

What died on the battlefields of Iraq was the vision held by many of a homogenized army — one in which units would largely resemble one another. Instead, the Army of the future will require a large kit bag of capabilities that it can deploy and fit together, sometimes in the middle of battle, to meet the many exigencies of this new era in warfare.¹

For decades, warfare experts have predicted that the nature of warfare will change in the 21st century. The nature of warfare has already changed dramatically. As the U.S. Army continues to move toward changes that will conceive, shape, test, and field an army prepared to meet the challenges of full-spectrum operations, Chief of Staff, Army (CSA) General Schoomaker asked, "I want to know if he [division commander] can turn his three brigades into five maneuver brigades, and if I provide the right equipment, could they be one and a half more lethal than before..."² Specifically, CSA Schoomaker asked for the best war-tested concepts of deploying and fighting, adding that proposals must be lethal, balanced, and modular. As the armor force is steeped in innovation and transformation, a parallel debate in *ARMOR*, raised the question, "Why not start with a combined-arms team at the platoon level and only scramble when necessary, rather than continually re-task organize? What follows are four different answers to the challenges of full-spectrum operations centered on platoon level "units of action."³

Intelligence Preparation of the Battlefield

On receipt of the mission, the S2 began a detailed terrain analysis of our proposed area of operation. Initial analysis showed a diverse mixture of terrain that would have varying impacts on maneuver operations. Task Force (TF) 1st Battalion, 77th (1-77) Armor, "Steel Tigers," was assigned a total area of over 1,000 square kilometers, and it was immediately apparent that company sectors would each require their

own unique approach to task organization based on terrain. From the open desert area south of Highway 1, to the jungle-like vegetation of Al Zourr, and the confined streets of Balad, each company would have unique terrain challenges.

The one terrain feature that would have the most impact, regardless of company sector, was the canal system. The Balad area is very agrarian and an endless system of canals criss-cross the entire region. These canals vary widely in depth and width but are not fordable and can only be crossed at existing bridge sites. The small canal roads present an additional challenge to the maneuverability of armored vehicles. In most cases, they cannot support the weight or width of the M1 Abrams. The M2 is also constrained by these canal roads, although it does enjoy slightly more freedom of movement than the Abrams. Based on this analysis, the commander decided to weight his tracked assets onto the main supply routes/alternate supply routes and the open terrain south of Highway 1.

Operationally, Iraq is a complex environment of low-intensity conflict and political and economic reconstruction. Anti-Iraqi forces (AIF) tactics are low-level and fairly unsophisticated.⁴ Their actions are usually limited to a single strike followed by an immediate withdrawal to avoid decisive engagements. The fights in Iraq are movements to contact against a relatively disorganized enemy force. Small ambushes against patrols and convoys are the preferred enemy tactic. Attacks occur in restrictive urban terrain in close proximity to businesses and homes; ambushes are initiated from orchards or dense agricultural terrain; improvised explosive devices (IED) are triggered along expanses of highways; and mortar or rocket attacks are constant.

The current operating environment (COE) requires tactical agility with emphasis on small-scale operations of infantry squads or tank sections actioning on contact. The porous nature of the COE allows AIF to become expert "exfiltrators," avoiding death or capture. Therefore, instant transition to pursuit is a necessity. More often than not, the pursuit is preceded by a transition from mounted to dismounted elements.



TF 1-77 Steel Tigers Troop to Task (U.S.)

As of 24 Aug 04

Task/Location	Requirement (# Squads/Platoons)*	Frequency (Daily/Weekly)	Priority
Combat Patrol - LSAA Zone A - consisting of: Route Clearance NAI Overwatch Observation Posts React to Indirect Fire (as necessary) R&S vic LSA Anaconda	4 Platoons	Daily	High
Counter-Mortar Patrol – N. Balad – consisting of: Route Clearance NAI Overwatch Observation Posts Traffic Control Points React to Point of Origin (POO) (as necessary)	2 Platoons	Daily	High
Counter-Mortar Patrol – S. Balad – consisting of: Route Clearance—ASRs Linda & Amy NAI Overwatch Observation Posts Traffic Control Points React to POO (as necessary)	2 Platoons	Daily	High
Route Clearance – MSR TAMPA-ASR LINDA- ASR AMY-ASR PEGGY including: Observation Posts Traffic Control Points	3 Platoons	Daily	High
Combat Logistics Patrol, consisting of: Route Clearance	1 Platoon	1-2 times daily	High
QRF – FOB PALIWODA	1 Platoon	Daily	High
QRF – LSA ANACONDA	1 Platoon	Daily	High
EOD Escort	1 Platoon	As necessary	Medium
Force Protection – FOB PALIWODA	1 Platoon	Daily	High
Iraqi National Guard (ING) Training	3 Platoons	2-3 times weekly	High
Detainee Transfer to FOB Remagen	1 Platoon	1-2 times weekly	High
SOI Engagements including: City Council Meetings- Balad & Yethrib Police Station Visits	1 Platoon	3-4 times weekly	High
Iraqi Police Service (IPS) Training	1 Squad	2-3 times weekly	High
Fuel Escort to FOB Tinderbox	1 Platoon	1 weekly	High
Detention Center Ops	1 Fire Team	Daily	Medium
Mayoral Cell FOB Maintenance Iraqi Civilian/Contractor Escorts	1 Squad	Daily	High
Security / JCC (HHC – Balad)	1 Squad	Daily	High
Crater Analysis	1 Squad	As necessary	Medium
Civil-Military Operations Center (CMOC) Ops CMO (S-5/CA) ING LNOs IPS LNOs	1 Squad	Daily	High
TF Mortars	1 Platoon	Daily	High
TF TAC Personnel Security Detachment (PSD) T6 PSD: 1 x SCT SEC, HQ66 Crew T3 PSD: 2 x MTR SQD, HQ63 Crew T7 PSD	1 Platoon	Daily	High
TF M109A6 Platoon Firing PLT HQ PLT	2 Platoons	Daily	High
10 PLATOONS ON HAND — 23 PLATOONS REQUIRED			
*Annotate requirement in terms of a 24-hour period of time			

Figure 1

During operations in Iraq, it is also critical that all of a task force's elements perform reconnaissance. Operation Iraqi Freedom has accelerated the transition of the concept of the battlespace in replacing the concept of the battlefield. The COE produces critical requirements that demand commanders know their battlespace. The concept of battlespace requires commanders to navigate under limited visibility conditions, to move rapidly over great distances and synchronize their movement and communicate both vertically and horizontally. In this brief review of required capabilities, the experiences in Iraq demand an internal capability to perform dismounted operations and extensive reconnaissance.

Mission

The Steel Tigers' mission presented a non-traditional role for an armor battalion. Route clearance, counter-mortar/IED patrols, reconnaissance and surveillance, traffic control points, and raids constituted the bulk of operations. Everyday missions remained small in scale, notably by paired-down platoons. The Steel Tigers' mission set included: route clearance; counter-mortar patrols; observation posts; traffic control points; quick reaction force (QRF) for Logistics Support Area (LSA) Anaconda; civil affairs, psychological operations (PSYOPS) and human intelligence (HUMINT) escorts; TF indirect fires; explosive ordnance disposal (EOD) escort; forward operating base (FOB) protection; named areas of interest (NAI) overwatch; counter-IED patrols; react to indirect fire; convoy security; QRF for FOB Paliwoda; spheres of influence engagements; TF tactical command post (TAC); detainee transfers; and FOB mayor requirements.

As shown in Figure 1, TF 1-77 Armor required 23 platoons to meet mission requirements. However, the current TF task organization only afforded 10 platoons, as shown in Figure 2.

The Steel Tigers' combat power was a mixture of armor (M1A1), motorized tank platoons (M1114), mechanized infantry (M2A2), light infantry (M1114), engineers (M113), and field artillery (M109A6). Specific mission requirements also required the additional task organization of civil affairs, tactical PSYOPs teams (TPT), tactical HUMINT teams (THT), and aviation assets (AH-64/OH-58). In sum, the task organization of TF 1-77 Armor created severe tactical problems, which were outside the Legacy Force structure.

**Team Pain —
C Company, 1-77 Armor**

At task organization, Team Pain deployed with two motorized tank platoons of four M1114s each and one mechanized platoon of four M2A2s. Following the initial deployment, the division deployed two additional companies of M1A1s of which Team Pain received two platoons. One of Team Pain's tank platoons would subsequently be task organized elsewhere in support of the brigade combat team (BCT). Therefore, Team Pain's final task organization was a mechanized infantry platoon of four M2A2s and two M1114s (Red), a tank platoon of two M1A1s and four M1114s (Blue), and a headquarters platoon of two M1114s, two up-armored M998s, and two M113s (Black). To increase the manning capabilities of Blue, Pain 6 attached an infantry fire team from Red.

Some examples of common missions and how Team Pain's platoon of action (POA) was organized are shown in Figure 3.

Team Pain's M1A1s initially were used for armored protection during their Main Supply Route (MSR) Tampa clearing mission. The M1A1's superior optics and armament made it ideal for scouring the road for suspicious activity or objects. Additionally, the added armor protection was a valued deterrent against the enemy; not too many AIF are willing to taunt a 120-mm gun. The deterrent value of the M1A1 also allowed a patrol to slow its movement through dense IED locations, thus clearing the routes properly while minimizing risk. Team Pain's M1s were also very effective at traffic control points to demonstrate an overwhelming presence. The thermal sights were great for standoff against AIF, who often used the wood line to conduct ambushes.



Task Organization

FOB PALIWODA		LSA ANACONDA	
B/1-77 AR (REGULATOR)		C/1-77 AR (PAIN)	
2/C/9 EN (RED)	(3 M113, 1 M1114)	3/C/1-77 AR (BLUE)	(4 M1114)
2/C/1-18 IN (WHITE)	(4 M1114)	2/C/1-26 IN (RED)	(4 M2A2)
3/D/2-108 IN (BLUE)	(4 M1114)	HQ/C/1-77 (BLACK)	(2 M1A1)
HQ/B/1-77 (BLACK)	(2 M1A1)		
C/1-26 IN (ROCK)		HHC 1-77 AR (HELLCAT)	
1/C/1-26 IN (RED)	(4 M2A2)	SCTS/1-77 AR (SABER)	(8 M1025/26)
3/C/1-26 IN (BLUE)	(4 M2A2)	1/B/2-108 (HAMMER)	(4 M1114)
1/C/1-77 AR (GREEN)	(4 M1114)		
		FIELD TRAINS	
HQ 1-77 AR (TIGER)	(2 M1A1)	TOC	
MTR/1-77 AR (THUNDER)	(4 M1025/26)		
1/B/1-7 FA (BULL)	(3 M109A6)		
S3 PSD	(4 M1114)		
CDR PSD	(4 M1114)		
TAC			

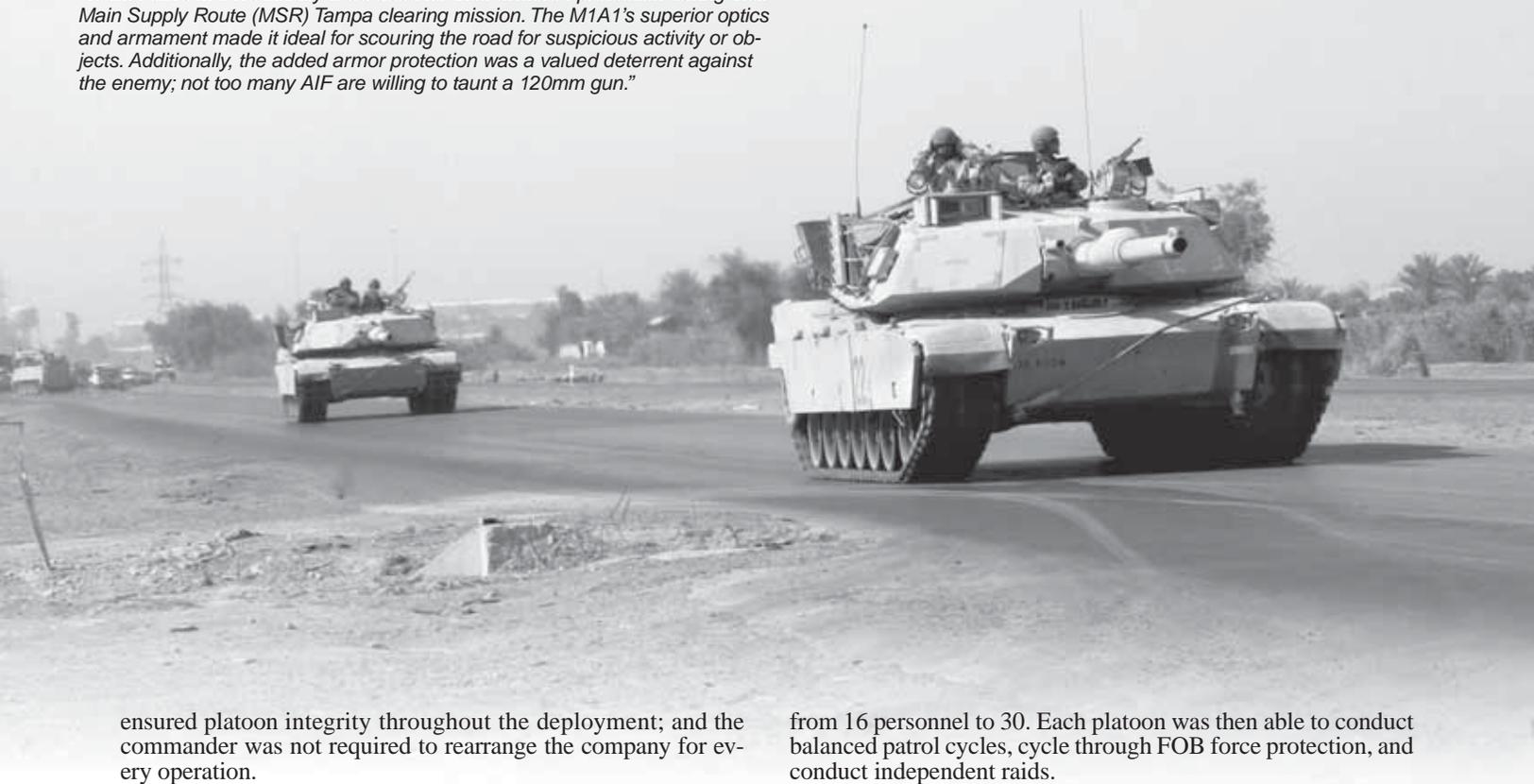
Figure 2

Distinct tactical problems arose with Team Pain's tank platoon. Primarily, tank platoons, given their modified table of organization and equipment (MTOE), do not have the equipment to perform dismounted missions, even with M1114s. The MTOE authorizes a tank platoon eight rifles, no M203s, no manpack radios, and no crew-served weapons. Through the initiative of several company armorers and executive officers, the task force converted several of its M240s into improvised M240Bs, and leader vehicles were stripped of their second radios that were used as manpacks for dismounted operations.

To satisfy requirements of dismounted operations, Team Pain placed challenges on its mounted elements. Dismounting M240s reduced the mounted elements' overwatch firepower. Stripping radios reduced leaders' dual net capability. Moreover, Pain 6 realized that initially, his tank platoon leaders were at a disadvantage because they now had to maneuver both a mounted and dismounted element. However, the POA had several benefits: each platoon could conduct multiple missions, which gave the company greater flexibility; platoons were not forced to concentrate on one specific operation based on weapons platforms; platoons could maneuver on a variety of terrain; platoon leaders could task organize at the platoon level for varied mission requirements; the POA

"The Steel Tigers' mission presented a nontraditional role for an armor battalion. Route clearance, counter-mortar/IED patrols, reconnaissance and surveillance, traffic control points, and raids constitute the bulk of operations. Everyday missions remain small in scale; notably by paired-down platoons."

“Team Pain’s M1A1s initially were used for their armored protection during their Main Supply Route (MSR) Tampa clearing mission. The M1A1’s superior optics and armament made it ideal for scouring the road for suspicious activity or objects. Additionally, the added armor protection was a valued deterrent against the enemy; not too many AIF are willing to taunt a 120mm gun.”



ensured platoon integrity throughout the deployment; and the commander was not required to rearrange the company for every operation.

Team Rock — C Company, 1st Battalion, 26th (1-26) Infantry

One of the more innovative solutions to the challenges of task organization belonged to Team Rock. As the deployment was viewed as a marathon and not a sprint, Rock 6 did not believe that the standard 16-man tank platoon could withstand exhaustive patrol cycles, support FOB force protection requirements, or conduct independent raids.⁵

Therefore, to create parity within the task organization, Rock 6 detached one M2A2 and one fire team from each of his organic M2A2 platoons and attached them to his motorized armor platoon (M1114). In turn, he detached an M1114 and its assigned tank crew to each of his organic M2A2 platoons. This increased the personnel strength of his motorized armor platoon

from 16 personnel to 30. Each platoon was then able to conduct balanced patrol cycles, cycle through FOB force protection, and conduct independent raids.

Team Rock took this integration a step further by implementing an M2A2 Bradley certification program for his 19-series soldiers. Through an intensive train-up, Team Rock executed a modified Bradley Table VIII to certify tankers as M2A2 drivers, gunners, and Bradley commanders. The motorized armor platoon leader, equipped with cross-trained soldiers, could then accommodate the company’s mission set.

A highlight for armor leaders is the new skill set developed by the armor platoon leader. Trained at Fort Knox, Kentucky, to command a tank platoon, these lieutenants are now proficient at integrating mounted and dismounted tactics in reconnaissance, raids, and convoy security. The POA platoon leader has a deeper appreciation for full-spectrum operations. He was also given the challenge of leading twice the number of soldiers than a tank platoon.

The mixture of vehicles in the Team Rock POA highlights the advantages of each weapons system. Initially, Team Rock conducted route clearance of Highway 1 with a full M2A2 Bradley platoon. The intensive maintenance requirements of such employment were a serious maintenance and service burden on the M2A2s. Deploying a platoon of two M2A2s and two M1114s on route clearance reduced the overall company M2A2 mileage, minimizing the wear and tear on a high-tempo weapons system.

The M2A2 is best suited for operations in Iraq, offering firepower, maneuverability/agility, crew protection, and a dismounted infantry-carrying capacity. However, its shortcoming for not accommodating for the high mileage in the route clearance of MSR Tampa (Highway 1) was complemented by a section of M1114s. The M1114 enabled the POA platoon leader the ability to maneuver in restrictive urban terrain and continued to provide crew protection. Moreover, Team Rock integrated the company’s M113s, giving the POA platoon leader the freedom of maneuver that lighter personnel carriers offer for bridge crossings. The M113 offers the maneuverability/

Mission	POA Organization
Route Clearance	4 x M1114 (BLUE or BLACK)
	2 x M2A2 and 2 x M1114 (RED)
	2 x M1A1 and 2 x M1114 (BLUE)
Reconnaissance and Surveillance (Terrain Dependant)	Open Desert or Agricultural Fields 4 x M2A2 (RED); 2 x M2A2 and 2 x M1114 (RED); or 2 x M1A1 and 2 x M1114 (BLUE)
	MSR and ASRs 2 x M1A1 and 2 x M1114 2 x M2A2 and 2 x M1114
	Urban Terrain 4 x M1114 (BLUE) 2 x M1114 (RED) and 2 x M1114 (BLACK)
Convoy Escort	4 x M1114 (BLUE)
	2 x M1114 (RED) and 2 x M1114 (BLACK)
Cordon and Knock (One to Two Houses)	4 x M1114 (BLUE)
	2 x M2A2 and 2 x M1114 (RED)
	2 x M1A1 and 2 x M1114 (BLUE)

Figure 3. TEAM PAIN: Missions vs. POA Organization

agility and troop-carrying capacity of the M2A2 with a decreased height and width profile required in urban operations.

Team Regulator — B Company, 1-77 Armor

Team Regulator conducted a relief in place with a fully manned M2A2 Bradley company from 3d BCT, 4th Infantry Division. The terrain of Team Regulator's new sector demanded the extensive use of dismounts (to which its predecessor had adequate access) to clear orchards, buildings, and to man observation posts. Therefore, the dismount requirement dictated the vehicle set of Team Regulator's platoons.

For Team Regulator, the POA changes occurred during task organization. Team Regulator lost her three organic M1A1 tank platoons to support the BCT.⁶ Team Regulator would receive an engineer platoon of three M113s, one M998, and one M1114 (Red), a motorized infantry platoon of five M1114s (White), and a light infantry anti-tank platoon of four M1114s (Blue). The headquarters platoon of two M1A1s, two M998s, and two M113s would remain and be supplemented with two M1114s.

One of Team Regulator's enduring challenges was a sector of distinctly varied terrain — the urban streets of Balad. This Shi'a enclave of 75,000 is set along the Tigris River. Manmade structures of walls, canals, and dikes, and thick vegetation of orchards, foliage, and agriculture fields limited their maneuver space. Operations in urban Balad were decentralized and avenues of approach limited the use of Team Regulator's M1A1s. Compounding maneuver limitations was the transition from the urban alleys and streets of Balad, to the jungle-like terrain paralleling the Tigris, to the expanse of arid land along side of MSR Tampa.

To increase White's dismounted infantry-carrying capabilities, the company modified its two ambulance M113s into troop carriers and added company headquarters' and maintenance M113s into the patrol cycle.⁷ Green carried with the same constraints as discussed above with the motorized tank platoon; therefore, Regulator 6 regularly supplemented Green platoon with M113, M1114, or M1A1s from headquarters platoon. Red alone operated within its normal platoon capabilities.

Due to the varying vehicle capabilities and soldier skill sets, each platoon had regular patrol requirements. Red, with its inherent EOD capability, primarily conducted counter-IED patrols and route clearance. White, with its dismount capabilities, focused on NAI overwatch to maximize the use of dismounted observation posts. Finally, Green, supplemented with either the headquarters tank section or M113s, conducted route clearance of the MSR and alternate supply routes (ASRs).

In reflection of the use of his headquarters tank section, Regulator 6 relied on the M1A1 to provide lethal direct fire overwatch, thermal optic capability, and act as a show of force. The restrictive terrain of Team Regulator's sector and the exhaustive requirement for dismounts limited his tank section to lethal direct fire in larger company raids or TF missions (movement to contact).

Tiger TAC — B Battery, 1st Battalion, 7th Field Artillery

The addition of an M109A6 Paladin platoon to the task force allowed the TF commander to use the TF mortar platoon (Thunder) as an additional motorized infantry platoon. Attaching a mortar section to the TAC was originally planned to offer indi-



"One of Team Regulator's enduring challenges was a sector of distinctly varied terrain — the urban streets of Balad. This Shi'a enclave of 75,000 is set along the Tigris River. Manmade structures of walls, canals, and dikes, and thick vegetation of orchards, foliage, and agriculture fields limited their maneuver space. Operations in urban Balad were decentralized and avenues of approach limited the use of Team Regulator's M1A1s."

rect fires capability to the TAC while in sector. However, the limitations of Thunder's M1064s, most notably speed, forced the increased use of M1114s and up-armored M998s. Moreover, the risk inherent of rolling a section of M1064s loaded with their high explosive basic load in a sector of IEDs, mines, and rocket-propelled grenades reduced their deployment in sector.

Therefore, to increase the number of TF platoons, Thunder was required to revert back to its infantry roots. With its MTOE M998s given add-on armor and the addition of two M1114s, Thunder took on missions, such as convoy escort, crater analysis, traffic control points, counter-IED/counter-mortar patrols, reconnaissance, QRF, and TAC personal security detachment. Moreover, Thunder provided two sections of mortars and its fire direction center (FDC) to support the TF fires mission.

The greatest challenge to Thunder 6 was to manage the troops-to-task issue. Over a 24-hour period, the mortar platoon provided a gun crew for indirect fires, fire direction control/platoon command post operations, QRF, FOB force protection, and personal security detachment for the TAC. To effectively manage his platoon and to keep his soldiers' skills sharp, Thunder 6 rotated his personnel through duties. Due to the troops-to-task, the TAC, for the most part, had to remain mounted.

In review of operations in Iraq, Thunder 6 recalls his soldiers definitely spent more time behind their M4s than behind their 120mm mortar tubes. He attributes their success here in Iraq to the mission focused training program conducted prior to deployment; it allowed the platoon to refine already present infantry skill sets.

Task Force 1-77 Armor's task was to shape her warfighting capabilities to changing circumstances. The old warfighting paradigm, which focused primarily on the military capabilities of a small set of potential adversary states, no longer addressed the entire threat spectrum. In this COE, traditional concepts of mass, speed, firepower, and maneuver were inadequate. The TF adapted in response to these new conditions just as our enemies pursued new ways to diminish our overwhelming power, as experienced AIF seldom presented a target set that an M1A1 tank platoon could fully exploit to influence the tactical fight. The tank platoon was designed for a different war on different terrain. Retired Israeli army General Yehuda Admon said of the use of Israeli armor in the urban fight, "This is not a normal way of using the tank for a low-intensive conflict. If we had something else to use, we would use it. Tanks are for mass fights."⁸ The tank continues to make a presence on the urban battlefields of Iraq.

AIF tactics, coupled with its task organization, created severe tactical problems, which were outside the Legacy Force structure. As tactical innovation occurs only where tactical innovation is required, four different commanders of TF 1-77 Armor applied innovation to distinct tactical problems. Where tactical innovation was not required, the commanders stayed with the tried-and-true applications of the armor platoon. In sum, the tactical problems spawned a tank platoon fighting split section with two M1A1s and two M1114s; a tank platoon fighting cross-trained as M2A2 Bradley crewman fought split section with two M2A2s and two M1114s; a headquarters tank section cross-attached with a light infantry anti-tank platoon forming a platoon of two M1A1s and two M1114s, or two M113s and two M1114s; and the creation of two additional platoons to resolve the TF troops-to-task of two headquarters tanks, a scout section, and two mortar squads operating in M1114s.

The POA, in reflection, allowed the platoons to break down into combat effective sections that could both move over narrow ground, yet maintain lethal standoff with an effective weapons system (either the M2A2's 25mm or the M1A1's 120mm). Setting the heavy tracks stationary, the lighter vehicle could maneuver under the watchful cover of the upgraded sights on both the M1A1 and M2A2. Bottom line: the POA provided commanders flexibility to accomplish mission sets.

The leaders of the POA faced varied challenges outside of those presented by the enemy. The POA platoon leader faced the challenge of knowing and understanding mounted and dismounted operations and the employment of his equipment to suit each operation. For the armor POA platoon leaders, they were forced to operate without M1A1s and introduced to M2A2s, M113s, and M1114s. Thus, tank crews must heavily train on their new equipment to be proficient.

No system to date has risen to become a war winner. However, innovative commanders routinely win battles by employing highly skilled soldiers in nontraditional formations. Reflecting on the 1973 Arab-Israeli War, General William E. DePuy noted that the Israeli tank crews (often using the same equipment their opponents used) were between three to six times more effective, "during the next 10 years, battlefield outcome will depend upon the quality of the troops rather than the quality of the tanks."⁹ True to form, the gauntlet was thrown, and the soldiers and commanders of TF Steel Tigers answered the call to arms.



Notes

¹Major General Rober H. Scales, Statement before the U.S. House of Representatives, Senate Armed Services Committee, Washington, D.C., 21 October 2003.

²Speech by General Peter J. Schoomaker, Chief of Staff, Army, at the annual Association of the U.S. Army Convention, Washington, D.C., October 2003.

³Colonel Bruce B.G. Clarke, "The Stryker Company and the Multifunctional Cavalry Platoon," *ARMOR*, July-August 2004, pp. 24-28.

⁴During the task force deployment, designation of enemy forces morphed from insurgents to anti-coalition forces to anti-Iraqi forces, signifying shifts in authority from coalition forces to the interim Iraqi government.

⁵The current operating environment often required the TF's platoon to transition from their pre-planned missions of reconnaissance and surveillance into hasty raids. The standard "motorized" tank platoon cannot support both a mounted security element and a dismounted assault element as required of urban operations.

⁶The 2d Brigade Combat Team, 1st Infantry Division originally deployed with one M1A1 tank company, which was parceled across six task forces. The division would later deploy two additional tank companies of which TF 1-77 Armor would ultimately receive a platoon.

⁷Modifying the medic M113s included painting over the red crosses or using "flip-style" red-cross designations that could be lifted up or down to display or not display the crosses. Brigade and division legal advisors confirmed that all modifications were compliant with the Law of Land Warfare.

⁸John Brosky, "Tank Still Has Role, But Future Uncertain," *Defense News*, 24 June 2002, p. 6.

⁹Richard Swain, ed., *Selected Papers of General William E. DePuy*, U.S. Army Command and General Staff College Press, Fort Leavenworth, Kansas, 1994, p. 71.

John P.J. DeRosa is an operations specialist, National Command Center-Raven Rock Mountain Complex, Adams, PA. He received a B.A. and an M.A. from California State University-San Bernardino. His military education includes Armor Officer Basic Course, Battalion Maintenance Officer Course, Maintenance Leader Course, Unit Movement Officer Course, Signal Support Systems Specialist Course, Basic Combat Training, and Airborne School. He has served in various command and staff positions, including assistant operations officer, Iraqi Security Forces, Task Force 1st Battalion, 77th (1-77) Armor, Balad, Iraq; executive officer, Headquarters and Headquarters Company, 1-77 Armor, 1st Infantry Division (ID), LSA Anaconda, Balad; assistant operations officer, 1-77 Armor, 1st ID, Schweinfurt, Germany; battalion maintenance officer, 1-77 Armor, Camp Monteith, Kosovo; and tank platoon leader and tank company executive officer, 1st Battalion, 185th Armor Battalion, 81st Separate Infantry Brigade (E), San Bernardino, California.

Light Cavalry Platoon — Armor Team Integration Procedures

by First Lieutenant Jonathan Silk

(Reprinted from July-August 2005)

During Operation Iron Saber, 4th Platoon, Killer Troop, 3d Squadron, 2d Armored Cavalry Regiment, was attached to 2d Battalion, 37th (2-37) Armor, during combat operations in Al Kufa, An Najaf, and Diwaniyah from April to July 2004. Team Battle was an armor/cavalry company team, comprised of 3d Platoon, B Company, 2-37 Armor, and Headquarters Company, 2-37 Armor, and three scout platoons from Killer Troop, 3d Squadron, 2d (3/2) Armored Cavalry Regiment.

On today's battlefield, platoon leaders assigned to light cavalry and armor units must be prepared to fight mounted and dismounted in the urban environment. During Operation Iron Saber, procedures were developed and used by my scout platoon, Killer 4, Killer Troop, 3/2 Armored Cavalry Regiment, during the execution of numerous reconnaissance missions and engagements with enemy forces in Iraq. These procedures, which are relevant to armor/cavalry company teams and armor companies

operating in gun trucks, include task organization in the urban fight; seizing key terrain; using the M203 effectively in urban terrain; coordinating with armor in the urban fight; marking enemy positions for tanks; and dismounted observation posts.

Organizing the Cavalry Scout Platoon for the Urban Fight

Good task organization is important because it gives the platoon flexibility to handle any situation. Our experiences revealed that maneuvering mounted with no dismounted capability against an enemy in an urban environment was ineffective. Using all of the platoon's assigned gun trucks without a dismount element does not provide the platoon leader the flexibility needed to conduct operations in an urban environment.

Based on combat experience, a mounted patrol, consisting of four gun trucks, can effectively conduct urban reconnaissance operations. If the platoon has more gun trucks available, take the





"The grenadiers can fire marking rounds at the entrance to side streets or alleyways, which can be adjusted by gun trucks on the ground or from a dismounted team observing the same area. Once the marking round is on line with the alleyway, the grenadier then fires into the alleyway. The incoming 40mm rounds will detonate in the alleyway or on the sides of the alleyway, killing or wounding enemy forces and denying that terrain as a covered position."

extra crews and form a dismount element that will ride in the four gun trucks. The security posture increased to 360-degrees per gun truck by having the dismount teams riding in the gun trucks.

Soldiers can use any spare crew served weapons and radios from the gun trucks for dismounted operations. The platoon's dismounted element consisted of two teams; a sergeant led one team made up of three soldiers and the platoon senior scout led the other team made up of four soldiers. The dismounted teams seized dominant terrain, cleared buildings, occupied observation posts, and operated as dismounted M240B teams.

The dismounted teams carried two manpack radios (one each) and, depending how the platoon leader deployed the teams, they carried two M240Bs with M145 mounted scopes. The M240Bs, which were not being used, were crew served weapons cross-loaded from the gun trucks. The platoon leader should include M203 gunners in the plan for dismounted weapons organization. The M203 gunners, deployed on dominant terrain seized by the dismounted teams, provided the platoon leader immediate capability to engage and destroy enemy forces massing and seeking cover in alleys and side streets around the platoon's position.

Cavalry Scout Platoon Organization

Killer 4-1	Killer 4-2	Killer 4-4	Killer 4-5
Gunner PL Driver Dismount-Senior Scout Dismount	Gunner TC Driver Dismount OP Kit Bag M240B W/M145 Scope	Gunner PSG Driver Medic Dismount	Gunner TC Driver Dismount Dismount OP Kit Bag M240B W/M145 Scope

Figure 1

For command and control purposes, the platoon's senior scout controlled the dismounted element and rode in the platoon leader's gun truck. When the dismounted team needed to be deployed, the platoon leader quickly tasked the senior scout using Force XXI battle command brigade and below (FBCB2).

All leaders in the platoon had radio capability. If leaders do not have radio capability, they will miss important information passed over the net. When the platoon leader dismounted, a soldier with a manpack maneuvered with him, leaving the platoon sergeant in control of the mounted element.

Seize a Dominant Position and Control the Terrain

Once the platoon makes contact with the enemy, it is necessary to maintain that contact to engage and destroy the enemy. In an urban fight, this can be difficult when the enemy uses urban obstacles to fight on his own terms and then breaks contact to displace and attack again.

Instead of constantly maneuvering to maintain contact, the platoon should seize the dominant terrain in the area. The dismounted teams, who are clearing buildings, find a building to use as a dominant position to find and fix the enemy while the gun trucks cover all avenues of approach to the platoon's position. From the dominant position, the platoon leader can observe the urban terrain and direct the platoon fight. The platoon leader can coordinate platoon fires from the gun trucks, coordinate with and direct armor to engage and destroy enemy positions, and deploy the dismounted crew served weapons to suppress enemy positions on rooftops, denying the dominant terrain to the enemy.

Using the M203 Effectively in Urban Terrain

On today's urban battlefield, rules of engagement (ROE) issues can either delay or prevent indirect fire support. The M203's capability to engage and destroy enemy forces using urban terrain as cover and concealment makes it an effective alternative when indirect fire is unavailable. The M203's 40-mm round minimizes collateral damage, which is important in the urban fight when enemy forces are in close proximity to innocent civilians. We quickly learned that the enemy would mass in alleyways and side streets a few hundred meters from the platoon's position and maneuver to a firing position on the ground to engage, or engage from an elevated dominant position. The side streets and alleyways are urban dead space. To deny the enemy this terrain, we used the M203 to engage him in alleyways and side streets.

Once the platoon established a dominant position, the grenadiers fired weapons to engage enemy forces who were massing in dead space where the platoon's direct fire weapons could not engage. The grenadiers can fire marking rounds at the entrance to side streets or alleyways, which can be adjusted by gun trucks on the ground or from a dismounted team observing the same area.

Once the marking round is on line with the alleyway, the grenadier then fires into the alleyway. The incoming 40mm rounds will detonate in the alleyway or on the sides of the alleyway, killing or wounding enemy forces and denying that terrain as a covered position. The enemy had the choice to either stay in the alley and absorb the 40mm indirect fire or maneuver to another position. When the enemy attempted to maneuver out of the alleyway or side street to escape the 40mm fire, the gun trucks covering those areas engaged and destroyed them.

Coordinating with Armor in the Urban Fight

From the dominant position, the platoon leader can coordinate with the team commander and call armor forward to engage and destroy enemy positions. The platoon leader directs the tanks to maneuver parallel to, or down to, the alleyway or side street and engage the enemy in the alleyway with the tank's coaxial machine gun. The platoon gun trucks will engage and destroy enemy forces maneuvering to escape the tank's coaxial machine gun fire as they exit the other side. The tanks should not maneuver where the scout platoon cannot support them. Once the tanks have destroyed enemy positions or forced the enemy to withdraw, the scout platoon can maneuver forward and occupy a new position to maintain contact or regain contact, if needed.

Marking Enemy Positions for Tanks

Identifying enemy positions in an urban environment is difficult. Further, marking them so a tank can identify them is equally difficult. Our platoon used several techniques to mark enemy positions at night or during limited visibility. In operations during hours of darkness, enemy positions were marked using the 9mm laser mounted on the handgrip of the 9mm pistol. This is

a good technique; however, if the soldier lasing the target gets tired, the laser could bounce around, making it difficult for the tank gunner and tank commander to identify the target.

The PEQ-2 laser is an excellent tool to mark targets, both with the aiming laser or on spotlight mode. The PEQ-2 mounts on a crew served weapon attached to the mount on the gun truck. This is a more stable platform from which to laze enemy positions. When multiple engagements were occurring simultaneously and a PEQ-2 was unavailable to mark an enemy's position, leaders would use a steady stream of tracers from their M4s until the tank gunner identified the enemy's location. Leaders should also be prepared to mount the tank and direct the tank commander to the enemy's position.

During daylight operations, we used a steady stream of tracers to identify enemy positions, which proved to be an effective technique. As a planning consideration, all soldiers should either carry a magazine of tracers or have a tracer/ball mix loaded in every magazine to mark enemy positions.

Use of Dismounted Observation Posts

Based on combat experience, employing dismounted observation posts (OPs) is an effective technique to counter enemy forward-observer positions. Each dismounted team had an OP kit bag loaded on the gun trucks, which consisted of a manpack radio, binoculars, and a global positioning system (GPS). The dismounted team occupying the OP had an M203 and an M240B with a mounted M145 scope.

Mahdi militia forward observers adjusted 81mm and 120mm mortar fire on our positions using cell phones to communicate with the mortar positions. Enemy forward observers seemed to



"From the dominant position, the platoon leader can coordinate with the team commander and call armor forward to engage and destroy enemy positions. The platoon leader directs the tanks to maneuver parallel to, or down to, the alleyway or side street and engage the enemy in the alleyway with the tank's coaxial machine gun. The platoon gun trucks will engage and destroy enemy forces maneuvering to escape the tank's coaxial machine gun fire as they exit the other side."

know the rules of engagement and did not carry weapons, making it difficult to determine hostile intent. Dismounted OPs observed enemy forward observers, usually positioned on rooftops or in doorways of buildings, making corrections to adjust fire over cell phones. They stood out from the rest of the environment because as mortar rounds impacted, they were in the open and not behind cover. The platoon engaged and destroyed enemy forward observer positions with M203 and M240B fire from the OP, crew served weapons fire from the platoon's gun trucks, or tank cannon fire coordinated by the platoon leader.

Dismounted OPs proved to be very effective when the terrain did not provide suitable observation and cover firing positions from which to engage. Sometimes the only cover available was piles of rubble or walls, which are not good vantage points from which to observe and engage the enemy. In this situation, dismounted OPs placed in front of covered positions can detect enemy forces. Once enemy forces are detected, the information is reported to the gun truck commander and gunner, then the gun truck moves from behind cover to engage. After the engagement, the gun truck returns to its covered position.

Coordinate Between Platoons for Use of Illumination

While conducting operations in Kufa during hours of darkness, on a number of occasions, there were multiple engagements occurring simultaneously, involving more than one scout or tank platoon. Engagements during hours of darkness can require illumination, such as a star cluster or parachute flare, to il-

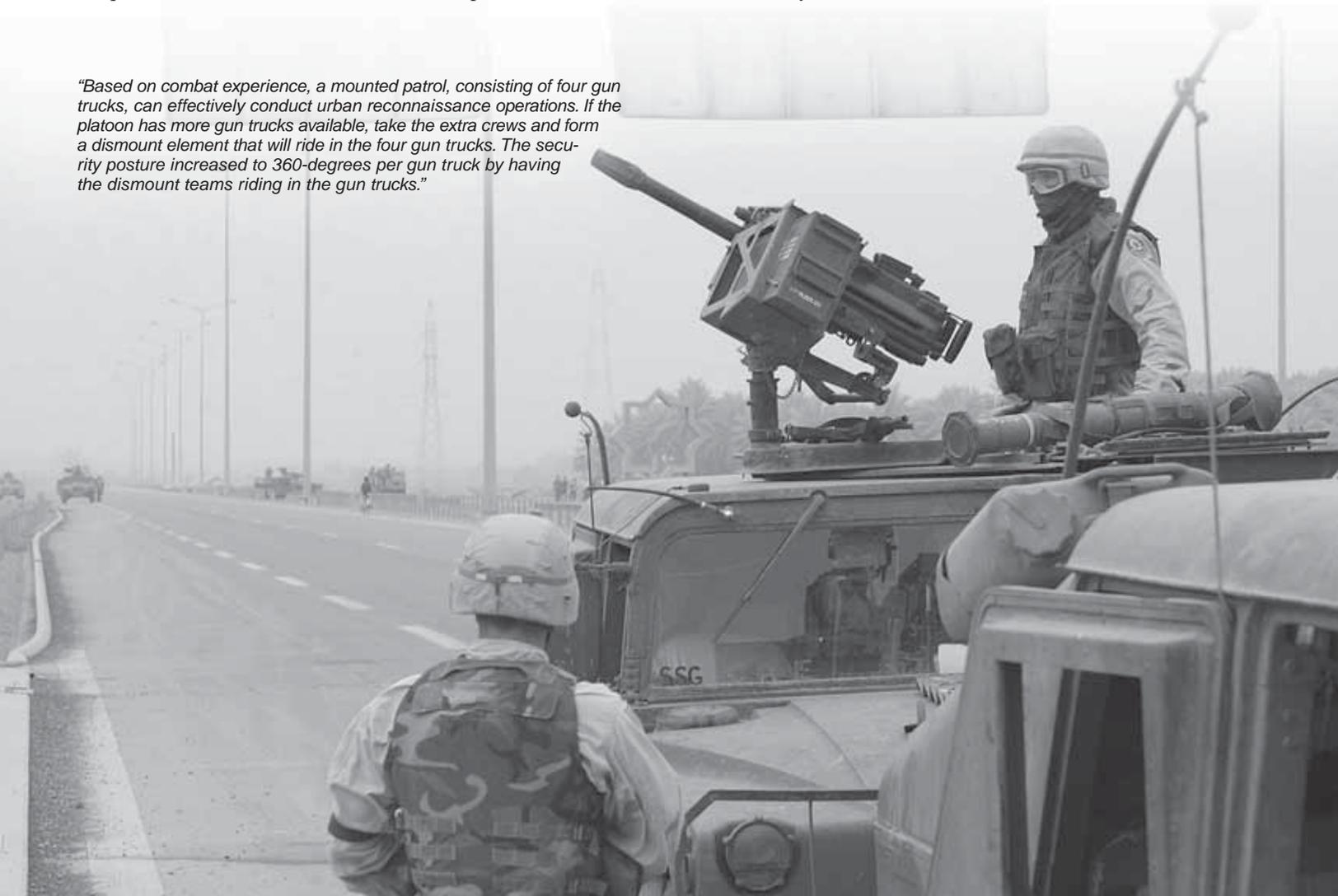
luminare enemy positions. Illumination should be coordinated over the command net to allow friendly gun trucks, who may be using darkness as concealment, to take up covered positions before flares illuminate and expose them. Failure to coordinate over the command net can leave friendly forces exposed to enemy fire when the flare pops.

Recommendations for the Armor Community

Armor companies need more M203s than currently authorized. The U.S. Army Armor Center and the U.S. Army Training and Doctrine Command should adjust the modification table of organization and equipment (MTOE) to provide an M203 per tank crew. The M203 is a very effective weapon for engaging and destroying enemy forces in the urban environment. Combat experience demonstrated that tank commanders and loaders could effectively engage and destroy enemy forces from the hatch with effective M4/M16 fire. Tank crews equipped with M203s allow the crew to put 40mm fire where they need it, when they need it, creating a more lethal tank crew. It provides crews greater protection by allowing them to protect their flanks in close-quarter engagements from enemy ground forces maneuvering against tanks attempting rocket-propelled grenade or small arms engagements. If tank companies are operating in gun trucks instead of tanks, then they are essentially scout platoons and can use these procedures.

Armor and cavalry platoons also need more manpack radios than currently authorized. The current battlefield demands that

"Based on combat experience, a mounted patrol, consisting of four gun trucks, can effectively conduct urban reconnaissance operations. If the platoon has more gun trucks available, take the extra crews and form a dismount element that will ride in the four gun trucks. The security posture increased to 360-degrees per gun truck by having the dismount teams riding in the gun trucks."



Battle Drills for STX 17-97F-10-3 Conduct Zone Reconnaissance (Cavalry Scout Platoon)

TABLE 4-12 from ARTEP 17-97F-10-MTP

<u>TASK/DRILL</u>	<u>T&EOs and TASK #</u>
Conduct tactical movement	17-3-1016.17-RECP
Conduct passage of lines as passing unit	17-3-1014.17-RECP
Conduct an area/zone reconnaissance	17-3-4010.17-RECP
Execute actions on contact	17-3-1021.17-RECP
React to indirect fire drill	17-3-DRL3.17-RECP
Attack an inferior force	17-3-0225.17-RECP
Reconnoiter an obstacle/restriction	17-3-4012.17-RECP
Bypass threat contact	17-3-2420.17-RECP
React to air attack drill	17-3-DRL5.17-RECP
Conduct reconnaissance handover	17-3-4025.17-RECP
Perform consolidation and reorganization	12-3-C019.17-RECP
Rearm/resupply	17-3-1030.17-RECP

Figure 2

armor and cavalry leaders fight dismounted. When leaders dismount, it is essential for them to have the capability to monitor the command net to report and receive information.

Armor and cavalry platoons need in-depth training on assigned weapons systems. To build depth, the fundamental requirements are basic skill and sustainment training on the M16/M4, M203, M240B/G, and the M2 .50-caliber machine gun. Maximizing the use of training ammunition and simulators will also build depth in platoons. Having several soldiers capable of effectively operating many different weapons systems was crucial to the platoon's success in combat. A platoon trained in-depth allows for greater performance on long-duration operations and for a good crew rest plan.

During deployment, leaders should establish sustainment and cross-training plans on platoon organic weapons. Training can be conducted at the forward operation base and qualification can be performed when the platoon rotates to a range in theater — it is critical that all soldiers be trained on all weapons systems. Leaders should anticipate taking casualties. When a casualty occurs on a weapons system, if the platoon has been cross-trained on all organic weapon systems, a trained soldier can immediately replace the casualty.

Implementing Effective Procedures During STX Training

Readers can implement these procedures during situational training exercises (STX) by referring to Army Training and Evaluation Program (ARTEP) 17-97F-10-MTP, *Mission Training Plan for the Reconnaissance Platoon*, Chapter 4, "Reconnaissance Platoon, STX 17-97F-10-3, Conduct Zone Reconnaissance (Cavalry Scout Platoon)."¹ Figure 2 is a copy of table 4-12 from STX 17-97F-10-3, which lists the tasks trained during the STX.² Once the platoon is proficient at conducting zone reconnaissance, it will be ready for progressively more difficult conditions. Figure 3 is an example of adding or substituting tasks to create a scenario to execute zone reconnaissance in an urban environment.³ The STX is an excellent opportunity to train in-depth on weapons systems and implement these procedures in an urban reconnaissance scenario.

Leaders preparing for deployment should plan to cross train all soldiers on platoon-organic weapons systems. Maximizing use of training ammunition and simulators will build depth in platoons. M203 grenadiers can train in military operations in urban terrain (MOUT) sites using training rounds to practice engaging alleyways and side streets from rooftops. If a MOUT site is unavailable, then platoon leaders can plan a nonstandard range to achieve the same training level. Platoons can train on marking targets for both day and night engagements during platoon ranges. One vehicle per section can spot the target and mark it using one of the above-described methods while the other vehicle engages the target.

Learn and Fight from Experience

The procedures described in this article will assist the light cavalry/armor platoon leader in conducting combat operations in urban terrain. The development process occurred during platoon after-action reviews (AARs) and during the planning process while the platoon leadership wargamed courses of action. From the AARs and wargaming sessions, the platoon leadership assessed what worked and what did not work and used proven procedures during combat operations.



Notes

¹Army Training and Evaluation Program (ARTEP) 17-97F-10-MTP, *Mission Training Plan for the Reconnaissance Platoon*, Chapter 4, "Reconnaissance Platoon, STX 17-97F-10-3, Conduct Zone Reconnaissance (Cavalry Scout Platoon)," 23 April 2004, p. 4-41.

²STX 17-97F-10-3, p. 4-41.

³ARTEP 17-97F-10-MTP, Chapter 5.

First Lieutenant Jonathan Silk is currently assigned to the U.S. Student Detachment, Fort Jackson, SC, pursuing a B.A. from Louisiana State University. He received an A.A. from Central Texas College. His military education includes Armor Officers Basic Course, Officer Candidate School, Airborne School, Air Assault School, Basic Noncommissioned Officers Course, Primary Leadership Development Course, and Northern Warfare School (winter and summer). He has served in various command and staff positions, to include scout platoon leader, Killer Troop, 3d Squadron, 2d Armored Cavalry Regiment (3/2 ACR), Operation Iraqi Freedom; anti-tank platoon leader, Killer Troop, 3/2 ACR, Fort Polk, LA; senior enlisted advisor, Louisiana Army National Guard, Camp Cook, LA; and platoon sergeant, A Company, 2d Battalion, 5th Infantry, 25th Infantry Division, Schofield Barracks, HI.

Recommended Tasks for Substitution in STX 17-97F-10-3 from ARTEP 17-97F-10-MTP

<u>TASK/DRILL</u>	<u>TASK #</u>
Conduct target acquisition	17-3-4017.17-RECP
Conduct reconnaissance by fire	17-3-0218.17-RECP
Conduct urban area reconnaissance	17-3-4015.17-RECP
Establish an observation post	17-3-1039.17-RECP
Search a building	17-3-1110.17-RECP
Conduct tactical movement (dismounted)	07-3-1134.17-RECP
Conduct overwatch	17-3-3061.17-RECP
Conduct support by fire	17-3-3062.17-RECP

Figure 3



Task Force Death Dealers: Dismounted Combat Tankers

by Captain Donald Stewart, Captain Brian McCarthy, and Captain James Mullin

(Reprinted from January-February 2004)

Iraq remains a combat zone and the enemy's tactics continue to evolve toward a form of guerrilla warfare, and the Army continues to tailor its operations to deal with the threat. Terrain, enemy, civilians, and mission — these competing factors have forced the Death Dealers of Task Force 1st Battalion, 67th Armor Regiment (TF 1-67) to adopt an outside-the-box mentality instead of employing a traditional armor role during Operation Iraqi Freedom.

The old tanker cliché of “death before dismount” has officially gone by the wayside and has led to the unimaginable dismounted armor crewmen. The current contemporary operating environment (COE) in Iraq calls for tankers to dismount. However, a large number of tankers continue to ride steel on most missions, and tanks remain a critical element in the COE.

The 3d Infantry Division's (ID) charge into Baghdad reaffirms the Abrams' speed and lethality on the battlefield. Continuing this trend, the 4th ID employs tanks daily and continues to engage the enemy with its M1A2SEP. Firepower and accuracy, psychological effect, speed, and survivability — the tank brings all of these to the fight.

When thrust into an urban environment, tanks can act as mobile roadblocks or control crowds with engine exhaust. This ar-

ticle addresses terrain, civilians, enemy threat and weapons, and friendly tactics, techniques, and procedures (TTP), and encourages follow-on forces to form training plans at home station prior to deploying. The Death Dealers are doing nothing revolutionary in Southwest Asia, but these issues do warrant the attention of the force so that follow-on forces can train to prepare for Iraq's COE.

The Terrain

A country the size of California, Iraq has several distinctly different environments. Central Iraq, the 4th ID's area of operations, is definitely not a desert environment. There is a fair share of sand and open terrain in the area, but central Iraq is primarily in the Tigris River valley.

Besides palm groves and farmland, the Tigris, Euphrates, and Diyala Rivers further divide the country. Additional obstacles include large concrete canals, some as wide as 6 meters and as deep as 4 meters. Additionally, farmers have cut numerous canals and irrigation ditches throughout the land, few of which are represented on maps; on imagery it is impossible to tell the extent of the irrigation. Cross-country travel, although possible in the area, is limited by both the thick palms and irrigation canals.

We conduct many operations in urban areas, which presents an additional set of issues. In many cities, the infrastructure has crumbled from more than a decade of neglect. The streets are narrow, many with a web of low-hanging power lines and canals that impede vehicle movement. Additionally, most families have adobe walls ranging in height from 1-to-3 meters surrounding their homes.

Task Force 1-67 has found it necessary to confirm routes into and out of an area, and when at all possible, conduct a reconnaissance of all routes. Additionally, we found that in built-up areas, the military grid reference system (MGRS) gives way to a terrain index-reference system (TIRS) and an urban reference system. Our brigade combat team (BCT) has a consolidated TIRS overlay. When planning missions, the task force uses Falcon view and ArcView satellite imagery and tactical unmanned aerial vehicle shots, on which we then number all of the buildings within the target area of operations to give ground and air elements a common, more precise set of graphic control measures.

Civilians

Iraqis tell us regularly, and it is probably true, that 90 percent of the Iraqi people want us here and appreciate what we are doing. The other 10 percent becomes the problem when trying to maintain stability among an entire population. Force protection must always be the primary focus. The Iraqi people, especially the children, are very friendly and courteous. They have had little to no exposure to the outside world for more than 30 years and are eager to learn about Americans and want to engage soldiers in conversation. Generosity and gift giving are cornerstones of their culture, and because of this, it is difficult not to become complacent.

Everyone has a weapon. When the Hussein regime fell, soldiers simply left their posts and ran home, many with as much armament as they could carry. Rocket-propelled grenades (RPG), assault rifles, and mortars are the weapons of choice. Most citizens were merely looking for self-defense against the ever-present Ali Babba; but the more nefarious purchased and stockpiled weapons for anticoalition activities. They have them in their homes and cars, and buried in yards and gardens. The arms dealers and anticoalition personnel with large weapons caches use any means to hide weapons, to include hiding them in Mosques and cemeteries. Dismounted units carry AN/PSS-11 mine detector sets to search for buried weapons and contraband. The mine detectors work well when adjusted properly — we have found weapons buried up to 2-feet deep.

"New lieutenants and staff sergeants are oftentimes senior leaders on the ground and must know how to react to any situation. At home station, tactical vignettes can be used to rehearse actions on contact so that these section leaders, tank commanders, gunners, loaders, and drivers know what to expect and have an idea of how to react."

To better protect our soldiers and combat complacency, especially at fixed sites, we rotate troops often. Each company has an area of responsibility, so soldiers become familiar with the area and its people, and can spot when something has changed or does not seem right. We have also installed Kevlar doors on all M998s to offer increased protection against small arms and thrown objects.

Enemy

The enemy continues to refine their tactics. One of those foreign to the Death Dealers before deployment was using improvised explosive devices (IED). There is a plethora of ordnance throughout the country, giving prospective bomb makers a great deal of ammunition. We have encountered IEDs that have been rigged in soda cans attached to telephone poles; 1.5-liter water bottles left on the road; explosives stuffed in the carcasses of dead animals; and 155mm artillery shells, daisy-chained together and placed along the shoulder of routes used mainly by coalition forces.

Vehicle commanders and drivers need to be observant of objects and loose soil in and around the roadway. Also, look for berms and structures 20 to 30 meters away from your location that can provide cover and concealment from which to command detonate devices. Once we identify an IED, we establish a cordon 300 meters away from the device and secure the area. The tactical operations center will then contact the explosive ordnance disposal (EOD) and they will assess the situation.

Additionally, avoid setting a routine. The enemy continually collects intelligence, knows soft points, and is acutely aware of times, routes, and composition of logistical convoys. Unlike conventional operations and experiences at combat training centers where it is important to establish a battle rhythm, in Iraq we found that unpredictability is essential to force protection. We have also conducted offensive operations against our resident bombers. Using pattern and terrain analysis techniques, the task force S2 identified areas where IEDs were prevalent or likely. We used two tanks to establish observation posts and await ambush opportunities. From a distance of over one kilometer, the





"Initially, the plan was to train tankers on the basics of dismounted security and patrolling so they could conduct dismounted patrols in the tank company's area of responsibility (AOR), and facilitate interaction with the Iraqi people. However, after a couple of dismounted armored crews were trained, we realized it offered greater flexibility to the task force in the form of increased capability — more boots on the ground — across the full spectrum of operations."

section engaged and observed several individuals drive up to the target area, dig holes in the roadway, lay wires, and began removing artillery shells from the bed of their truck.

Rocket-Propelled Grenades

RPGs are simple and inexpensive enemy weapons. The enemy uses them to snipe at convoys in an effort to execute an ambush. The RPG attacker prefers a concealed position from which he can see vehicles approaching along the route. Typically, they shoot at night with either no sight or a crude sight, and likewise, are not very accurate.

As with IEDs, leaders must look at locations conducive for firing RPGs. It is imperative that crews maintain individual sectors and sections maintain sectors. Scanning discipline is key because the launch flash of an RPG only lasts about a second, and soldiers must act quickly to capture or destroy the enemy before he flees the scene.

Friendly TTP

Due to the nature of current combat operations in Iraq, our primary mounted maneuver unit is the section. Tank sections conduct mounted patrols, and therefore, conduct actions on contact as a section. New lieutenants and staff sergeants are oftentimes senior leaders on the ground and must know how to react to any situation. At home station, tactical vignettes can be used to rehearse actions on contact so that these section leaders, tank commanders, gunners, loaders, and drivers know what to expect and have an idea of how to react. As in any situation, we continue to refine and rehearse our actions and TTP. As previously mentioned, leaders must know and rehearse individual and section sectors of fire.

Dismount!

Task Force 1-67 is a tank-heavy Force XXI task force with two pure M1A2SEP tank companies, an M2A3-equipped mechanized infantry company, a headquarters and headquarters company (HHC), and a forward support company (FSC). While an

awesome organization designed for high-intensity combat, it is not the optimal task organization for our current battlefield in northeastern Iraq. After 3 months of dismounted patrols and raids, our infantry brothers, scouts, and mortars were working nonstop, and to be perfectly honest, the 19Ks were tired of hearing the words "traffic control point." In an effort to maximize combat power and maintain flexibility, the task force instituted a dismounted training plan.

Initially, the plan was to train tankers on the basics of dismounted security and patrolling so they could conduct dismounted patrols in the tank company's area of responsibility (AOR), and facilitate interaction with the Iraqi people. However, after a couple of dismounted armored crews were trained, we realized it offered greater flexibility to the task force in the form of increased capability — more boots on the ground — across the full spectrum of operations.

Since validation in country, our dismounted tankers perform a myriad of tasks. They conduct foot patrols throughout their AORs, stand sentry in watchtowers, and execute raids, including air inserting onto objectives. In preparation for deployment in the COE, units must cross-train soldiers on basic infantry tasks. When possible, get the infantry involved. They are the subject-matter experts, and having infantry involved in training your tankers fosters mutual team spirit and confidence. At a minimum, train basic patrolling and focus on built-up areas and actions on contact. If possible, incorporate an expert and train room-clearing techniques.

Air insertion has been key to gaining surprise and quickly securing an objective. As 19Ks are generally not familiar with Army aircraft, units need to familiarize them with both UH-60s and CH-47s. Schedule static load training at home station regularly to train and familiarize crews. Training before you arrive puts you ahead of the power curve.

Equipment

Increased dismounted operations have necessitated redistribution of equipment. As tank companies traditionally do not train to operate dismounted, they are likewise not equipped to operate dismounted. For instance, we have to cross level M16/M4s within companies to fully equip two squads. Cross leveling across the task force allows us to operate like this regularly. Lack of night vision devices is the biggest shortfall. Additionally, more wheeled assets, squad radios, such as integrated communications and laser-designating devices, would help conduct dismounted operations more safely and efficiently.

Operational readiness has been difficult to sustain. High operational tempo coupled with extreme temperatures has reduced mean time failure on many assemblies. Road wheel arms and engine exhaust seals have been the two biggest problems. The supply system took a while to catch up with both the distances and the demand, but is now consistent, if not swift. Be flexible in your task organization; you cannot use it if it is broken. We regularly used tanks with broken number two arms on perimeter guard — they could fight but could not roll outside the gate.

Force XXI Battle Command Brigade and Below (FBCB2) — the backbone of Force XXI — has worked very well. It gives us

an amazing advantage over the enemy. The ability to pull up imagery, quickly analyze a route (to include march time based on the route speed), the ability to navigate along that route, and the situational awareness to see all of your units vectoring in on the target is amazing. It is a beautiful sight to watch the FBCB2 screen and see all of your units closing on the objective from multiple directions, on time, as planned, all while keeping radio chatter to a minimum.

Vehicle commanders can post enemy icons to orient friendly units. Additionally, FBCB2 has allowed us to operate over extended distances because it retransmits through any system, not just those operating on our net identification. If we get out of voice communication range, we can usually send a text message (e-mail) situation report or spot report. Like any electronic system, it does not fare well in extreme heat, and repair parts have been slow to arrive, but it definitely has given us a marked advantage.

Civil Affairs

Prepare your company fire support officer (FSO) to be your civil affairs/information officer. As a company commander, I was responsible for a town of about 10,000 people, including the function of the town. The executive officer was the security officer, and platoon leaders served as minister of public works (water and electricity), minister of oil (gas and propane), and minister of education. The FSO tracked the progress and kept a database of people and locations within the town. The task force set up city councils in each of the larger towns within the area of operations so that with our help, they could get the city functioning until the government was running. Our focus was to help in whatever way we could to get the city functioning.

It is also necessary to include cultural awareness training in your home station training plan. Many Arab conventions are quite different from ours, especially regarding women. For example, in the Arab culture a man is forbidden to touch a woman unless they are married. To maintain cultural sensitivity and facilitate cooperation between Iraqis and Coalition Forces, our task force created female search teams. The task force deploys a team of female soldiers from the FSC on every raid and to every deliberate checkpoint. These soldiers underwent training from the military police and linguists regarding personnel searches and cultural awareness.

Although focused for a high-intensity conflict, Iraq has shown that our TTPs have to adjust to the changing environment. Flexibility is the key. We are not breaking any

"In preparation for deployment in the COE, units must cross-train soldiers on basic infantry tasks. When possible, get the infantry involved. They are the subject-matter experts, and having infantry involved in training your tankers fosters mutual team spirit and confidence. At a minimum, train basic patrolling and focus on built-up areas and actions on contact. If possible, incorporate an expert and train room-clearing techniques."

new ground, merely raking over it. Tanks continue to provide overwhelming firepower, protection, and shock effect to any fight. However, to be successful in the COE, we must remain flexible and continue to evolve in our tactics, training, task organization, and equipment. Missions require only the services of highly trained, motivated soldiers, like the dismounted armor crewmen of TF 1-67 Armor.



CPT Donald Stewart is currently en route to his new duty station at the Combat Maneuver Training Center, Hohenfels, Germany. He received a B.A. from Bellarmine College in Louisville, KY. His military education includes Armor Officer Basic Course, the Armor Captains Career Course, and the Combined Arms and Services Staff School. He has served in various command and staff positions, including commander, B Company, 1st Battalion, 67th Armor Regiment (1-67 AR), 4th Infantry Division (Mechanized), Iraq and Fort Hood, TX; assistant S3, 1-67 AR, Iraq and Fort Hood; executive officer, Headquarters and Headquarters Company, 2d Brigade, 1st Infantry Division (M), Schweinfurt, Germany; executive officer, B Company, 1st Battalion, 77th Armor Regiment (1-77), 1st Infantry Division (M), Kosovo and Schweinfurt; platoon leader, C Company, 1-77 AR, 1st Infantry Division (M), Kosovo and Schweinfurt; and assistant S4, 1-77 AR, 1st Infantry Division (M), Schweinfurt.

CPT Brian McCarthy is currently serving as an assistant S3 with Task Force 1-67 AR, 4th Infantry Division (M), in Iraq. A graduate of the Virginia Military Institute, he received his commission through officer candidate school. His various duty assignments include executive officer and scout platoon leader, E Troop, 9th Cavalry, 3d Infantry Division (M), Fort Stewart, GA; and scout platoon leader, 4th Squadron, 7th Cavalry, Camp Garry Owen, Korea.

CPT James Mullin is currently serving as commander, B Troop, 1-67 AR, 4th Infantry Division (M), in Iraq. He received a B.S. from the United States Military Academy. He has served in various positions, including S3 Air, 1-67 AR, Fort Hood, TX and Iraq; executive officer, C Company, 1-77 AR, 1st Infantry Division (M), Schweinfurt, Germany; platoon leader, C Company, 1-77 AR, 1st Infantry Division (M), Kosovo and Schweinfurt, Germany; and assistant S3 (LNO), 1-77 AR, 1st Infantry Division (M), Kosovo and Schweinfurt, Germany.



Death Before Dismount: Tran

by Captain Michael Taylor and First Sergeant Stephen Krivitsky

(Reprinted from March-April 2005)

At 0400 hours and under three percent illumination, a platoon of 19 soldiers, accompanied by an interpreter, with the company command and control (C2) and psychological operations team attached, departs base camp to conduct a dismounted raid. The dismounts move using night vision and ground command pointer infrared (IR) lasers to guide their point man. The soldiers communicate using PRC-119 man-pack single-channel ground and air radio systems (SINC-GARS) and integrated communications security (ICOM) squad radios with headsets. The company fire support team (FIST), located at an observation post (OP) east of the target house, overwatches the sniper team and objective with a 13-power magnification thermal command launch unit (CLU) sight.

The company sniper team, inserted hours earlier, is set, overwatching the target house with 10-power magnification ther-

mal AN/PAS13s and AN/PVS7Bs. The team is concealed in ghillie suits and marked with Budd lights; they report negative contact — no movement on the objective.

The remainder of the company, mounted in high-mobility multipurpose wheeled vehicles (HMMWVs), is staged on the base camp prepared to move. The dismounted platoon pauses just short of the objective and coordinates with the sniper team by radio; negative contact — still no movement. The company HMMWV element is ordered to start point (SP). The dismounted platoon then moves in, establishing a base of fire and setting the inner cordon; negative contact — no movement — surprise is achieved. The HMMWVs quickly move into the objective area and set the outer cordon to protect the search teams.

0500 hours: the company cordon is set; negative contact — no movement on the objective — surprise is maintained. The



Transforming An Armor Company

dismounted platoon's first assault team (four-man stack) moves to the entry point. GO! The number four man breaches the door and the assault team quickly enters the house, clearing the first room. The lights are on, night vision is not needed, the soldiers use M68s to scan with both eyes open and quickly identify targets. The team moves to the second room and repeats the process, catching the primary target as he begins moving to a cabinet to secure an AK47. The primary target is detained.

The assault team continues to clear the house, room by room, and secures additional detainees. The platoon's security team quickly follows the assault team into the house and secures each cleared room and the detainees. The detainees are segregated, secured, and questioning begins — identities are confirmed. A simultaneous thorough search of the house and objective area begins with AN/PSS11 metal detectors —

a rocket-propelled grenade (RPG) launcher and warheads are found!

Within seven minutes of conducting actions on the objective, an armor team moves into an adjacent objective area with M1A1 tanks and M2 Bradley Fighting Vehicles to begin their mission. The primary target's home phone rings and the company interpreter answers. The caller quickly identifies himself and warns the primary target by name to "get out now, the Americans are coming!" The interpreter thanks the caller and hangs up. Further questioning of the detainees identifies the caller's location; the dismounted platoon moves in and detains the caller. The house and objective area search continues; security is maintained. The mission nets the primary target and his associates, a small weapons cache, and intel documents — all with zero casualties. Mission accomplished!



This was Cobra Company in the spring of 2004. No longer an outfit full of typical 19Ks, it has been transformed over the past nine months from a tank company of 74 soldiers manning 14 M1A1s, conducting armor-only missions, into a new organization that adapted to its environment. Today's Cobra Company has 85 soldiers in three line platoons manning one M1A1 tank and 15 HMMWVs (a mix of M1114 and M1025). These soldiers conduct armor, cavalry, and infantry missions and fight mounted and dismounted, similar to the dragoons of the 16th century, who fought as light cavalymen on attack and as dismounted infantrymen in defense.

Cobra Company was alerted in July 2003 to deploy in support of Operation Iraqi Freedom. Cobra Company turned in its 14 M1A1 tanks at Fort Riley, Kansas, and quickly trained on M1025 HMMWVs, along with a company from the Bounty Hunters of 1st Battalion, 34th Armor, and one company from the Iron Rangers of 1st Battalion, 16th Infantry. The company then deployed in early September 2003.

Once on the ground in Kuwait, the soldiers drew their new mounts, the M1025 and M1114 vehicles, and began movement into the task force's area of responsibility, only a short six weeks after notification of the deployment. On the first day outside the base camp, during a right-seat ride in mid-September, Cobra Company made contact with an insurgent complex ambush — improvised explosive devices (IEDs), RPGs, and small-arms fire. The fight began.

The company's training, personnel, equipment, and tactics, techniques and procedures (TTP) continually evolved over the next nine months as missions and the enemy changed. The company served as the task force's light wheeled force, conducting missions, such as quick reaction force (QRF), convoy escort, cordons, and route reconnaissance. As the battlefield changed, additional missions of raids, searches, route clearance, key terrain security, counterreconnaissance/area denial, counter-mortar operations, company forward operating base (FOB), sniper/OP operations, and dismounted patrols were added. The lessons learned throughout these nine months were invaluable.

Training

In an environment with zero defect and no chance to "re-key," we quickly began training soldiers to accomplish new missions

— all requiring additional skill sets unfamiliar to armor crewmen. As missions were added, the company turned to subject-matter experts, doctrine, Center for Army Lessons Learned (CALL), fellow infantry companies, and local Special Forces soldiers for TTP and training.

We immediately identified the need for all soldiers to operate on the ground as part of a dismounted element. Combined arms is key, and creating and developing this dismounted element and ensuring all soldiers were trained to fill this role, were critical to the company's success. During this transformation, we identified that most 19Ks needed additional basic infantry training to operate with confidence as a dismount in a fire team and squad. The requirement for additional individual soldier training was evident when we began to train platoons to conduct dismounted operations.

Every soldier receives limited basic infantry training during initial entry training, the amount of training must be increased to ensure soldiers are confident riflemen. This training deficiency is an Armywide issue and the effects are seen and felt in Iraq, where every soldier is a potential dismount. Soldiers must be provided the basic skills to operate as riflemen during initial entry training, with focus on rifle marksmanship and fire and maneuver at team and squad levels. Leaders are obligated to ensure soldiers build these basic skills during home station and institutional training to ensure they are always ready to fight.

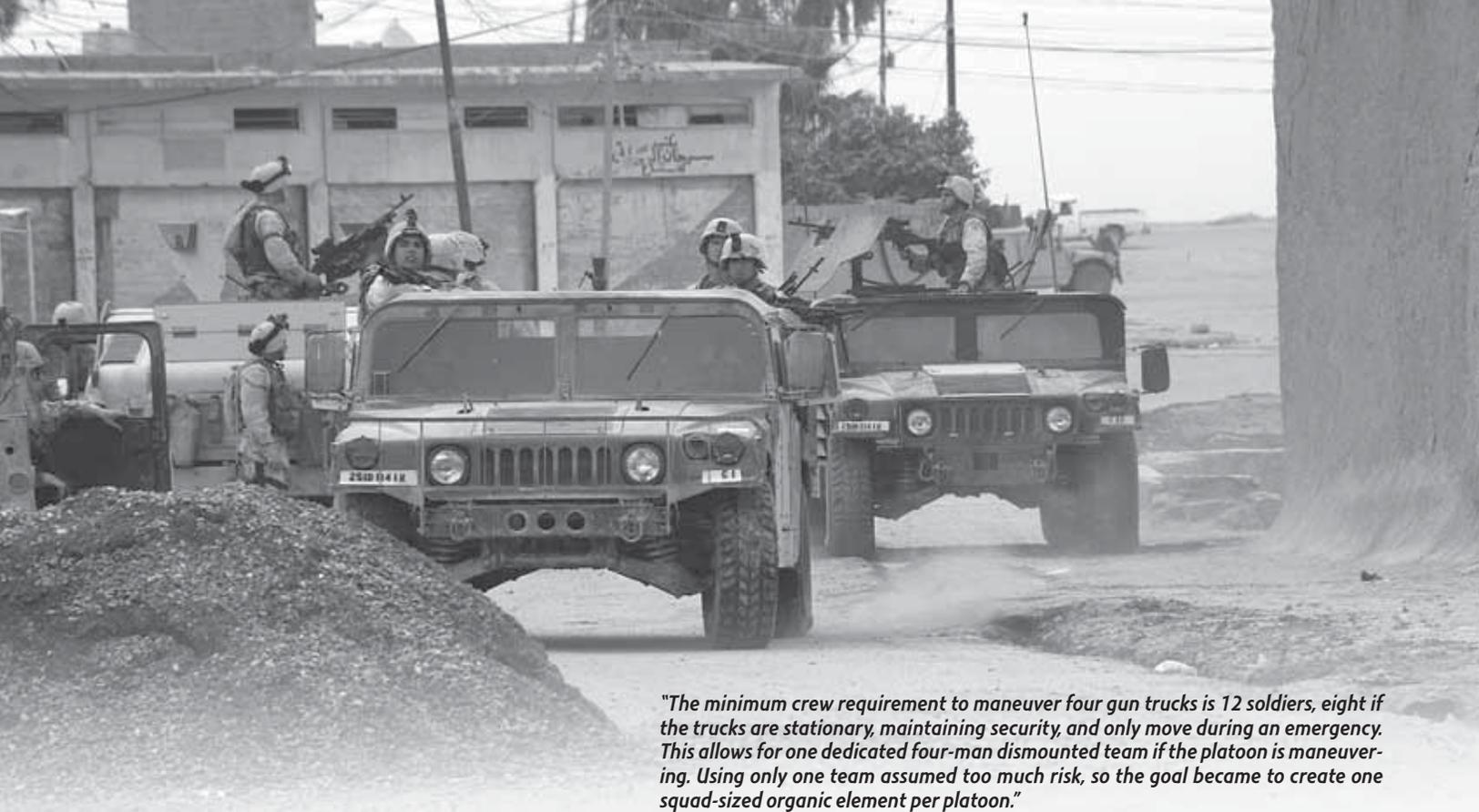
The company focused on dismounted infantry operations, room-clearing procedures, and sniper operations. We began repetitive training to create confidence in weapons, tactics, fellow soldiers, and leaders. Training lanes were created on the FOB by platoons to execute dismounted formations, movement techniques, and battle drills, along with dismounted cordon, room-clearing (tape house) procedures, and search techniques. Leaders conducted classes, developed standard operating procedures (SOPs), war-gamed, rehearsed, rehearsed, and rehearsed. Four-man stack room-clearing rehearsals were conducted several times prior to raids and searches. Training continued as we added additional equipment and soldiers. We developed TTP and SOPs for new tools, such as manpack radios, squad radios with headsets, small-arms optics, and metal detectors. Soldiers also focused on individual weapons training to include day and night fire, using new optics to gain and maintain confidence.

Personnel

Unit manning was the second challenge the company had to manage. Three weaknesses were identified in the typical tank, now truck, platoon: no medic, no forward observer, and no dedicated dismounted element.



"Every soldier receives limited basic infantry training during initial entry training, but this training must be increased to ensure soldiers are confident riflemen. This training deficiency is an Armywide issue and the effects are seen and felt in Iraq, where every soldier is a potential dismount. Soldiers must be provided the basic skills to operate as riflemen during initial entry training, with focus on rifle marksmanship and fire and maneuver at team and squad levels."



"The minimum crew requirement to maneuver four gun trucks is 12 soldiers, eight if the trucks are stationary, maintaining security, and only move during an emergency. This allows for one dedicated four-man dismounted team if the platoon is maneuvering. Using only one team assumed too much risk, so the goal became to create one squad-sized organic element per platoon."

Medic. We addressed the medic issue first. Separate platoon-level operations increased and each platoon was widely dispersed within the task force's area of operations. This fact drove the need to attach a medic to each line platoon to provide immediate medical support. The company medic team was task organized. One medic was attached to each line platoon to provide on-site medical support and create a team by working closely with their platoon. The medics also provided a readily available subject-matter expert to maintain soldier proficiency. Integrating medics into each platoon ultimately saved lives over the past nine months.

Forward observers. We task organized the fire support team as forward observers (FOs) within the three line platoons. This improved fire support at the platoon level by allowing the platoon leader and platoon sergeant to focus solely on C2 and maneuver while FOs executed the call for fire. The attached FOs worked closely with their platoons, integrating fire support into the platoon leaders' maneuver, and providing a ready subject-matter expert to maintain soldier proficiency. If fires were needed, FOs could switch the truck's second radio to the task force fires net, leaving platoon leaders free to maneuver platoons.

Dismounts: Finally, each platoon required a dismounted element not organic to a tank platoon. An armor platoon consists of 16 soldiers. The minimum crew requirement to maneuver four gun trucks is 12 soldiers, eight if the trucks are stationary, maintaining security, and only move during an emergency. This allows for one dedicated four-man dismounted team if the platoon is maneuvering. Using only one team assumed too much risk, so the goal became to create one squad-sized organic element per platoon. We built this squad by adding one more soldier to each platoon, in addition to the medic and forward observer. Our goal remains to add an additional soldier per platoon to increase the line platoon's strength to a total of 20 soldiers. Each platoon then identified a truck commander to lead the squad. The platoon leader typically led the squad on all planned patrols and raids. This squad enabled each platoon to conduct patrols, OPs, room clearing, and then maneuver with both mounted and dismounted elements if contact was made.

Additional challenges became apparent while conducting company-level missions when the medics and fire support team were task organized and we began using snipers from the headquarters platoon. The medics remained with the platoons to provide immediate aid. If only two platoons were needed during a company mission, the third platoon medic accompanied the first sergeant to conduct aid and casualty evacuation (CASEVAC). If three platoons were required, a fourth medic from the medical platoon was added under the operational control (OPCON) of the company first sergeant.

The fire support officer (FSO) was added to the commander's vehicle to integrate fires. The FSO used the task force net to call for fire while the commander fought on the company net. When missions required the maneuver of the entire company and close air support (CAS) was likely, the FIST was consolidated to man its gun truck and accompany the commander.

Sniper operations were conducted by using headquarters personnel to create two teams. Simultaneous company-level and sniper operations were accomplished by using mechanics to fill in for the command crews (drivers and loaders) and company trains.

To alleviate all three manpower shortages in the future, the headquarters platoon should include seven additional soldiers — four to serve as dedicated sniper teams, one to serve as a headquarters medic to assist the first sergeant, and two additional soldiers to man the FIST truck with the fire support officer, allowing FOs to remain with their platoons.

Equipment

Equipment was the third challenge. Most of the tools required and provided by a typical infantry or cavalry modified table of organization and equipment (MTOE) were not readily available in the tank company's MTOE. These infantry/cavalry tools include M68 close combat optics (red dot sights), backup iron sights, M4/M16 rail systems, IR lasers and spotlights (PAQ4Cs and PEQ2As), additional night vision goggles (NVGs), SureFire spotlights, M203s, and M16 rifles. All of these tools provide precision fire during both day and night.

Prior to deployment, the company was issued additional M16A2 rifles, shotguns, M240B machine guns, .50-caliber machine guns, and PAS13s. Upon arrival in Kuwait, the company was issued 12 M1114 trucks prior to movement into Iraq. Through months of hard work and persistence, the company, task force, and brigade filled most equipment requirements such as additional radios, gun shields, HMMWV kevlar blankets, M203s, rail systems, and personal weapons optics.

Vehicles: Currently, the company is equipped with 15 gun trucks (M1025/1114) and now only one M1A1 tank. The three line platoons use the M1114 uparmored HMMWVs, which have proven to be more survivable than the typical M998/1025 trucks due to their improved armor package. Each line platoon has four gun trucks and the headquarters has three trucks (commander, XO, and FIST). The FIST truck is used only on company missions due to FOs being task organized with line platoons. The tank sees occasional use at the company FOB or on security missions.

The company trains consist of three M113A2s, two M998 HMMWVs, and three M923 trucks. The M113s transport the first sergeant, maintenance team, and medics when armor is needed. Through experience, we have identified that M113s have limited use due to their reduced top speed, weight (pontoon bridges), and our current task organization of personnel. The three 5-ton trucks are used by supply and maintenance. During a typical company mission, the trains will consist of one M998 cargo HMMWV prepared to carry casualties or enemy prisoners of war (EPWs) and may include an M923 to carry additional class I and V, seized weapons, equipment, and EPWs. The maintenance team is prepared to move with the first sergeant in the second M998 HMMWV.

Weapons: Line platoon crew served weapons consist of M2HB .50-caliber flexes and M240B machine guns. Each platoon is

equipped with four .50-caliber machine guns mounted on MK93 heavy machine gun mounting systems and four M240Bs that are used mainly by the dismounts. The headquarters carries two .50-calibers and two M240Bs, with one mounted on an M6 pintle mount in the first sergeant's M998 truck. The first sergeant and maintenance M113s also carry a .50-caliber, along with the supply and maintenance M923 five-ton trucks.

The optimal organization would have each line platoon mounting two M240Bs, one .50-caliber, and one MK19 machine gun on the four gun trucks. The MK19 40mm grenade launcher is very effective in open terrain, as well as behind berms or on rooftops, as we have seen with the task force scouts and fellow motorized infantry company. The M249 squad automatic weapon (SAW) would also fit well in place of the dismount M240B machine guns.

Personal weapons consist of M4 carbines and M16A2 rifles. Prior to deployment, the company fielded 14 M16A2s (including headquarters and headquarters company weapons) and 33 M4 carbines for a total of 47 weapons spread over 81 MTOE soldiers. In this environment, every soldier must be equipped to fight dismounted and must have a rifle or carbine to be effective. Currently, the company has 76 weapons for 85 soldiers with the goal of every soldier carrying a rifle or carbine. Each M4 is equipped with the M4 rail adapter system, which allows soldiers to mount IR lasers and spotlights. We currently have one for each of the 32 M4s. There are no rail systems available for the M16A2. In the future, every M4 and M16 should have a rail system to mount equipment.

Additional personal weapons include the M500 shotgun, M9 pistol, M203 grenade launcher, and the M14 sniper rifle. The M500 shotgun is carried on dismounted patrols and each platoon is equipped with one or two. The M9 pistol has seen little

"Currently the company is equipped with 15 gun trucks (M1025/1114) and now only one M1A1 tank. The three line platoons use the M1114 uparmored HMMWVs, which have proven to be more survivable than the typical M998/1025 trucks due to their improved armor package."



use, but is carried by all gunners and truck commanders. Two M203 40mm grenade launchers have been added to the company to equip each platoon with one system. An additional M203 per platoon and per sniper team is the goal. The M14 sniper rifle is used by the two sniper teams in conjunction with a 10-power daylight Leopold scope or a heavy thermal PAS13, and is paired with a 32-power spotting scope.

In the future, the M249 SAW should replace the two dismount M240Bs. The M249 SAW provides a lightweight automatic weapon with small-arms capability, rather than the medium caliber M240B, and is best used in the military operations in urban terrain (MOUT) environment to mitigate effects of larger caliber machine gun fires. The SAW is easy to carry and can also be mounted on the weapons station of the gun trucks.

Optics for rifles, carbines, and machine guns make soldiers lethal during both day and night. Almost every soldier in the company who carries a rifle or carbine is equipped with either the PAQ4C or PEQ2A IR laser, which is mounted on the M4 rail system or to the top of the M16A2 rifle. These IR lasers allow soldiers to target, illuminate, and accurately hit a target while using night vision goggles. The PEQ2A also has an IR spotlight, which can assist in illuminating rooms and areas during low illumination. The PEQ2A should also be mounted on all dismount M240Bs (at least two per platoon).

All M4 carbines mount the M68 close combat optic (CCO), a backup iron sight, and a SureFire spotlight. The M68 allows soldiers to scan with both eyes open and then accurately fire during close combat by placing the red dot on the target. When the CCO fails, the backup iron sight is available for use. The M68 can also be mounted in place of the handle on the M16A4 or on the rail system of an M16A2. SureFire spotlights have proven to be effective during house and vehicle searches. Every line platoon soldier should be equipped with one. SureFires can also be mounted on the M16 with tape or straps if a rail system is not available.

Additional daylight optics that have proven useful include the AN/PVS6 mini eye-safe laser infrared observation set (MELIOS) for the fire support team. The company has one MELIOS, which is currently rotated by the three platoon FOs, depending on who is more likely to call for fire during a platoon mission. All three line platoon FOs must be provided with one AN/PVS6 MELIOS to assist with fire support. Also, in the future, each M240B or M249SAW should be equipped with a 3-power machine gun optic (MGO), which provides more accurate fire during daylight.

Night vision: Night vision is critical to mission success and each soldier and platoon must be properly equipped to operate in limited visibility. The company currently fields 51 sets of PVS7B/D for 85 soldiers. Each platoon fields up to 14 sets of PVS7s for 19 soldiers, with the goal of one set per line soldier. AN/PVS14s are every soldier's choice because they provide monocular vision and an increased depth perception. In the future, each truck commander, driver, and gunner should be provided with PVS14s and every line platoon soldier must have a set of NVGs.

Thermal sights combined with NVGs have proven extremely effective during limited visibility. Each truck mounts one AN/PAS13 heavy sight on its M2HB or M240B, which provides a 3.3-power and 10-power narrow field of view (NFOV) thermal image. Line platoons also have two medium thermal sights, which are a wider field of view at 2-power and 3.3-power. They can be mounted on the dismount M240Bs, used in OPs, or carried during dismounted patrol missions. Gunners wear PVS7s and switch to thermals during operations. This allows gunners to identify friendly forces marked by IR Budd lights, chem-lights, or strobes. Each platoon is also equipped with a 1-power

handheld thermal viewer. This small thermal viewer is useful during dismounted patrols only. It provides a thermal capability of 75 to 100 meters on the move. When stationary, the patrol switches to the PAS13 to increase thermal range and magnification. Currently, the company sniper teams use a daylight scope with a PAS13 during the night. The PAS13 can be mounted on the M14 rifle, but the rail system initially provided with the M14 did not support the weight properly. The preferred sight for the M14 is the 8.5-power AN/PVS10. This sight is a must for any sniper team and is critical to ensure the sniper can place accurate fires during limited visibility.

Communications: Building the communications architecture for the company created its own challenges. The company deployed with the radios and systems required to operate the MTOE-assigned vehicles. The dismounted requirements were not taken into account until later. Currently, each platoon is equipped with two AN/PRC-119 manpack systems with one dedicated 1523E model all-source imagery processor (ASIP) radio for each dismounted squad. The ASIP radios are perfect for dismounted patrols due to their small size and weight. One 1523D radio can be pulled from a truck as needed to create a second manpack system for multiple OPs or elements. The line platoons also carry five ICOM squad radios with two boom microphone headsets and three locally purchased walkman-type earpieces. The ICOM is the primary radio used during patrols and the headsets allow for noise discipline during OPs and raids. The commander and executive officer each carry one to monitor dismounts during raids, route clearance, patrols, and contact. Nine ICOMs with headsets is the goal for a platoon, allocating one per truck (four), team leader (two), patrol leader, point man, and trail man.

Miscellaneous equipment: Additional useful equipment includes PAS13 and ICOM battery recharging stations, HMMWV towbars, HMMWV towropes, AN/PSS11 metal detectors, 12-ton hydraulic jacks, tire ramps, and picket pounders. HMMWV towbars and towropes are carried by all platoons to conduct self-recovery and the ropes are used when time is critical or when under fire. The metal detector is used to locate caches during raids, cordons, and searches. The 12-ton hydraulic jack was used in place of heavy scissor jacks until they began to arrive through the supply system. The jacks are used in combination with the tire ramp, which was made to elevate the truck. The crew drives the flat tire onto the ramp, which lifts the truck just high enough to place the jack and jack plate beneath.

Picket pounders are used to breach during raids and bolt cutters assist with entry. All trucks carry a litter to facilitate platoon extraction of wounded personnel. Every soldier carries Budd lights to mark their positions during limited visibility. The IR strobe is also used to mark OP positions for friendly ground and air units.

If possible, obtain the SINCGARS ear bud system, which facilitates gunner and truck commanders monitoring the C2 nets during offensive operations. The ear bud system also allows the dismounted radio operator to move hands free. Each platoon should be provided with two per truck and two for the dismounted radio operator for a total of 40 for the company. Creating an intercom system for the M1025/1114 truck may be a solution to this communications challenge.

Platoon and company leaders should be equipped with the blue force tracker (BFT) to increase situational awareness with real time operational information. Typically, a platoon operates as an independent task force asset, rather than under company control, so the BFT better facilitates C2 at the task-force level for clearing fires, deconflicting direct fire, and rapid response of the QRF. Each platoon should be permanently outfitted with one

countermeasures system as a force protection measure. This device is used for route clearance and convoy escort, protecting dismounted as well as mounted soldiers.

Tactics, Techniques, and Procedures

TTP also evolved as the fight continued. Every mission was a learning experience as we continued to develop TTP.

Intelligence: Enemy pattern analysis and dissemination at the company level is based on products provided by the battalion S2. The battalion S2 disseminates recent enemy actions down to the company level, weekly and monthly, through the event matrix and a map, diagramming the locations of enemy events. By using these two documents, company leaders develop intelligence preparation of the battlefield (IPB) at the company level. Having a complete picture of enemy activities along main supply routes (MSRs) and in the areas of operation (AO) enables company leaders to identify or template areas that the enemy is using for ambushes and IED emplacement. Leaders can then plan movement techniques or formations to defeat the templated enemy. Producing both documents monthly allows company leaders to better see trends and identify where and when enemy activity has occurred.

Satellite imagery has improved our ability to visualize the battlefield and plan operations. Conducting IPB and executing missions using imagery has made C2 and maneuver easier for every leader who has a copy. Using satellite imagery for maneu-

ver does assume some risk, depending on the age of the data. Buildings may have been constructed or canals built that block routes to an objective. Unmanned aerial vehicle (UAV) imagery can counter the risks of using outdated imagery.

Knowing the people, the enemy, and terrain is a must. A typical battalion's AO is so large that it necessitates breaking up the task force AO into company AOs. If executed, this allows each company to become more effective by gaining knowledge of the area and becoming familiar with specific areas, the terrain, people, leaders, police, public facilities, businesses, and culture. Over the course of three months, the company conducted a counterreconnaissance mission to secure a highway. The soldiers met with local families, highway police, and vendors in the area the road passed through, which improved the soldiers' ability to identify who did not belong and facilitate information flow. The company used countless dismounted patrols to gain intimate knowledge of the area, which was passed on to the task force. This familiarity enabled soldiers to pick up on details that an unfamiliar unit might overlook. Our regular presence also encouraged people to talk and provide information.

Aviation: Using aviation during ground operations creates a combination that the enemy is not well prepared to counter. FM communications and marking techniques are a must for air-ground operations. Dropping aviation to the company frequency during contact or operations allows the company commander to directly communicate and coordinate efforts. Aviation, in conjunction with a mounted reconnaissance, adds a new dimension that the enemy must face and increases the task force's ability to detect possible ambushes and IEDs. Aviation can also be used as an air reconnaissance and QRF element to escort convoys. Combined-arms operations work — air and ground forces are a powerful combination. In the future, a task force should have a close relationship with an aviation unit to provide dedicated air support.

Signals: Each platoon requires a set of pyrotechnics and visual signals. We have developed a company SOP for signals to use in the event FM and squad radios fail. Soldiers are marked with an IR chemlight, Budd light, or glint tape to mitigate fratricide during limited visibility.

Vehicle missions and load plans: Each truck platoon must always be prepared to execute any mission while in sector including traffic control points (TCPs), cache searches, house searches, EPW processing, limited visibility operations, and medical evacuation (MEDEVAC). Each vehicle in the platoon is assigned specific missions and carries required equipment.

Equipment and supplies that a truck platoon carries include slave cables; spare tires on frames, mounted at the rear of the truck commander's side of the truck; batteries; petroleum, oil, and lubricant (POL) products; ice chests; a fifth VS17 panel for marking landing zones; a digital camera for capturing images of EPWs, IEDs, and caches; two lensatic compasses per truck; a class V basic load; and a class VIII medical load.



"In the future, the M249 SAW should replace the two dismount M240Bs. The M249 SAW provides a lightweight automatic weapon with small-arms capability, rather than the medium caliber M240B, and is best used in the military operations in urban terrain (MOUT) environment to mitigate effects of larger caliber machine gun fires. The SAW is easy to carry and can also be mounted on the weapons station of the gun trucks."



"When a platoon makes contact with an IED, the section outside the kill sack stops and sets security. If the platoon identifies the triggerman, they engage. All trucks scan for additional IEDs before moving through the area. A section maneuvers to a flank and dismounts a team to search for trigger devices, wires, and residue from the IED. The platoon is prepared to search houses for the triggerman, gain intelligence on enemy activity, or use metal detectors to search for nearby caches."

React to contact: Actions on contact have evolved to meet enemy TTPs for IEDs, direct fire, or a complex ambush, which includes an IED and a direct-fire attack. During direct fire contact, the platoon returns fire, moves out of the kill sack, sets a base of fire, and maneuvers on a flank to destroy the enemy. The FOs are prepared to call for fire or CAS. Each section is prepared to dismount and maneuver in restricted terrain.

When a platoon makes contact with an IED, the section outside the kill sack stops and sets security. If the platoon identifies the triggerman, they engage. All trucks scan for additional IEDs before moving through the area. A section maneuvers to a flank and dismounts a team to search for trigger devices, wires, and residue from the IED. The platoon is prepared to search houses for the triggerman, gain intelligence on enemy activity, or use metal detectors to search for nearby caches. If the IED was discovered before detonation, the platoon then secures the area around the IED and searches for a potential triggerman until an explosive ordnance disposal unit arrives. All personnel maintain 360-degree security during the battle drill while searching for secondary IEDs or a possible ambush.

Complex ambushes force a platoon to fight in two directions. A typical ambush includes IEDs and small-arms and RPG fire from one or both sides of the road. The enemy also places a second IED further down the road in the direction of travel where a convoy may stop, following the ambush in an effort to hit a stationary target. The platoon reacts to contact with fire, maneuvers to flank, and destroys the enemy. The enemy prefers to hit and run and rarely stands and fights, so the platoon has to quickly react, fix the enemy, then complete their destruction.

Route clearance: IED detection and route clearance are best conducted off route and looking in from a flank to avoid an ambush or kill zone. Route clearance can be conducted with dis-

mounted elements or a combination of dismounted and mounted elements, based on mission, enemy, terrain, troops, time, and civilians to increase security and the likelihood of IED detection. Both techniques use vehicle or handheld optics to observe from a distance, while searching for signs of an IED.

Dismounts have the ability to detect telltale signs of a camouflaged IED better than mounted elements. Mounted elements may bypass a dug-in IED on a route multiple times due to the enemy's ability to camouflage the position and speed of mounted elements. Dismounts can also maneuver in restricted terrain along the flanks of a route, ensuring standoff and concealment from enemy observation to minimize an IED ambush. Dismounts in open terrain require additional security on the flanks to prevent detonating an IED. Using binoculars and an overwatch element increases the ability of the reconnaissance patrol to detect potential IEDs and/or triggermen. Employing snipers, M1s or M2s with optics, or a truck-mounted element with binoculars, are options to overwatch a patrol and mitigate the use of a triggerman.

Employing HMMWV gun trucks as overwatch and flank security, in concert with the dismounted reconnaissance element, is a technique that has been very effective. Using a vee-platoon or company formation to clear an entire route has proven extremely successful. The platoon uses two trucks at the base of the vee, providing overwatch for dismounted teams, and two trucks forward on the flanks, searching for triggermen. The dismounted teams move off road on the flanks, clearing the danger areas. Maneuvering the reconnaissance off road is highly recommended to create standoff from the actual IED. Another technique is to conduct route clearance only along routes or danger zones where IEDs are most likely, such as culverts, bridges, canals, guard rails, road signs, and soft sand or dirt in the median or along the roadside. The route clearance unit must continu-

ously change time and composition of the force, such as mounted, fire teams, snipers, and armor, to prevent creating a pattern. Adding a countermeasures system (one per line platoon) to the reconnaissance may mitigate the use of remote-detonated IEDs. Once an IED is discovered, the platoon executes the IED contact SOP.

Cordon and search: Due to our unique organization, we have developed a battle drill to conduct a company cordon and search. One line platoon of 19 personnel with an interpreter (with or without M1114s) moves to the objective, establishes the inner cordon, and then conducts the house search. A second truck platoon sets the external cordon to protect the search platoon. The goal is to simultaneously set the outer and inner cordons to prevent the target from escaping. The headquarters element supports the mission and consists of the commander's truck, FIST truck (optional), the XO's truck, and the first sergeant's M998 truck, which is used for EPW and CASEVAC. Speed and surprise is of the essence — more vehicles are not necessarily better. Platoons rehearse these drills to ensure every soldier knows his task and purpose.

IPB for this type of mission must identify routes and enemy dismounted avenues of approach out of the target area. The key to success is to set the cordon and deny the targets an escape route. Use HMMWVs to provide speed and ease of maneuver in city streets. Limit the number of vehicles to minimize congestion at the objective area. Only take transport for inner cordon teams and gun trucks for the external cordon and headquarters. For each raid or search, assign an interrogation team to assist the company. Designate an EPW collection and interrogation point. This allows the search platoon to focus on security and search.

The inner cordon and search platoon moves, mounted or dismounted, to the objective, sets at an objective rally point, dismounts, and moves the platoon to cordon the house. One three-to-four-man team sets the inner cordon, a second four-man team serves as an assault team, and a third three- to four-man team, accompanied by an interpreter, serves as the security element. The assault team executes the four-man stack once the house is isolated and the outer cordon is set. Once the first room is cleared, the security team, with the interpreter, follows the assault team into the house to secure EPWs and rooms and begin questioning. The platoon's trucks move as necessary to improve security.

The outer cordon platoon establishes positions to block movement in and out of the search area and protects the search platoon — nothing moves in or out without approval. Weapons orientation, control status, observation, and discipline are critical. The commander is in the vicinity with the search platoon and the XO and first sergeant are near the cordon platoon. The commander can dismount and use a manpack with his loader as security and a radio operator. The first sergeant is prepared to move to conduct CASEVAC or set at the EPW collection point to load detainees and weapons from any caches. Once the search is complete, the company collapses with the search platoon moving first, followed by the cordon platoon.

Traffic control points: All platoons are prepared to establish a TCP during day or night. The preferred method is to create the TCP with wire and spike strips. The platoon TCP kit contains four spotlights, two small TCP signs, four rolls of wire, four reflective triangles or orange cones, and a minimum of one spike strip. Spike strips provide the ability to slow vehicles if they cross the wire barrier. The platoon establishes an overwatch element to chase down vehicles and provide additional security, and remaining trucks establish the search area. Personnel are dispersed to minimize damage from vehicle-borne IEDs. The TCP is marked with signs, reflective triangles, and strobe lights or chemlights; wire or spike strips protect the soldiers. Six sol-

diers conduct vehicle and personnel searches with the section leader commanding and controlling the TCP. Two soldiers man the crew served weapons and provide security, while the final soldier guides traffic.

The soldiers of Cobra Company have completed transformation during the crucible of combat and can fight and win in any situation. Throughout this deployment, the company's training, personnel, equipment, and TTP have continued to evolve. The soldiers have continued to learn under combat conditions and have become proficient in the skills required to accomplish their missions. The transformation of Cobra from a tank company to a light and highly mobile motorized armor company would have been impossible without the unwavering courage of its soldiers and their refusal to let down their comrades in the face of the enemy. A soldier's courage to fight day after day in the face of mounting casualties is the essence of the American soldier and the stuff of legends. The American soldier will accomplish any mission, no matter the challenges, and will always find a way to win.

We, as leaders, have the privilege to be entrusted with the most precious resource America has to offer — its young men and women. Army leaders at all levels must ensure every soldier is properly equipped and trained to become lethal on the battlefield. This lethality will potentially reduce casualties and increase unit effectiveness. This lethality may make the enemy think twice about attacking a convoy.

The Army is focused on improving technology, combined with the necessity of accomplishing more with less. The soldier will employ that technology and accomplish the mission with less. To do this, every soldier must be equipped with a rifle or carbine, along with assorted day and night sights complete with a set of night vision goggles. Soldiers must be trained to use this equipment beginning with initial entry training and reinforced at all levels of military education, to include home station and repetitive training. Finally, the soldier must also be trained on basic small-unit tactics.

On the current battlefield, every soldier is a potential dismount — they must be equipped and prepared to kill the enemy at all times. They must have the reflexes, developed through years of training, to survive and win. It is our obligation as leaders to ensure soldiers are prepared to fight and win in any situation and in any war.



CPT Mike Taylor is currently commanding headquarters and headquarters company, 1st Battalion, 34th (1-34) Armor, 1st Brigade Combat Team, Camp Manhattan, Iraq, and Fort Riley, KS. He received a B.S. from Eastern Illinois University. His military education includes the U.S. Army Command and General Staff College, the Armor Captains Career Course, Airborne School, and the Armor Officer Basic Course. He has served in various command and staff positions, including commander, C Company, Task Force 1-34 Armor, Camp Manhattan, Iraq; Task Force S3 air, 1-34 Armor, Fort Riley, and Camp Manhattan, Iraq; assistant brigade S3 Plans, 1st Brigade Combat Team, 1st Infantry Division, Fort Riley; commander, headquarters and headquarters troop, 3d Squadron, 16th Cavalry Regiment, Fort Knox, KY; and troop XO, E Troop, 1st Squadron, 16th Cavalry, Fort Knox.

1SG Stephen Krivitsky is currently assigned to the 2d Region Reserve Officer Training Corps, Penn State University, Pennsylvania. His military education includes Advanced Noncommissioned Officers Course; M1A1 Master Gunner Course, and Basic Noncommissioned Officers Course. He has served in various positions, to include first sergeant, C Company, 1st Battalion, 34th Armor, 1st Brigade Combat Team, 1st Infantry Division (Mechanized), Fort Riley, KS; master gunner, U.S. Army Europe, 7th Army Training Command, Grafenwoehr, Germany; and platoon sergeant, D Company, 1st Battalion, 68th Armor, Fort Carson, CO.

“Checkmate on the Northern Front”

The Deployment of Task Force 1-63 Armor In Support of Operation Iraqi Freedom

by Major Brian Maddox

(Reprinted from September-October 2003)

Strategic Chess Match

Chess is a game of strategy where an indirect approach is often more valuable than overt strength. A skilled player deliberately maneuvers to eliminate his opponent's options and then, at the right time, boldly moves toward the objective — checkmate. During March and April 2003, coalition and U.S. military planners crafted a strategy for Northern Iraq worthy of a gifted chess master. At stake in this “game” was the defeat of Iraqi forces north of Kirkuk and coalition control of the critically important Kirkuk oil fields.

Diplomatic differences with a newly elected Turkish government prevented the planned deployment of a large coalition force to open a second “Northern Front” in Iraq. Military planners turned to a different option that relied more on finesse and flexibility to accomplish stated objectives.

This strategy involved a diverse group of forces and organizations that included national intelligence agencies, conventional U.S. Army and Air Force units, Special Operations Forces, and Kurdish Pesh Merga fighters. One of the conventional units involved in this campaign in Northern Iraq was the 1st Battalion, 63d (1-63) Armor, 3d Brigade, 1st Infantry Division, Vilseck, Germany.

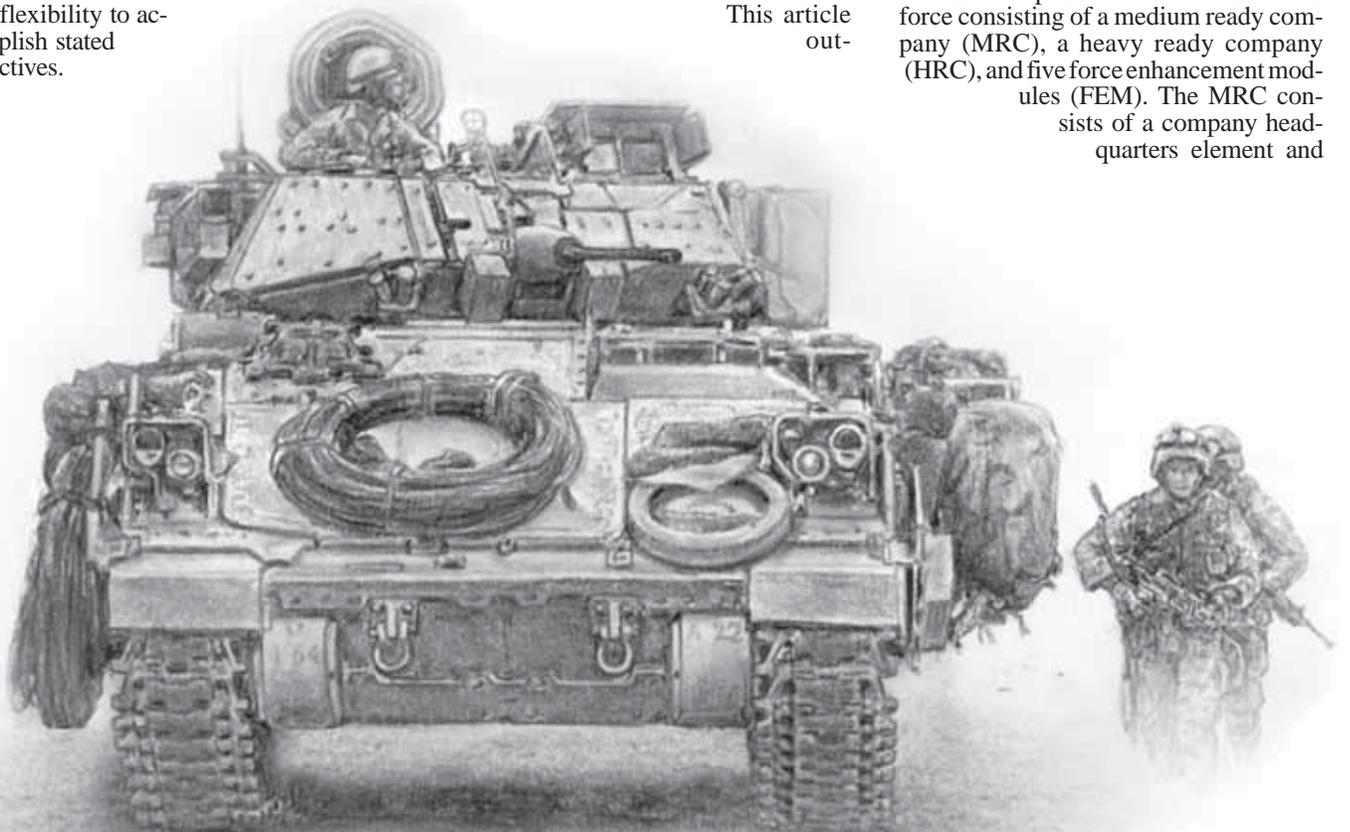
The air deployment of Task Force (TF) 1-63 Armor to Iraq in April 2003 played an essential role in the success of the Northern Front. TF 1-63 Armor's deployment demonstrated that the United States could project a viable heavy armor force anywhere in the world. The mere presence of U.S. armor in Northern Iraq weakened the resolve of defending Iraqi forces in the region and contributed to their rapid collapse north of Kirkuk.

This article
out-

lines TF 1-63 Armor's unique organization, briefly describes the unit's actions in Northern Iraq, and provides lessons learned from this historic deployment.

Background and Organization of the Immediate Ready Task Force

TF 1-63 Armor deployed to Northern Iraq as the U.S. Army Europe (USAREUR) Immediate Ready Task Force (IRTF). The IRTF is a unique organization with an unusual organizational structure. Born in the wake of Task Force Hawk, the USAREUR IRTF was designed and equipped to accomplish a wide range of short-notice missions. In 1998, USAREUR identified the requirement for an armor force capable of deploying rapidly anywhere in the European Command (EUCOM) area of operations (AOR). Originally designed around a mechanized infantry or armor company team, the IRTF has since expanded to a battalion task force consisting of a medium ready company (MRC), a heavy ready company (HRC), and five force enhancement modules (FEM). The MRC consists of a company headquarters element and



two mechanized infantry platoons equipped with M113A3s and four dismounted infantry squads. The HRC consists of one M1A1 Abrams platoon and one M2 Bradley platoon with two dismounted infantry squads. An additional M1A1 or M2 serves as the HRC commander's vehicle.¹

In addition to the HRC and the MRC, five supporting FEMs provide the IRTF commander with the force multipliers needed to accomplish various missions. For example, the command and control FEM consists of two modified M997 ambulances equipped with an array of communications and computer equipment. These vehicles provide the IRTF commander a highly mobile tactical operations center (TOC) capable of planning and tracking armor operations. The four remaining FEMs consisting of combat service support assets, engineers, military police, and scouts complete the IRTF's organization. Each FEM is air deployable and capable of supporting task force-level operations or, with proper support, limited independent operations.

The IRTF was not originally designed to deploy or operate independently. The IRTF was created to provide a light infantry organization with a viable armor capability. In the EUCOM AOR, units serving as the IRTF often trained with the 173d Airborne Brigade based in Vicenza, Italy. This brigade provides a lethal,

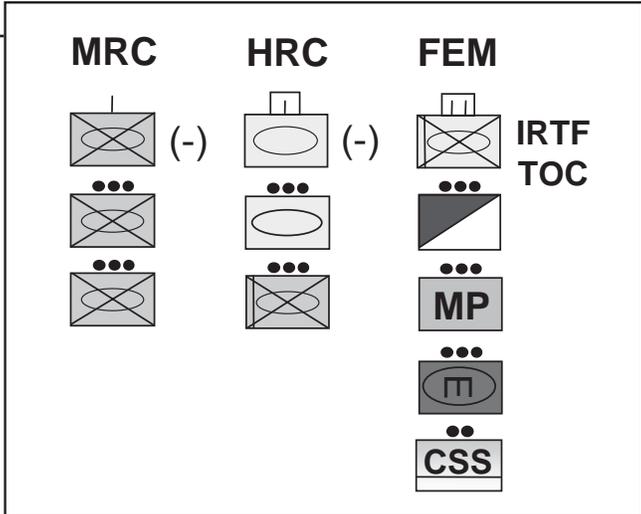


Figure 1. IRTF Organization

highly mobile infantry force, but lacks a heavy armor punch. The IRTF is designed to provide that armor punch. A series of successful training exercises conducted at the Combat Maneuver Training Center, Hohenfels, Germany, and training deployments to Hungary and Poland in which various IRTF units trained with the 173d Brigade, cemented a successful working relationship in a training environment. In Northern Iraq, TF 1-63 Armor and the 173d Brigade validated this relationship during combat operations.

Bashur Landing and Operations in Northern Iraq

Early morning 8 April 2003, the first M1A1 Abrams tank drove off the back ramp of an Air Force C-17 at Bashur Air

Field in Northern Iraq. This was the first time an M1A1 had air landed in support of a combat operation. The task force operations officer arrived on the ground with the first M1A1 and began to coordinate the arrival of the rest of the task force.

The task force commander's plan was to first deploy the HRC's tank platoon, an M88 recovery vehicle, and small command and control elements to quickly get an organized force on the ground capable of conducting and sustaining combat operations. By 10 April, the situation in the vicinity of Kirkuk began to change rapidly. Kurdish Pesh Merga fighters continued to press their attacks against Iraqi forces defending north of the city.

The 173d Brigade commander believed the time was ripe for a concerted move on Irbil. The task force commander arrived at Bashur at approximately 0300 hours on the morning of 10 April and immediately received a verbal warning order to be ready to move south in three hours. At that time, TF 1-63 Armor had five M1A1 tanks and two M2 Bradleys on the ground at Bashur. No recovery or maintenance assets had yet arrived. TF 1-63 Armor soldiers hurriedly finished off-loading the last of the vehicles to arrive and began to prepare for offensive operations.

The task force commander decided to assume risk and prepare to move what force he had toward Irbil. The commander believed that the mere movement of an armored force south toward Irbil and Kirkuk would provide coalition forces an important psychological advantage. Intelligence reports indicated that Iraqi forces, dug in north of Kirkuk, did not expect to encounter American armor moving from the north. Even a small armored force moving from Bashur might convince the Iraqis to abandon their defenses. Likewise, Kurdish Pesh Merga fight-



"Early morning 8 April 2003, the first M1A1 Abrams tank drove off the back ramp of an Air Force C-17 at Bashur Air Field in Northern Iraq. This was the first time an M1A1 had air landed in support of a combat operation. The task force operations officer arrived on the ground with the first M1A1 and began to coordinate the arrival of the rest of the task force."



"The task force commander decided to assume risk and prepare to move what force he had toward Irbil. The commander believed that the mere movement of an armored force south toward Irbil and Kirkuk would provide coalition forces an important psychological advantage. Intelligence reports indicated that Iraqi forces, dug in north of Kirkuk, did not expect to encounter American armor moving from the north."



ers, energized by the presence of armored vehicles, could press home their attacks against Iraqi positions.

For over a decade, Kurdish fighters struggled against Saddam Hussein's regime with antiquated small arms and homemade artillery and explosives. The Kurds fought valiantly, but they lacked the heavy weapons to defeat Iraqi forces dug in and supported by artillery. For days, Kurds wondered when the tanks would arrive.²

Prior to the arrival of the main body of TF 1-63 Armor at Bashur, the task force operations officer and the liaison officer conducted leader's reconnaissance of two possible routes to Irbil and Kirkuk. The liaison officer traveled the direct route down Highway 3 to a point just North of Irbil. Any forces traveling this route could

secure the Irbil airfield and if necessary skirt the western edge of Irbil and continue south on Highway 2 toward Kirkuk. This route had two advantages: it was suitable for armored vehicle traffic, and it allowed coalition forces to use the Irbil airfield to stage future operations to the south.

The disadvantage of the Irbil route was that it led right into the teeth of the Iraqi defenses north of Kirkuk. Forces moving south along this route must travel through a wide valley with steep rolling hills. The imposing Kani Domlan Ridgeline dominates the southern edge of this valley. Iraqi infantry and artillery positioned on this key terrain continued to hold this ground despite weeks of heavy bombing by coalition aircraft and attacks by Pesh Merga fighters and U.S. Special Opera-

tions Forces. Forces moving along this route would also have to cross the Little Zab River at the town of Altun Kupri. Local Pesh Merga reported that Iraqi infantry occupying a small stone castle on the east side of the river heavily defended Altun Kupri. Intelligence reports indicated that these troops would strongly resist any effort to dislodge them.

The liaison officer and the task force operations officer also conducted reconnaissance on an eastern indirect approach route south toward Kirkuk. This route winds southeast of Bashur through small villages and numerous narrow mountain switchbacks to the town of Taqtaq located on the Little Zab River. The advantage of this route was that it avoided the strength of the Iraqi positions along the Kani Domlan Ridge.



“TF 1-63 Armor entered Kirkuk with the combat power and sustainment needed to conduct stability operations. The task force successfully accomplished the strategic objective of providing an armor presence in Kirkuk to demonstrate coalition resolve and deter Iraq’s neighbors in the region from attempting to gain control of the Kirkuk oil fields.”

eration army” greeted the armored troops as the long column of vehicles snaked toward the south.

When TF 1-63 Armor reached Irbil, the cost of conducting a 50-kilometer road march, without any heavy maintenance and logistics support, hit home with a vengeance. Two of the M1A1s had major problems that required considerable time to repair. The task force commander faced the difficult decision to push on with the limited combat power remaining or wait for the sustainment package, which was scheduled to arrive in the next 24 to 36 hours. The task force commander decided to see how the situation developed involving 1-508th operation near Altun Kupri. He was prepared to support the 508th with what combat power he had available, if necessary. If the 1-508th was successful in their mission without armored support, TF 1-63 Armor could build combat power and prepare for follow-on operations in Kirkuk.

Approximately 10 kilometers north of Kirkuk, there is a gap in the ridgeline where a small tributary of the Little Zab River flows into Kirkuk. The commander of the 173d Brigade referred to this gap as the “sweet spot.” He believed that if the route was trafficable for armored vehicles, he could use the gap in the Kani Domlan to envelop the Iraqi positions on the ridgeline to the northwest.

The route south from Taqtaq was not suitable for armored vehicle traffic, unfortunately. Several of the bridges along the route were incapable of supporting Abrams tanks. Additionally, road conditions deteriorated significantly south of Taqtaq. Unimproved mountain roads and narrow village streets greatly restricted armored vehicle mobility. This route was, however, suitable for lighter vehicles and was used by the 2d Battalion, 503d Infantry (2-503d) during their attack on Kirkuk. The success of this operation validated the 173d brigade commander’s analysis of Iraqi defenses and his desire to exploit key terrain to defeat a potentially strong enemy position.

At approximately 0600 hours on 10 April 2003, TF 1-63 Armor began its movement to Irbil. The brigade’s mission was to conduct a reconnaissance in force in the vicinity of Irbil to demonstrate coalition resolve in Northern Iraq.³ The brigade commander learned that Pesh Merga planned to attack Iraqi forces located in Altun Kupri. This accelerated the brigade’s movement timeline. The brigade commander assigned 1st Battalion, 508th Infantry (1-508th) the mission to move along Highway 3 to Irbil and support the Pesh Merga attack on Altun Kupri. The 1-508th would also secure tactical assembly area (TAA) Boston located to the west of the Irbil Airfield. From TAA Boston, the 1-508th, if needed, could conduct reconnaissance to the west and deter-

mine the location and strength of any Iraqi forces moving east from Mosul. TF 1-63 Armor’s mission was to follow 1-508th to Irbil and occupy TAA Boston. The task force would then prepare for future combat operations.

During the movement to Irbil, the soldiers of TF 1-63 Armor experienced a mixture of emotions. The tension and wariness of moving south toward an enemy defending in unknown strength stood in sharp contrast to the overwhelmingly friendly and joyous reception that greeted the task force as it moved toward Irbil. Elated Kurds greeted soldiers with flowers and embraces as they passed by. Large banners with “welcome to the lib-

Deployment of TF 1-63 AR

	7 APR	8 APR	9 APR	10 APR	11 APR	12 APR
	CHALK 1 1 X C-17 1 X M1 (1)	CHALK 4 1 X C-17 1 X M1 (2)	CHALKS 2 & 5 3 X C-17 1 X M1 (3) 1 X M2 (1) 1 X HMMWV (1) 2 X AMB (2) 1 X TRL	CHALKS 3, 6, & 16 3 X C-17 2 X M1 (5) 1 X M2 (2) 1 X M113 (1) 1 X HMMWV (2)	CHALKS 7, 8, 9, 14, 10, & 11 6 X C-17 2 X M2 (4) 6 X M113 (7) 1 X M88 (1) 10 X HMMWV (12) 1 X TRUCK (1) 2 X HEMTT (2)	CHALKS 12 & 18 2 X C-17 1 X M2 (5) 3 X M113 (10) 4 X HMMWV (16) 1 X HEMTT (3) 2 X TRUCK (3)
13 APR	14 APR	15 APR	16 APR	17 APR	18 APR	19 APR
CHALKS 13, 14, & 17 3 X C-17 1 X M113 (11) 3 X HMMWV (19) 2 X HEMTT (5) 1 X TRUCK (4)	CHALKS 20 & 21 2 X C-17 3 X M1064 (3) 1 X HMMWV (20) 2 X HEMTT (7)	CHALK 22 1 X C-17 1 X M113 (12) 1 X M1064 (4) 3 X HMMWV (23)	SCT CHALK 1 1 X C-17 5 X HMMWV (28)	MP CHALK 1 1 X C-17 7 X HMMWV (35) 2 X TRL (3)		MP CHALK 2 1 X C-17 2 X HMMWV (37) 1 X PLS (1) 1 X TRL (4)
TOTAL NUMBER OF VEHICLES						
CBT VEH		SPT VEH		AIRCRAFT USED		
5 X M1 5 X M2 12 X M113 4 X M1064		1 X M88 37 X HMMWV 7 X HEMTT 4 X TRUCK 2 X AMB 4 X TRAILER 1 X PLS		24 X C-17		

Figure 2. Actual Airflow of TF 1-63 Armor

The task force commander's decision was difficult, but it paid long-term dividends during initial support and stability operations in Kirkuk. The Pesh Merga assault on Altun Kupri was successful and led to the ultimate collapse of Iraqi forces defending in and around Kirkuk. The 1-508th and the 2-503d followed in short order and secured the strategically important Kirkuk oil fields. TF 1-63 Armor entered Kirkuk with the combat power and sustainment needed to conduct stability operations. The task force successfully accomplished the strategic objective of providing an armor presence in Kirkuk to demonstrate coalition resolve and deter Iraq's neighbors in the region from attempting to gain control of the Kirkuk oil fields.

Lessons Learned

During the deployment of TF 1-63 Armor in support of Operation Iraqi Freedom, task force leaders learned several key lessons for future air deployment of armor forces. These lessons learned primarily deal with deployment preparation and execution, task organization, and operational employment.

The austere configuration of the IRTF does not allow its structure to be reduced without severely degrading its capabilities. The task organization contains a limited amount of combat power, command and control assets, and logistics to function operationally. Any reductions in this configuration can cause the IRTF to be combat ineffective in a high-intensity conflict (HIC) environment.

Due to limited airflow, it took over two weeks for the IRTF to deploy to Northern Iraq. This piecemeal approach reduced the combat effectiveness of the organization until more assets arrived in theater. The IRTF needs to flow as an entire force over a relatively short time. This ensures that all command and control and support assets are in place to support the limited combat systems.

If the IRTF is to be deployed for future HIC operations, the combat power of the organization should be increased to include two additional heavy platoons — one M1A1 platoon and one M2 platoon. This would enable the HRC to operate as a tank-heavy team with two M1A1 platoons and one M2 platoon, and the MRC to operate as a mechanized infantry team with two M113 platoons and one M2 platoon. Without this added combat power, the capabilities and firepower of the MRC are severely limited with only M113s. If one task organizes the M2 platoon to support the MRC, the HRC is left with only one tank platoon. These two additional

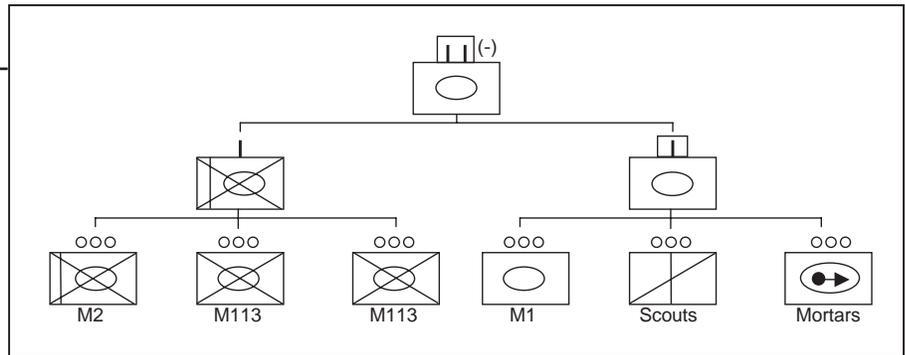


Figure 3. Actual Task Organization used by TF 1-63 AR

platoons allow the HRC and MRC to operate as true company teams and both maintain sufficient combat power to operate in an HIC environment.

When TF 1-63 Armor deployed to Operation Iraqi Freedom, the commander task organized to balance the firepower and mobility between the HRC and the MRC. The task organization in Figure 3 was in effect for the majority of missions in Northern Iraq. Without such a balanced task organization, the two company commanders would have been unable to resource the troops to tasks assigned.

Once fully deployed, there is great temptation to break apart the IRTF and attach its assets to light airborne units, thus significantly increasing the firepower of each light element. This technique, however, does not afford the brigade commander the shock effect and combat power of a heavy task force to react to armored threats.

"...TF 1-63 Armor's deployment to Northern Iraq validated the concept of deploying an armored force by air anywhere in the world. The M1A1 Abrams and the M2 Bradley are powerful symbols of America's military power."

Even during support operations and stability operations, the IRTF was a very effective resource to project coalition resolve and provide overwhelming presence at trouble spots. The IRTF is best used as a separate heavy force capable of rapidly reacting to armored or mechanized threats. The task force commander often stated "don't task us for equipment, give me the task and we will accomplish the mission."⁴

In summary, TF 1-63 Armor's deployment to Northern Iraq validated the concept of deploying an armored force by air anywhere in the world. The M1A1 Abrams and the M2 Bradley are powerful symbols of America's military power. The ability to deploy these systems by air

provides a tremendous psychological edge and credible combat power to light units.

During Operation Iraqi Freedom, TF 1-63 Armor demonstrated that armor and mechanized forces work well with Special Operations Forces and light infantry units in remote environments. The U.S. Army must continue to work with its sister services to ensure that we develop the joint capabilities to transport and sustain heavy forces to future battlefields. One Special Operations soldier operating near the town of Taqtaq put it in plain language: "We have done all that we can do. We've bombed these guys for three weeks. We need tanks and heavy infantry to drive them off the ridge." Unthinkable? Not anymore — checkmate.



Notes

¹If a mechanized company is assigned to the HRC mission, the commander's vehicle is an M2.

²One Special Operations soldier working with a group of Pesh Merga outside the village of Taqtaq reported that the Kurds wanted to know when the Big Red One would arrive.

³Operations Order Brief for Operation Bayonet Deterrence, 2 April 2003.

⁴Concerning the integration of heavy and light forces, there were occasions where the IRTF placed platoon-sized elements under the operational control of the light battalions. The armored protection and additional firepower provided by the heavy unit nearly doubled the capability of the light unit (platoon or company) to which they were attached.

MAJ Brian Maddox is currently the operations officer for Task Force 1st Battalion, 63d Armor, Vilseck, Germany. He is a Distinguished Military Graduate from Carson Newman College, Jefferson City, TN. He received an M.A. from Vanderbilt University. He is a graduate of the U.S. Army Command and General Staff College, the Armor Officer Advanced Course, and the Armor Officer Basic Course. He has served in various command and staff positions, to include assistant professor of history, U.S. Military Academy, West Point, NY; commander, Headquarters and Headquarters Company, 4th Squadron, 16th Cavalry, Fort Knox, KY; commander, B Troop, 1st Squadron, 16th Cavalry, Fort Knox; observer controller, National Training Center, Fort Irwin, CA; and platoon leader, 4th Battalion, 64th Armor, Fort Stewart, GA.

3d Squadron, 7th U.S. Cavalry Up Front:

by Major J.D. Keith

(Reprinted from September-October 2003)

The campaign is over, the guns are quiet (for the most part), and the dreams of many cavalymen in the 3d Squadron, 7th U.S. Cavalry have turned toward home. Thoughts of seeing loved ones and newborn children, hanging out at the beach, or having hot wings and beer at Hooters immediately come to mind.

Of course, it is never that easy. As the squadron continues to conduct stability operations and support operations in Baghdad and prepares for redeployment back to Fort Stewart, Georgia, it is the opportune time to capture more significant reflections on the squadron's operational and logistics experiences as it executed one of the fastest, longest, and most demanding campaigns in recent history.

With minimal war stories and hopefully some thought-provoking comments, this article presents a few of the lessons learned by the squadron during this latest conflict that other divisional cavalry squadrons can capitalize on as they prepare to conduct reconnaissance and security operations around the world.

Maneuver

Hunter-killer teams. Much has been written about the merits (or demerits) of scouts and tankers being organized into hunter-killer teams. Our two cents — it works. Our ground cavalry

troops (GCTs) trained hunter-killer teams and tactics at Fort Stewart, the National Training Center (NTC), and in Kuwait, then exercised them in the ultimate test — combat. The typical team consisted of three cavalry fighting vehicles (CFVs) and two tanks. As troop commanders made contact with enemy forces, they were rapidly able to bring overwhelming fires to bear within seconds of the initial contact versus trying to maneuver a tank platoon to the point of contact or to outflank the enemy. This gave the scout (platoon leader or platoon sergeant) the ability to rapidly kill the enemy he encountered with his CFV or tank fires, instead of becoming truly “decisively engaged” and losing the ability to maneuver and continue his mission. When in more static, squadron guard operations, due to the nature of the threat, we continued to work in hunter-killer teams with great effectiveness with each outpost having the firepower and flexibility to deal with any of the situations they encountered when defending against attacking Iraqi forces. Hunter-killer teams work — be flexible and train them during peacetime.

Heavy operations in coordination with OH-58D Kiowa Warriors (KWs). We doctrinally employed our air cavalry troops (ACTs) and it worked great! The KW performed superbly throughout the campaign. They do not fly straight on a heading at the



Operation Iraqi Freedom Lessons Learned

same altitude, or hover in one area long enough to be engaged. On a number of occasions, the KWs took ground fire and received damage, but it was mostly cosmetic. The troop tactics, techniques and procedures (TTPs) that we trained and exercised at home station, the Joint Readiness Training Center, the NTC, and during train-up in Kuwait, enabled the crews to execute their missions and survive.

The squadron must be resourced to operate two forward arming and refueling points (FARPs) in addition to providing cold gas in the squadron support area (SSA) to fully support offensive operations. Through extraordinary means, we were able to do this and it paid great dividends as our FARPs maneuvered across the battlefield to be in position to “go hot” as required to support continuous air operations. Finally, higher headquarters need to understand and be more cognizant of how cavalry units employ their organic aviation assets in cross forward line of own troops (FLOT) operations to allow them to operate freely within their capabilities based on the commander’s recommendation to accomplish specific missions.

OH-58D Kiowa Warrior operations in built-up areas. During the campaign, our ACTs conducted numerous operations in built-up areas, encountering heavy small-arms fire on several oc-

casions. Several of the aircraft received damage; but none were lost to enemy fire. To mitigate risk while still accomplishing the mission at the squadron level, we actually evaluated the need for KW support for each of these types of missions. If KWs must be used around contested urban terrain, we recommend that they be used during hours of limited visibility, thereby greatly increasing the aircraft’s survivability.

Intelligence

During combat, the divisional cavalry squadron typically operates under the direct control of the commanding general and his assistant division commander for maneuver. When employed doctrinally, the squadron area of operations (AO) greatly exceeds that of a normal brigade combat team (BCT) — often more if working across the division front — therefore, it is logical to assume that the squadron should be equipped similar to a BCT because it needs an analysis control team. Without this asset, the squadron gathers intelligence, but is severely hamstrung in receiving intelligence since it does not have robustness in the S2 shop or digital links for the analysis control team to tap so they can send information laterally, or receive information and analysis from higher. Adding an analysis control team will greatly assist the commander and his staff as they develop the intelligence picture



of the battlefield. Not only will this help discover and develop the situation in the squadron AO during operations, but will help gain a clearer picture of the proposed AO during the planning process. Currently, the squadron must either go back to division (often physically) and piggyback on a nearby BCT to gather necessary planning information, or fight the good fight with division to have an analysis control team from a BCT assigned.

Fires

The howitzer battery and squadron mortars. A howitzer battery is an integral part of a regimental cavalry squadron's modification table of organization and equipment (MTOE) for a reason, and it needs to be added to the division cavalry's MTOE.

Responsive, large caliber cannon fires are a must for successful cavalry operations. The division's answer to this shortcoming was to attach a six-gun Paladin battery to the squadron and — to put it simple — we maneuvered like a mortar platoon on steroids. Over the course of the campaign, our howitzer battery fired over 600 rounds of 155mm high-explosive (HE) rounds, dual-purpose improved conventional munitions (DPICM), and search and destroy armor (SADARM), and definitely contributed to the squadron's success in every engagement against Iraqi forces. If the howitzer battery cannot be added to the squadron MTOE, then the division should create a habitual relationship between an existing howitzer battery within division artillery, and with the squadron in garrison, field training, and combat. This will require the howitzer battery to attend the squadron's training meetings, field problems, and other exercises so that it becomes completely integrated into the squadron. Since the squadron has only six M1064 120mm mortars organic to the unit (two per GCT by MTOE), we chose to form them into a six-gun mortar platoon in garrison to maximize training and provide limited massed indirect fires to the main effort to facilitate maneuver. To do this, we also added a fire direction center (FDC) M577 and an M998, and crewed both vehicles out of hide. During Operation Iraqi Freedom and based on our mission analysis, we decided to break the platoon back down into two three-gun sections and attach them to two of the GCTs. We found this technique highly beneficial not only to MOS-specific training, but it added increased fire support flexibility to the squadron since the mortars could operate as a six-gun platoon or break down into three- or even two-gun sections, depending on the mission. This also allowed us to use the mortarmen in a dismount mode during stability operations and support operations since they were already a trained platoon with an established chain of command. Any fire support the squadron can get is good — do not change

the MTOE reference mortars unless it is to assign them as a platoon under headquarters and headquarters troop. The howitzer battery will be a great combat multiplier as it allows the squadron to truly "DESTROY" enemy forces with indirect fires (SADARM and DPICM) and to help shape the squadron's fight.

Enlisted tactical air controller (ETAC) integration and resourcing. The U.S. Air Force's ETAC is the true battlefield hero. In today's joint fighting environment, the ability of the ETAC to unleash hell on an enemy force is unchallenged. The divisional cavalry squadron should be resourced with three ETAC teams, each in an armored vehicle (increase the current MTOE from one to three M113A3s). Distribution is one per GCT. Proper employment of the ETAC is a true combat multiplier, whose use in combat saves countless friendly lives. Also, the employment of close air support via the ETAC needs to be aggressively trained in garrison. Leaders from troop to squadron level need to fully understand the capabilities that the ETAC brings to the battlefield and the constraints under which it operates.

Mobility/Counter-mobility/Survivability

Adding a combat engineer company to the squadron is always a battlefield multiplier. In the case of Operation Iraqi Freedom, our attached engineer company's performance was absolutely superb. Without using mines and with limited class IV barrier materiel, they quickly constructed temporary counter-mobility obstacles by moving wreckage around the battlefield or emplacing berms along high-speed avenues of approach to hinder enemy movement. They also provided quality bridge and route assessments along our lines of communication, allowing the scouts to focus on gaining information and maintaining enemy contact. Finally, the engineers proved very effective in their secondary role as infantrymen, manning key dismount avenues of approach and fighting from open-hatched M113s to keep enemy dismounted infantry and paramilitary forces away from the M3s and M1s, especially in urban terrain.

Adding an engineer company to the squadron cannot be underestimated, their input and assistance in terrain analysis during mission analysis and execution was vital. The squadron does need support from higher, and conducts its mission analysis to determine which engineer vehicles are required to support combat operations — it may be more effective to leave armored vehicle launch bridges (AVLBs) or armored combat equipment (ACE) behind in a consolidated unit package due to maintenance and speed, especially during offensive operations.

Replace the squadron's M998 HMMWVs with M1114s (M1025/26 at the least). The squadron's recent experience fighting an asymmetrical threat, in addition to our experiences at the NTC, simply reinforce the need to replace the vast majority of the squadron's M998s with up-armored HMMWVs capable of mounting crew served weap-



"Our ground cavalry troops (GCTs) trained hunter-killer teams and tactics at Fort Stewart, the National Training Center (NTC), and in Kuwait, then exercised them in the ultimate test — combat. The typical team consisted of three cavalry fighting vehicles (CFVs) and two tanks. As troop commanders made contact with enemy forces, they were rapidly able to bring overwhelming fires to bear within seconds of the initial contact versus trying to maneuver a tank platoon to the point of contact or to outflank the enemy."



"We doctrinally employed our air cavalry troops (ACTs) and it worked great! The KW performed superbly throughout the campaign. They do not fly straight on a heading at the same altitude, or hover in one area long enough to be engaged."

ons. This change not only increases protection to the vehicle's occupants but also allows the squadron to provide security to its own high value assets, especially when on the move. During Operation Iraqi Freedom, the squadron used a direct support linebacker platoon to provide security to the FARPs and the squadron support area (SSA). If left to only organic assets (as done during NTC rotations), the squadron was forced to take a scout platoon from one of the GCTs to provide this vital security support. Authorizing M1114s in place of M998s allows the squadron to provide greatly increased security to rear area elements in the event of contact with enemy forces, and also allows a greater distribution of mobile crew served weapons with night vision devices.

Air Defense

The squadron used a linebacker platoon as direct support throughout most of the campaign. During one portion, we had a battery. Based on threat analysis, we chose to use the air defenders in a ground support mode, marrying them up with our two FARPS. We used the combat trains to provide much needed mechanized combat power to these high value assets, without which we could not accomplish mission. This also enabled us to keep combat power forward with the GCTs instead of pulling reconnaissance forces from them to protect our combat service support assets. When operating with a battery, adding the battery commander and his M2A2 to the tactical operations center (TOC) greatly enhanced the TOC's defenses because the tactical actions center was not collocated. The linebacker-equipped air defenders performed superbly in ground support and are a definite value added to the squadron during any and all operations.

Logistics

Forward area support company (FASCO)/forward area support team (FAST). One major problem during division cavalry operations is logistics support. There is very little, if any, writ-

ten doctrinal guidelines, and there is no dedicated logistics support element, such as a brigade's forward support battalion (FSB), to support a squadron the size of a mini-brigade. While the squadron operates under the aviation brigade in garrison and receives aviation intermediate maintenance (AVIM) support from the aviation support battalion (ASB), the ASB is not equipped in any way, shape, or form, to support the squadron's substantial ground combat and support fleet. On the other hand, while the division's main support battalion (MSB) has the capability to support the squadron's ground components, it does not have the AVIM.

Another significant support obstacle is that the squadron almost always works directly for the division commander as a separate maneuver element, typically well forward in the division's battlespace, significantly increasing the distances it must travel to get logistics support — far beyond what a maneuver brigade must travel to get support from its habitual FSB. The squadron, in conjunction with the division, fought to rectify this logistics situation while still deployed to Bosnia as Stabilization Forces (SFOR) 9.

While preparing for NTC rotation 02-07, the division created a FAST out-of-hide from elements of the MSB and ASB. The team had an organic maintenance support team equipped with one M88A1, one M978 wrecker, direct support electrical test set (DSETS), GRM-122 (single-channel ground and airborne radio subsystem [SINGARS] radio test set), and assorted other maintenance vehicles. An additional support package with eight 5,000-gallon fuel tankers, two reverse osmosis water purification systems, two front-line ambulances, two palletized load systems, one forklift, three heavy-equipment transports, three 5-ton cargo trucks, and command and control vehicles were assembled to provide the remainder of support. We tested the concept during NTC 02-07 when the squadron deployed and operated under the control of the 52d Mechanized Division, which was the first de-

ployment of the entire squadron since Operations Desert Shield/Storm.

During redeployment, the FAST, as a separate, distinct unit, was unfortunately allowed to slip into obscurity. On receiving notification to prepare to deploy in support of Operation Enduring Freedom, the FAST (or FASCO as we viewed it) again received increased emphasis from the squadron. The FASCO was formed and supported the squadron throughout the deployment, reception, staging, onward movement, and integration (RSOI), combat operations, and redeployment. A senior first lieutenant commanded the FASCO and a master sergeant served as the non-commissioned office in charge.

From January through the end of April, the FASCO supplied the squadron with over 320,000 gallons of JP8; 345,000 meals ready to eat; 230,000 gallons of bottled water; 175,000 gallons of bulk water; 80,000 short tons of ammunition; repair parts in excess of \$14 million; 115,000 gallons of packaged petroleum products; and completed 305 direct support job orders. It remains an essential part of the squadron's ability to conduct operations successfully. We emphatically recommend the following:

- Establishing FASCO as an MTOE-authorized unit under the MSB. This requires transferring personnel and equipment from the MSB to the new MTOE unit, and transferring limited personnel and equipment from the ASB to the new FASCO.
- The FASCO provides direct support to the squadron 100 percent of the time, in garrison, training, and combat.
- The relationship between the FASCO and the squadron is the same as that of a direct support artillery battalion to its habitual brigade combat team.

- A major, either ordnance or quartermaster, should command the FASCO. The position should be a branch qualifying position and considered the equivalent of a support operations officer.

- The FASCO commander's rater will be the squadron commander, his intermediate rater should be the MSB commander, and the senior rater will be the division support command commander.

Permanently establishing the squadron FASCO is absolutely essential to successful squadron operations in support of the division. We tested this theory at the NTC, validated it in combat during an attack that stretched over 700km, and then continued to support the squadron during stability operations, support operations, and redeployment. Bouncing the squadron's support from one FSB to another, or relying on the MSB, does not work. Institute the FASCO now — this is an absolute must!

Squadron maintenance operations. Establish the squadron maintenance platoon just like an armor or mechanized battalion MTOE unit. Although many future (and maybe a couple of past) GCT commanders will grind their teeth, the full-time consolidation of the GCT maintenance teams on MTOE will greatly facilitate maintenance operations in garrison and field/combat operations. This will help the squadron maintenance sergeant ensure that all the squadron's mechanics receive the training they need to fully support their unit's wartime needs (it isn't just about turning wrenches).

The current divisional cavalry squadron MTOE gives the squadron five M88A1 recovery vehicles, one fewer than an armor/mechanized battalion, yet we have 68 combat vehicles (41 M3s and 27 M1s) organic to the squadron, versus 44 in the armor/

"The squadron's recent experience fighting an asymmetrical threat, in addition to our experiences at the NTC simply reinforce the need to replace the vast majority of the squadron's M998s with up-armored HMMWVs capable of mounting crew served weapons. This change not only increases protection to the vehicle's occupants but also allows the squadron to provide security to its own high value assets, especially when on the move."



mechanized battalion. This equates to 35 percent more combat vehicles. Add the doctrinal time and space distances that the squadron operates over that of an armor/mechanized battalion and this shortcoming of recovery assets speaks for itself. In addition, the squadron typically does not have an FSB to fall back on for additional recovery support. Division cavalry squadrons need to be authorized at least two more M88A1s to facilitate squadron operations. Finally, we need to put to bed the old “built-up prescribed load list (PLL) and tool truck versus deployability” issue. Change the squadron’s MTOE to replace all troop PLL and tool trucks with M1079 vans. They are practically ready-made PLL/tool trucks that can be quickly reconfigured internally to provide a clean, organized, and safe environment for work and storing PLL/tools. They also come with built-in electrical wiring that enables use of the unit-level logistics system computer inside the truck.

Command and Control

The tactical actions center (TAC). When formed, the squadron TAC should have three Bradley-series vehicles (M3/BFIST). Currently it has two — the commander’s and the S3’s. The squadron fire support officer (FSO) should be equipped with a BFIST; he currently has his M577 in the TOC and an M998 HMMWV. If the FSO is given a BFIST, we then recommend putting the ETAC with his communications package in the back of the BFIST — this may be a little crowded, but worth investigating. Given the distances covered by the squadron, this will allow for fires deconfliction as far forward as possible, especially when distances prevent the advanced field artillery targeting and direction system from operating and everything is executed over frequency-modulated (FM) or tactical satellite radios. If the ETAC needs to see outside the vehicle, he can always open the hatch of the BFIST. Keep the ETAC HMMWV if possible — just as a backup.

Communications. The division cavalry squadron needs a more robust long distance communications package. The MTOE should be changed to replace the current M998 retransmission (RETRANS) vehicle with armored vehicles, such as an M1114 or M113A3, to provide increased protection and firepower to an element that typically is required to operate alone on the battlefield. The squadron had the opportunity to draw additional M113s during the operation and did exactly that — with great results. When not used for RETRANS, the M113s (with .50-cal machine guns) provided outstanding security support to the squadron TOC and combat trains (both elements without much firepower). When employed as RETRANS, having two like vehicles (M113/M1114) with the capability to traverse challenging terrain, and outfitted with .50-cal machine guns or MK-19s, the RETRANS team can provide its own security when none is available. If the squadron S6 is similarly equipped with an armored vehicle, he can perform emergency RETRANS and provide additional security to the squadron TOC.

The squadron also had the unique opportunity to use the Force XXI battle command brigade and below (FBCB2) — blue force tracker in combat. The system we used was satellite based instead of enhanced positioning location and reporting system (EPLRS) based. Although we did not have any experience with the EPLRS-based system, the satellite generally worked great. The ability to maintain situational awareness and send free text messages was vital to the squadron’s overall success, especially when we were forced to operate beyond FM communications range within the squadron. FBCB2 should be more evenly distributed across the squadron than ours were during Operation Iraqi Freedom — we had only five systems in the squadron, providing zero redundancy. Troop commanders, the squadron commander, and

the squadron XO at the TOC were the only recipients of this outstanding system. Although every vehicle does not need FBCB2, we do recommend the following based on the cavalry squadron’s doctrinal missions and our experiences with the system:

- 11 per GCT — two scout platoon, two tank platoon, one troop commander, one troop XO, and one troop command post.
- One per ACT — mounted in troop commander’s HMMWV.
- Two per aviation unit maintenance troop — mounted in HMMWV (FARP command and control vehicle).
- Five per squadron TAC/TOC — squadron commander/S3 M3, S3 577, S2 577, and FSO 577.
- Two per squadron combat trains command post — S4 577 and HMMWV.
- Six in headquarters and headquarters troop (HHT) — squadron maintenance officer, senior maintenance sergeant, support platoon leader, HHT commander, HHT first sergeant, and HHT maintenance sergeant.

This arrangement brings the grand total to 50 systems across the entire squadron. This not only increases overall friendly situational awareness and the ability to navigate the battlefield, but provides a secondary or tertiary means to disseminate graphics, fragmentary orders, and important reports across the width and breadth of the unit.

Finally, MTOE does not adequately equip the squadron with UHF/VHF communications. Reliable UHF/VHF communications within the ground elements of the squadron could have greatly increased the squadron’s ability to fully use the KWs’ communications systems. This would have allowed the squadron commander, TOC, and GCT commanders to maintain redundant communications with the KWs and take greater advantage of their ability to maneuver freely across the squadron’s battlespace. Putting this capability into the FARP command and control vehicles will also allow the pilots a more reliable and capable means of communicating with FARP NCOICs, which is vital when maintaining KW coverage on the battlefield. To accomplish this, we recommend that the MTOE be changed to authorize 16 AN/VRC-103 multi-channel radio systems that operate in UHF/VHF and FM frequencies.

Hopefully these comments and recommendations will find support across the armor/cavalry community and work their way into unit MTOEs and standard operating procedures.



Major J.D. Keith is an armor force integration systems officer, Deputy Chief of Staff, Unit Set Fielding-Strategic Plans, Department of the Army, Washington, DC. He received a B.S. from Kansas State University and an M.A. from Western Kentucky University. He is a graduate of the U.S. Army Command and General Staff College, Fort Leavenworth, KS. He has served in various command and staff positions, including squadron executive officer, 3d Squadron, 7th U.S. Cavalry, 3d Infantry Division, Fort Stewart, GA; squadron S3, 3d Squadron, 7th U.S. Cavalry, 3d Infantry Division, Fort Stewart; deputy G3 and G3 chief of operations, Task Force Eagle, 3d Infantry Division (M), Bosnia-Herzegovina; and commander, Headquarters and Headquarters Company, 2d Battalion, 64th Armor, 3d Infantry Division, Schweinfurt, Germany.

Valuable input for this article was provided by LTC Terry Ferrell, MAJ Nick Snelson, MAJ Brad Gavle, CPT Darin Griffin, CPT Kara Bates, CPT Ray Kimball, CPT Jim Schwartz, CPT Dave Muhlenkamp, CPT Brian “Jake” Jacobson, CPT Steve Stasevich, and 1LT Brad Gogats.

Air-Ground Integration

by Captain Shawn Hatch

(Reprinted from July-August 2005)

Conventional U.S. Army doctrine applies aviation assets primarily to the linear battlefield — the traditional Cold War-style battles on relatively open terrain. In fact, current doctrine recommends “isolating and bypassing urban areas when possible due to the costs involved.”¹ While operating in an urban environment may be costly, it will be much more costly to fail to adapt and not have any aviation assets fighting along side ground maneuver units. We see that battles and wars are increasingly less linear and executed less on open terrain. Instead, wars are often fought in and around built-up urban terrain. Much of the doctrine for the linear battlefield applies in this urban and non-contiguous battlespace, but U.S. Army aviation procedures must adapt drastically to accommodate this new battlespace. Many of these adaptations have occurred in the aviation community, and many more are ongoing and yet to be discovered. However, the best procedures and application of aviation assets are useless if they are not properly integrated with ground assets, which aviation assets must support.

Aviation is potentially the greatest untapped combat multiplier in the urban environment; failing to learn and apply these qualities may prevent the U.S. Army from maintaining its dominance as the world’s greatest and most adaptable military force.

This article provides a general understanding of some concepts to consider when integrating aviation assets into the ground maneuver plan; it will look at three areas: roles of Army aviation, planning considerations, and air-ground synchronization of aviation assets in the urban environment. Current doctrine is evolving slowly and has already adopted some of these concepts; however, some concepts are currently being practiced but are not reflected in current doctrine, and some of these concepts are all together original and not currently practiced anywhere.

Roles of Army Aviation

Army aviation is arguably the most maneuverable branch of the Army. As a result of its maneuverability and unique charac-

teristics, it has the capability of performing certain roles and missions with greater speed, less danger to soldiers, and more effectively than any other combat asset. Tables 9-1 through 9-4 in U.S. Army Field Manual (FM) 3-06.11, *Combined Arms Operations in Urban Terrain*, do a good job listing many of the roles in which aviation can be employed.² However, this is not an exhaustive list and some roles and missions should be expanded with further clarification. These tables are organized by the four main categories of operations that commanders in the urban environment must conduct: assess and shape; dominate; transition; and stability and support.

Assess and Shape. This category includes the traditional cavalry role of reconnaissance. Contrary to FM 3-06.11, aviation possesses the ability to perform reconnaissance in much more than just the “urban peripheral area.” Air cavalry units (and in some cases, lift and attack units) are currently being used daily to recon deep into the heart of urban terrain.



Certainly, the aerial observation provided by these units is slightly limited by structures and the high concentration of other obstacles common to urban terrain, but some areas, such as rooftops, around corners, and open-top entrenched areas, are much more readily observable from the air. Most casualties sustained in the urban environment occur when moving between buildings, down streets, and through open areas; these casualties can be reduced by using a reconnaissance platform capable of seeing around corners, on rooftops, and other areas not visible to maneuvering ground forces.³

Another unused role of aviation in the assess-and-shape category is that of a deception force. When needed, helicopters can be a very noticeable presence both during the day (visual) and at night (audible). This is especially true in many of the world's underdeveloped urban areas where other civil aviation assets are limited, making Army aviation assets more apparent. Using this factor, the battlefield can be effectively shaped, causing the enemy to believe operations are occurring where they are not.

Dominant. The cordon mission paired with any of its variants, such as knock, search, and destroy, is ideally suited to aviation support. Starting from route reconnaissance to the cordon objective and then focusing both in and out (as discussed later in planning considerations), helicopters provide the ground commander with a critical view of the objective, making the cordon more secure. Early warning from an aerial view prevents any element from moving in or out of the cordon, which may have otherwise passed through the cordon undetected, especially during the initial establishment of the cordon.

Stability and Support. Experience in Operation Iraqi Freedom (OIF) has shown that aviation can play several roles during stability and support operations. Improvised explosive devices (IEDs) are one of the most deadly enemy actions used in Iraq. Many of these IEDs, and their potential locations, can be located using aerial reconnaissance. Lines of communication (LOC) security is a common role that incorporates aerial reconnaissance, which is a variation of a route reconnaissance, but is done routinely and focuses on a few elements as dictated by the ground commander. These elements can include trafficability of the LOC, potential threats (including IEDs), and the presence of known or suspected enemy along the LOC. A close variant of LOC security is convoy



"The aviation liaison officer (LNO) is critical to properly employing all aviation assets at the discretion of the ground commander. The LNO should be the resident expert on the capabilities and limitations of his unit and know how to best use its capabilities to support the ground mission."

security. Aviation has a significant advantage in assisting ground forces in this area in the urban environment. In addition to providing suppressive fires in support of the ground convoy, aviation assets provide early warning offered by the aerial perspective, a marked advantage when buildings limit the ground unit's field of view.

A proven role of aviation is the presence patrol. The psychological factor of a helicopter is a significant deterrent to would-be disrupters of stability. But, the aerial presence patrol offers much more than just a psychological deterrent; aircraft can cover a much larger area in a presence patrol than a ground unit, and still observe much of the same activities as a ground presence patrol. Intelligence analysts in the 502d Infantry Regiment, 101st Airborne Division (Air Assault), deployed in Mosul, Iraq, from May 2003 to January 2004, noted that there was a significant decrease in insurgent activity when presence patrol aircraft were on station. In the absence of continuous aerial operations, aerial presence patrol schedules were shifted continuously and irregularly to convey the sense of continuous aerial coverage, thus decreasing insurgent activity.

Aviation roles in the urban environment are only limited by our ability to adapt. Current doctrine lists common roles, but these should not be considered all inclusive. Limiting aviation to traditional roles will fail to maximize its unique advantages, and rob the ground commander of limitless opportunities against the enemy.

Mission Planning Considerations

The aviation liaison officer (LNO) is critical to properly employing all aviation assets at the discretion of the ground commander. The LNO should be the resident expert on the capabilities and limitations of his unit and know how to best use its capabilities to support the ground mission. At the same time, all planners involved in the military decisionmaking process (MDMP) should, at a minimum, be familiar with some basic planning considerations, such as aircraft station time and rotation plan, hovering and graphic control measures, inner loop/outer loop security, and objective altitude planning, for using aviation in an urban environment.

Aircraft Station Time. Planning for cavalry and attack aircraft should almost always assume that aircraft will operate in teams of two aircraft. While this is not doctrine, the "hunter/killer" team approach is a proven technique that, in my experience, is nearly universally followed. This will effect planning for the amount of ammunition available, observable area, and speed for reconnaissance missions. However, the greatest consideration for this is the time on station and rotation plan. Without extended fuel tanks, Army helicopters universally have about a two-hour station time based on fuel. When planning any operation, this can be a significant consideration, especially if continual coverage is necessary. A common tendency is to request teams to split up and refuel separately, leaving one on station while the other refuels. While possi-



“The 3d Infantry Division attributed the high survivability of the OH-58D Kiowa helicopters in urban environments during OIF to the “movement techniques used by the aircrews.” Kiowas operated at or below 50 feet above ground level, while maintaining at least 60 knots. The bottom line: planning restrictive control measures, such as attack by fire positions, which force helicopters to remain over a relatively small piece of terrain, endangers the mission.”

ble, this is a highly undesirable technique and should be avoided. Therefore, it may be necessary to employ multiple teams and establish a rotation or plan for gaps in coverage, depending on the distance between the operation and the refuel point.

Hovering Flight. A difficult lesson learned during OIF is that hovering in the urban environment does not work. Numerous news sources commented on the notably greater survivability of helicopters that continued to move while fighting over cities in Iraq, verses hovering and near-stationary aircraft, even in higher-threat environments.⁴ The 3d Infantry Division attributed the high survivability of the OH-58D Kiowa helicopters in urban environments during OIF to the “movement techniques used by the aircrews.” Kiowas operated at or below 50 feet above ground level, while maintaining at least 60 knots.⁵ The bottom line: planning restrictive control measures, such as attack by fire positions, which force helicopters to remain over a relatively small piece of terrain, endangers the mission. This may appear to be a simple principle to maintain, but as the plan gets more and more complicated, and more assets fight for the same time or space, deconflicting airspace and direct fire control can become quite complicated and the easiest remedy is to “cut the legs off” the helicopters, forcing them to stand still. Alternatives must be found to rule out a plan that includes stationary aircraft.

Inner Loop/Outer Loop Security. Many operations in urban environments neces-

sitate an “inner loop/outer loop” security pattern. This is very similar to how a ground element would focus observations during cordon operations, but executed quite differently. Cordon and isolation operations often occur on a relatively small objective; to avoid hovering flight, helicopters must constantly circle to stay within operating distance from the objective. If the objective is only a city block or smaller, two aircraft are very cramped for airspace. The inner loop/outer loop security pattern allows both aircraft to make concentric circles in opposite directions around the objective. The inner aircraft focuses observation inward in the circle, and the outer aircraft outward. The circles are in opposite directions to allow the pilot who is not operating the controls clear observation, while the pilot operating the controls can see and deconflict with the opposite aircraft. This technique provides observation on the actual objective, as well as outside the objective, offering a terrific advantage to the ground commander in cordoning or isolating the objective. This technique can also be conducted with a larger element (two teams of aircraft or more) on a larger objective such as a small village. In this case, one team would provide the inner loop security while another team provides the outer loop security. In either case, this technique allows the flexibility for any member of the team to divert temporarily from his assigned sector to support the other, should additional observation or firepower be required.

Altitude. An often-overlooked common consideration for planning is the altitude

of supporting aviation. In the case of a cordon or raid, the ground commander should consider the impact of supporting aviation at various altitudes. While lower aircraft (50 to 200 feet) provide better, more detailed observation, they may alert enemy forces to friendly troops’ presence, increase noise for ground personnel, and blow over weak structures or other loose debris in the area. When planning operations in the urban environment, it is critical to consider the third dimension to achieve the appropriate results.

Air/Ground Synchronization

Perhaps the greatest challenge in air-ground integration is synchronizing the viewpoints of air and ground components. Ensuring that all players are looking at the same target, building, vehicle, window, or other item has proven to be significantly difficult in the urban environment. Several methods exist to enhance the common operational picture and allow for expedient target designation, but none are foolproof — a concerted focus on building new technologies to solve this problem is certainly needed.

In an urban environment, an eight-digit grid has little significance due to the proximity of urban features, as well as the vertical development common in many cities. Even if a highly accurate grid for a certain target were available, correlating that grid with a specific piece of terrain expeditiously is very difficult, even for the best soldiers. Therefore, current doctrine incorporates the use of several maneuver graphic aids, including the area sketch, urban targeting grid sectors, and

“bulls-eye” or target reference points (TRP).⁶ Each of these techniques has certain advantages and limitations, which make them more or less suitable in varying environments, and often a combination of techniques is needed to accomplish the mission. Still, the perfect solution for this problem has yet to be found.

The area sketch may include a detailed drawing of all buildings and other significant terrain features in an area, all individually numbered and the corners of each building labeled to aid in building orientation. Phase lines, objectives, and other graphic control measures are not uncommon to aid in rapid target identification. Advantages to this technique include a highly detailed description of the area, high reliability when describing a numbered feature, and the ability to describe

sides of oddly shaped buildings, especially when they do not conform to cardinal directions. However, the amount of pre-mission coordination required for this technique is quite significant. In addition, ensuring that all elements down to the lowest level have the same area sketch is very difficult. Larger objectives will be difficult to describe in the same way without creating a massive sketch, which is not practical for tactical operations.

Similar to the area sketch is the urban targeting grid sectors. In this technique, an objective or area is broken down into a certain grid. Buildings and prominent features are labeled within each sector. This has many of the same advantages and disadvantages of the area sketch. It is not realistic to number every building and prominent feature within a large area.

The 502d Infantry Regiment used a similar technique while in Mosul, Iraq, but without numbering every building. This was affectionately called the “horse-blanket,” where grid sectors were labeled with a two-letter identifier, the first letter indicating the owning battalion. This worked well for ground units who concentrated on relatively small areas and moved at a slower pace, but it was difficult for fast-moving aviation units covering the entire city to maintain accurate situational awareness at all times due to the high number grid sectors.

Finally, the bulls-eye or TRP technique is a much more simplified method that simply identifies a series of easily identifiable terrain features called “bulls-eye” or “TRP.” Targets are described using a bearing and distance from the closest



“Cordon and isolation operations often occur on a relatively small objective; to avoid hovering flight, helicopters must constantly circle to stay within operating distance from the objective. If the objective is only a city block or smaller, two aircraft are very cramped for airspace. The inner loop/outer loop security pattern allows both aircraft to make concentric circles in opposite directions around the objective.”

bulls-eye. This technique is easily applied and is the simplest for coordination between units, but it does not provide for very accurate target locations.

Despite all best efforts, most air-ground target synchronization eventually boils down to a target “walk on,” where either the ground or air unit begins with one or more of the techniques discussed above to synchronize viewpoints in the same general area, and final guidance is given by either a verbal or visual cue. While these are good techniques, they are not always sufficient, and a few additional procedures and future technologies are needed. These techniques include creating a standard vehicle identification (ID) list, simplifying and organizing large cities, and using real-time video communications through Force XXI battle command, brigade and below (FBCB2) or similar technology.

Most maneuver units have a library of threat vehicles that every soldier is responsible to identify. In the emerging urban environment, the enemy will not always use a clearly identifiable T-72, so units must modify libraries of threat identification. What one soldier describes as a “box van” may be very different from another soldier’s perception of that same vehicle. Additionally, where a soldier at a traffic control point can read the make of a car and possibly its license plate, these identifying marks are nearly impossible to see from aviation assets, especially at night. Units should develop a library of vehicle identification, as seen in Figure 1, to standardize vehicle descriptions, which will prevent miscommunications of a vehicle description. A 90-percent accurate library can be easily reached, and it can be modified when the unit changes its area of operations.

Urban environments in non-English speaking nations create the challenge of U.S. soldiers being unable to pronounce, and thus remember, names of places, roads, and other landmarks. A technique to effectively coordinate between various U.S. units is to simplify cities by renaming (at least for military use) main supply routes, key landmarks, and other key plac-

es. Nicknames will inevitably develop, but the key is to make these nicknames official so that all units use the same, easily pronounceable names. This is similar to the area sketch and bulls-eye technique, but focuses primarily on a few key routes and landmarks. Directing a ground quick reaction force from an aviation platform to a specific target is greatly simplified if both units are using the same names (not necessarily found on street signs unobservable from the air) along key routes. The alternative (take your next left then go one mile) is confusing and can quickly cause the ground unit to become disoriented.

Finally, both ground and air units would benefit greatly from future technologies that incorporate real-time video broadcasted to other involved units over an FBCB2 or similar system. Designating a certain building, landmark, or other feature and then broadcasting that exact picture to the supporting air unit, would eliminate any confusion over the exact target identification; leaving no question of which building, door, window, or other feature was the target.

Aviation plays a vital role in the success or failure of operations in urban terrain. We cannot be bound to traditional roles and thus fail to adapt to the threat and challenges found in the urban environment. Planners must have a working knowledge of aviation considerations so they can maximize the use of aviation assets and get exactly what they need to successfully accomplish the mission. Finally, the perfect role and best plan are useless if air and ground forces cannot effectively communicate and synchronize their points of view. Prior thought and planning is essential to ensuring everyone is looking at the same target, especially in the midst of high-stress situations. Combat helicopters can fight in unmatched ways; failing to properly integrate them in the urban environment is detrimental to the U.S. Army’s success.



Notes

¹U.S. Army Field Manual (FM) 3-06.1, *Aviation Urban Operations: Multiservice Procedures for Aviation Urban Operations*, U.S. Government Printing Office (GPO), Washington D.C., 15 April 2001, p. 1-1.

²FM 3-06.11, *Combined Arms Operations in Urban Terrain*, GPO, Washington D.C., 28 February 2002, pp. 9-2 to 9-4, Appendix A.

³Ibid, p. 4-32.

⁴Robert Blackstone and Dorothy Norton, *Evaluating Military Operations on Urbanized Terrain (MOUT) Tactics, Techniques, Technologies and Procedures (TTPs): Observations from Operation Iraqi Freedom (OIF)*, Project Metropolis, Marine Corps Warfighting Laboratory, 8 August 2003, pp. 44-49.

⁵The U.S. Army 3d Infantry Division (Mechanized) After Action Report, Chapter 5, p. 25.

⁶Each of the publications in the FM 3-06 series discusses an element of air-ground coordination, much of which is covered in this paragraph. This discussion has tried to simplify the different techniques found in all of the publications to their basic components.

	Compact Sedan
	Full Size Sedan
	Passenger Van or Cargo Van
	Small Box Van (14 Ft. box)
	Box Van or Water/Fuel Truck
	Semi-Trailer

Figure 1

Captain Shawn Hatch is currently a student at the Armor Captains Career Course, Fort Knox, KY. He received a B.S. from the United States Air Force Academy. His military education includes Aviation Officer Basic Course and Initial Entry Rotary Wing Course. He has served in various command and staff positions, to include squadron rear detachment commander, 2d Squadron, 17th Cavalry Regiment (2-17 CAV), 101st Airborne Division (Air Assault), Fort Campbell, KY; squadron S1, 2-17 CAV, 101st Airborne Division, Fort Campbell; flight operations officer, 2-17 CAV, 101st Airborne Division, Fort Campbell; platoon leader, A Troop, 2-17 CAV, 101st Airborne Division, Fort Campbell.

Reconnaissance Patrols in Baghdad

by First Lieutenant Gregory S. Hickerson

(Reprinted from September-October 2004)

U.S. forces conduct reconnaissance patrols in Baghdad to identify subversive or enemy elements and determine how the local population will react toward the coalition. As a patrol leader, you will simultaneously conduct these two types of missions each time you lead a patrol. These missions are extremely important because they provide a clear picture, which commanders need to effectively plan and conduct future operations.

You must consider multiple aspects when identifying criminal activity. Identifying criminal activity includes having a good rapport with the locals in your area of responsibility (AOR), a good analysis of the latest intelligence on your AOR, properly conducted troop leading procedures (TLP), and a bit of luck. Focusing too much on any one of these aspects will leave you conducting a patrol with no specific task and purpose, versus a reconnaissance patrol with a definite task and purpose.

Establishing a good rapport is by far the most important ingredient to successful missions day after day. Dignity and re-

spect must be enforced throughout your unit at the lowest level. During initial contact with the locals in your AOR, it is very important to make a good impression. Leaders who have a good understanding of the culture and are open to these differences will ensure that the locals view soldiers as problem solvers, not as outsiders interfering with local disputes, especially in Muslim countries where working with the community involves interaction with both males and females, and knowing what is and is not taboo. Establishing trust and confidence snowballs in the tight-knit communities you will encounter in Iraq. Learning the local language and using it at every opportunity shows you are truly concerned. All leaders rely on interpreters to assist them in communicating, but you can gain a lot of goodwill by trying to make one-on-one contact and place a personal touch on what may seem to be a stressful time for both you and the local community.

As a leader, you should know your AOR better than anyone else, have contacts and informants throughout, and be easily rec-

ognized by the locals. If you are properly established in the area, you will be regarded as a sheriff; if not, you will be considered just another outsider. Most of the intelligence about the AOR is gathered and reported by your unit, but knowledge and analysis are two different things. Analysis of the latest intelligence will help you adjust your day-to-day missions.

During day-to-day missions, it is an easy trap to cut corners and forget TLPs, which in turn, cuts into your effectiveness as a leader and also detracts from unit effectiveness. To counter this trap, create and use tools that force the use of TLPs. For example, use patrol order templates at the lowest level, ensure subordinate leaders back brief the patrol plan, and that timelines include a patrol brief so all soldiers understand the mission. Commanders and platoon leaders should assign missions two to three days prior, giving subordinate leaders proper time to plan and rehearse.

Identifying the sentiment of the local population is something every commander needs to know and what every scout should





“Rehearse dismounted drills that include forming a porous perimeter, which allows you to bring the leader into the center, but avoids crowds and distractions. This drill must send the message that coalition soldiers are approachable. In reality, security teams, bound continuously to points of domination, are continuing to provide security for the internal human intelligence (HUMINT) team, keeping unwanted distractions out of the perimeter, while providing security for the entire dismounted area. The HUMINT team must establish a signal with the security team to designate individuals selected for intelligence gathering.”

provide. Sentiment of the local population dictates size and strength of patrols, unit posture during operations, and types of missions. Collecting this data is done everyday by each member of the scout patrol. It is as simple as waving at the locals and observing their reactions, and as tough as engaging a local in a heated discussion on topics that truly affect his living conditions such as electricity, water, garbage, and sewage. Listening to the problems with attention and concern makes a difference. As you patrol the streets, it is very easy to be distracted and over-

whelmed by the crowds. Focus on individuals and engage in one-on-one conversation.

Rehearse dismounted drills that include forming a porous perimeter, which allows you to bring the leader into the center, but avoids crowds and distractions. This drill must send the message that coalition soldiers are approachable. In reality, security teams, bound continuously to points of domination, are continuing to provide security for the internal human intelligence (HUMINT) team, keeping unwanted dis-



tractions out of the perimeter, while providing security for the entire dismounted area. The HUMINT team must establish a signal with the security team to designate individuals selected for intelligence gathering. By doing this, your security elements can focus on internal and external security and your HUMINT element can focus on effective questioning and conduct information gathering. Always use two-man teams on both the security team and HUMINT team, which provide additional safety and security of individual soldiers.

Planning your patrol should follow the eight TLP steps: receive the mission; issue the warning order; make a tentative plan; start movement; reconnoiter; complete the plan; issue the order; and supervise. Your plan should include the most recent intelligence and significant acts. As the enemy evolves and changes his tactics, you must adapt as well. Keep it simple, and focus time and energy on rehearsals and battle drills. Develop an effective plan that allows the most time and space available to complete the mission. Include flexibility in your patrols, which in turn allows subordinate leaders the most versatility while conducting TLPs. You should always plan maneuver that includes primary and alternate routes and vary these routes from patrol to patrol. Never develop a pattern of entrance or exit from built-up areas. Use all available avenues of approach and routes within your AOR.

You should conduct patrol briefs prior to each patrol that include all aspects of a traditional five-paragraph operation order (OPORD). The patrol brief can omit some parts of the OPORD, based on mission and timeline. At a minimum, it should include task organization, scheme of ma-

“Mounted formations are extremely important to patrol leaders for security, command and control, and projection of combat power. Two basic mounted-patrol formations in the urban environment are the column and staggered column. Based on the mission, platoons leaders should use the column formation in built-up areas with narrow streets and multiple story structures and in heavy traffic on major thoroughfares. Traffic and enemy situation will dictate distance between vehicles. Gunners should divide the perimeter for weapons orientation and should scan rooftops and likely sniper areas.”

maneuver, task and purpose for each element, and coordinating instructions. Ensure you include safety-related information such as speed, rollover drills, and actions on contact. Patrols are an everyday event so each leader should develop a system to standardize planning and rehearsals that will make planning almost routine.

Mounted formations are extremely important to patrol leaders for security, command and control, and projection of combat power. Two basic mounted-patrol formations in the urban environment are the column and staggered column. Based on the mission, platoons leaders should use the column formation in built-up areas with narrow streets and multiple story structures and in heavy traffic on major thoroughfares. Traffic and enemy situation will dictate distance between vehicles. Gunners should divide the perimeter for weapons orientation and should scan rooftops and likely sniper areas. Drivers should focus on maneuver, so if you are limited to four-soldier trucks, one dismount should sit behind the driver and scan the left side, truck commanders focus on the right side. These two passengers should sit with chest and head facing out providing maximum protection toward the enemy. Removing all vehicle doors clears obstructions of visibility and allows soldiers to fire personal weapons while mounted.

During your patrols, conduct dismounted operations regularly to gather intelligence. Platoons should establish standing operating procedures (SOP) and rehearse these operations constantly. Dismount team organization should consist of two-man teams, including the security elements, HUMINT collection team with interpreter, and the team leader. It is very important to separate duties so that each member is focused on the mission. You should use either the box formation or the diamond formation. Movement techniques between mounted and dismounted elements vary based on terrain and mission, but should be limited to traveling overwatch and bounding overwatch. You should use bounding overwatch in heavily populated

areas or heavy traffic. The overwatch vehicle should include driver, gunner, and team leader.

Tactical questioning is a skill that leaders should practice and rehearse. The better leaders perform this skill, the more accurate gathered HUMINT will be and gathering time will be reduced. Again, remember leaders should have established a good rapport in the AOR and have already established multiple contacts and informants.

Focused questions should be conducted using brief, simple, clear questions that get direct answers, which will allow leaders to continue with follow-up direct questions. Avoid including negative words in the question. Other types of questions that you should avoid are leading, vague, or compound questions. Leading questions are questions that will only return a “yes” or “no.” Vague questions, such as “what’s going on” or “what’s the problem,” will return unrelated answers and lead the conversation to where the contact has control of the conversation. Compound questions will confuse the contact or allow the contact to give incomplete

responses. Again, compound questions allow the contact to take control of the conversation. Remember, you have to control the conversation at all times.

Sections and platoons conduct reconnaissance patrols in Baghdad daily. Understanding these two types of missions will increase your unit’s effectiveness. Identifying subversive or enemy elements involves establishing a good rapport, analysis of the most recent intelligence, and properly conducted TLPs. Determining the sentiment of the local people includes watching reactions of the people, sound tactical questioning of the locals, and intelligence gathering.



First Lieutenant Gregory S. Hickerson is a scout platoon leader, B Troop, 1st Squadron, 2d Armored Cavalry Regiment (Light), Baghdad, Iraq. He received an A.S. from the University of Maryland and is an Officer Candidate School distinguished graduate. His military education includes Armor Officer Basic Course, Scout Leaders Course, Airborne School, and Air Assault Course.



“Platoons should establish standing operating procedures (SOP) and rehearse these operations constantly. Dismount team organization should consist of two-man teams, including the security elements, HUMINT collection team with interpreter, and the team leader. It is very important to separate duties so that each member is focused on the mission. You should use either the box formation or the diamond formation.”



Defeating the Threat in Iraq Through the Combined Arms Convoy Concept (CAC2)

by Captain Klaudius K. Robinson

(Reprinted from March-April 2004)

Coalition forces face an unconventional, asymmetrical, and adaptive threat in Iraq. Noncompliant forces (NCFs), Former Regime Loyalist (FRLs), and foreign fighters all contribute to a threat most mounted Army units have not seen or dealt with recently. U.S. forces are continually developing tactics, techniques, and procedures (TTPs) to defeat NCFs, FRLs, and foreign fighters (these factions will be referred to as the enemy), but in turn, these factions adapt and the struggle becomes an action-reaction-counteraction cycle.

The current threat in Iraq is very closely associated with guerilla-type forces. The threat is very similar to the threat faced by rotational units at the Joint Readiness Training Center (JRTC), Fort Polk, Louisiana. The only difference is that the enemy in Iraq is not uniformed, and therefore difficult to identify. The enemy is not willing to take heavy losses and is aware of the overall supremacy of the coalition forces if engaged conventionally. Force-on-force maneuver warfare is not advantageous to the enemy when he is outmanned and outgunned. Therefore, other tactics are used to engage coalition forces.

Initially, the enemy used simple ambushes involving rocket-propelled grenade (RPG) attacks and small arms fire (AK-47s and light machine guns). The attacks were carried out by a small force, which usually broke contact after the initial volley of fire to increase survivability. Ambushes were set either on one side of the road, or both when the road was elevated, allowing the enemy to engage coalition forces without firing into each other. The confusion of the initial volley, coupled with the small

size of the enemy force breaking contact, made it extremely difficult to acquire, engage, and destroy targets. Most ambushes involved friendly mounted units that were engaged from the flanks when traveling at high speed. Mounted units had trouble acquiring and engaging the enemy during the ambushes. These factors led to very few confirmed kills resulting from friendly returned fire. In turn, the small size of the enemy forces and limited scope of weaponry used, very rarely, caused casualties or damage to equipment. Enemy forces targeted mostly soft-skinned vehicles traveling in convoys or on patrols, such as high-mobility, multipurpose wheeled vehicles (HMMWVs), light medium tactical vehicles (LMTVs), and heavy expanded mobility tactical trucks (HEMTTs).

Initially, light and heavy armored vehicles, such as M113s and M1s were very rarely targeted. As the threat progressed, there was an increase in targeting soft-skinned vehicles, but attacks on M1 tanks were extremely rare. The threat was countered by increasing the minimum number of vehicles and personnel in convoys and patrols. The enemy responded by employing improvised explosive devices (IEDs) in ambushes in conjunction with RPG and small arms fire. The attacks then shifted to using IEDs almost exclusively. Using IEDs allowed the enemy to conduct ambushes without self-exposure to coalition fire or action. This type of threat is not going to cause mass casualties. It will, however, disrupt operations and force commanders to re-evaluate how they conduct combat and support operations. Commanders are forced to develop new TTPs and shed training principles that they have come to rely on.

Logistics and administrative convoys are easy enemy targets. It is easy to see why, soft-skinned vehicles offer less protection, are easier to destroy, and are perceived as a lesser threat by enemy forces. The battalion scout platoon and any other wheeled vehicles with crew-served weapons are heavily used for providing escorts to administrative convoys, but logistics convoys are expected to provide their own security. Combat power, such as tank companies and mortar platoons, was used for force protection at forward operating bases (FOBs), as quick reaction forces (QRFs), and reserved for major offensive operations such as battalion- or brigade-level raids. This leads to very little combat power being applied to defeat the main threat — ambushes.

Mounted forces are not trained to deal with this type of threat. During each rotation to the JRTC, a light infantry brigade is usually augmented by one armored company team. There are normally 10 rotations in a year, and there are a lot more than 10 armored company teams in the Army. As a result, mounted units have had almost no opportunity to train against this type of threat during a combat training center (CTC) rotation at the platoon/company level, much less at the battalion/brigade level. Despite the limited training opportunities, we have an increase in this type of threat used in recent years. The Russians have seen it in Chechnya and Afghanistan and U.S. forces have seen it in Somalia, Afghanistan, and Iraq. Light infantry forces are pitted against this threat at the JRTC, and as a result, have had success, especially in Afghanistan.

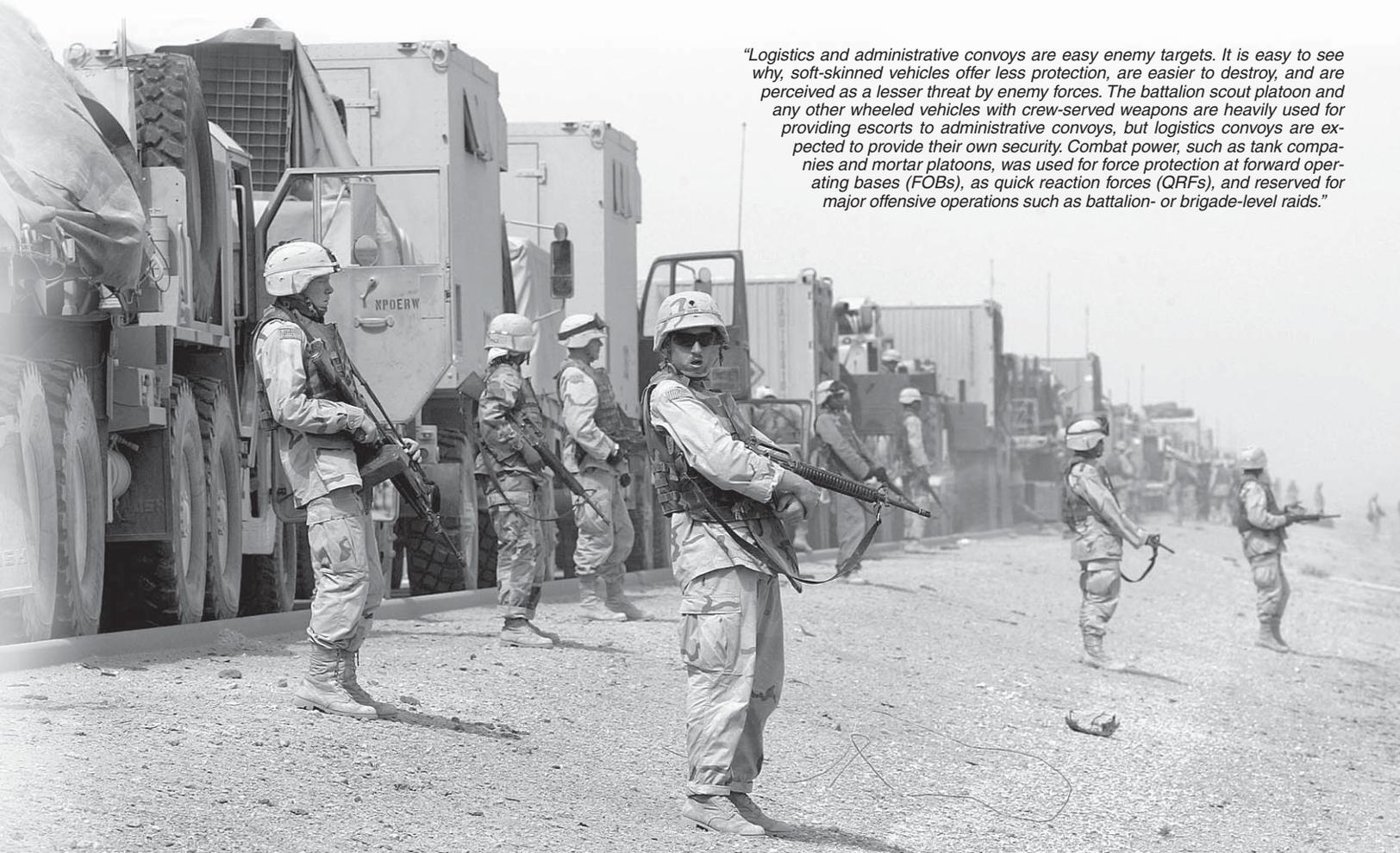
The National Training Center (NTC) does a wonderful job preparing our mounted force for full scale maneuver warfare, but does very little to prepare our mounted forces for the current threat faced in Iraq. The problem lies in the fact that most armored units go to the NTC and, as mentioned before, very few have an opportunity to go to the JRTC. This trend will probably not change in the near future, so how do armored/mounted units

train to defeat the type of threat faced in Iraq? More important-ly, how do they defeat this threat?

We do a good job training our armored units to fight an outdated enemy. Training is not the problem, focusing this training to defeat the correct threat is. There are several steps that can be taken to prepare a mounted force to face the current threat in Iraq. For example, today's tank gunnery focuses on vehicle-on-vehicle engagements with enemy targets always in the front arc of the tank. There are no targets directly to the flanks or even to the rear of the tank, as encountered in ambushes. Instead, engagements should be modified to allow the tank to travel in a direction, and acquire and engage targets to the flanks and rear. For example, the tank travels parallel to the range and has to acquire targets to its flank. Targets should reflect the most likely threat; in this case, it is dismounts.

Mounted units must also train on how to properly encounter the enemy. Not all of Iraq is a desert as seen during the first Gulf War. The Fertile Crescent in Iraq (Tigris and Euphrates River Valleys and tributaries) offers terrain reminiscent of a jungle. Thick vegetation, man-made structures, walls, canals, and dikes severely limit mounted movement along the flanks of the walls. Vehicles are forced to stay on roads and this limits the maneuver space of tank commanders, platoon leaders, and company commanders. As a result, units must focus training on conducting patrols and convoys along roads that are open on the flanks, as well as severely limited by terrain. When ambushed, convoys and patrols must quickly identify which side of the road the ambush originated and mass return fires in that direction. Training must be focused to make this a simple battle drill understood and executed by all crews in the convoy or patrol. Patrols tend to maintain unit integrity but convoys sometimes do not. This is where consistency in training must be reflected across the entire unit so that everyone in the convoy knows what to do when an

"Logistics and administrative convoys are easy enemy targets. It is easy to see why, soft-skinned vehicles offer less protection, are easier to destroy, and are perceived as a lesser threat by enemy forces. The battalion scout platoon and any other wheeled vehicles with crew-served weapons are heavily used for providing escorts to administrative convoys, but logistics convoys are expected to provide their own security. Combat power, such as tank companies and mortar platoons, was used for force protection at forward operating bases (FOBs), as quick reaction forces (QRFs), and reserved for major offensive operations such as battalion- or brigade-level raids."



ambush occurs. Battle drills, whether standard or developed as a result of the threat, must be well rehearsed and executed.

Convoy and patrol leaders must know how to use combat multipliers. Essentially, when facing the Iraqi threat, even a convoy is a military combat operation. As a result, it should be treated like one. Troop leading procedures (TLPs) need to be exercised and leaders need to brief operation orders (OPORDs). When planning the convoy or patrol, a leader must plan for contingencies and integrate other branches into his plan. The contingencies should include procedures to follow if ambushed with IEDs or small arms, or if IEDs are found along the road.

Leaders should develop a direct fire plan, plan indirect fires, and rehearse the plan. As stated in *Guide to Military Operations Other Than War*, "Because they often consist of so many disparate elements — many of which may not even be military, or whose members may not speak a common language — convoys must be meticulously planned and prepared. Once the convoy crosses its start point, especially in austere environments, it is very difficult to adjust for shortcomings in preparation or planning."¹

Our leaders and soldiers do a great job of adjusting to a fluid environment, but adjustments can be mitigated with proper planning and preparation. Units can train for this as a platoon or company collective task. Combat multipliers include using indirect fires and air assets. Leaders must be trained on how to properly plan for and employ these assets. "The fire support element of the headquarters initiating the convoy should develop a fire plan to support the convoy. Normally, this is a simple plan consisting of priority targets on which the supporting artillery or mortars are laid and shifted as the convoy progresses along its route. This keeps the artillery focused on the general area of the convoy and greatly improves its responsiveness."² This training must be accomplished through crawl, walk, and run phases. There must also be leader emphasis on conducting this training and not getting wrapped around training the way we have always trained. New threats require new TTPs, but this requires units to train personnel to execute them properly, quickly, and effectively. Training, however, is only part of the problem. Units must defeat the enemy.

To win on a battlefield, a force must defeat another force. This is a simple and plain statement, yet there are many methods and means to an end. Defeat is defined as, "A tactical task to either disrupt or nullify the enemy force commander's plan and subdue his will to fight so that he is unwilling or unable to further pursue his adopted course of action and yields to the will of his opponent."³



On the simplest of levels, to defeat your enemy is to negate his ability to fight. The best way to negate an enemy's ability to fight is to destroy him. To destroy him, you must acquire him. To acquire him, you must go where he is. Currently, the main threat comes from ambushes against convoys and patrols. As a result, this is where combat power needs to be focused and focused toward defeating the individuals who are engaging friendly forces. As a result, combat power must not be tasked out and must be concentrated to accomplish this task.

There are several things that dilute combat power in a unit. Multiple FOBs cause units to commit combat power to secure each FOB and provide QRFs. This also puts more convoys on the road because of an increased logistics need. FOBs not tactically or centrally located in an assigned area of responsibility (AOR) will cause vehicles to travel longer distances to cover the AOR. Longer distance travel equals more maintenance problems, which leads to more deadlined combat power. There are several ways to concentrate combat power, such as limiting the number of FOBs, establishing FOB locations with mission travel distances under consideration, and combining convoys and patrols into one package.

Combining convoys and patrols into one package will focus combat power on the threat. The enemy will be a lot more hesitant in attacking a soft-skinned target that is escorted by a tank. Combining convoys and patrols will also decrease the number of targets available to the enemy. This becomes a combined-arms convoy and leads us to the combined-arms convoy concept (CAC2). The CAC2 uses all the concepts described in this article. Convoys and patrols are combined to take the fight to the enemy and designed and trained to defeat the enemy. The convoy becomes essentially an offensive operation while accomplishing its assigned mission, whether it is logistics or administrative. Therefore, it is treated like an offensive mission.

Leaders must conduct TLPs and resources must be committed for the operation. This includes indirect fire and air assets. This combined-arms package is robust and can respond to a roadside threat, especially an ambush when reaction time is critical. The faster an element can return fire and the more volume of fire that element can produce, the better. For example, a morning logistics package (LOGPAC) is assigned a tank platoon with which to travel. Two OH-58 Kiowa Warriors are also assigned to this package and indirect fires are planned in free fire areas (FFAs) along the planned route. One leader is assigned as the convoy commander and is responsible for conducting TLPs. The leader should be well versed in how to employ all assets available and should have the aid of the battalion or brigade staff in completing his plan. The convoy executes the mission and is ambushed, but because of proper training, the enemy's fire point of origination is identified and the convoy package masses its fires on the enemy. The air assets are critical in this concept because they offer a different vantage point in acquiring the enemy. "Certain air assets can also be extremely helpful. Attack helicopter escort is ideal, as it can simultaneously reconnoiter and provide armed escort."⁴ If the convoy is attacked with IEDs, the attack aviation element is there to potentially identify and destroy the individ-

"Mounted units must also train on how to properly encounter the enemy. Not all of Iraq is a desert as seen during the first Gulf War. The Fertile Crescent in Iraq (Tigris and Euphrates River Valleys and tributaries) offers terrain reminiscent of a jungle. Thick vegetation, man-made structures, walls, canals, and dikes severely limit mounted movement along the flanks of the walls. Vehicles are forced to stay on roads and this limits the maneuver space of tank commanders, platoon leaders, and company commanders. As a result, units must focus training on conducting patrols and convoys along roads that are open on the flanks, as well as severely limited by terrain."



“Convoy and patrol leaders must know how to use combat multipliers. Essentially, when facing the Iraqi threat, even a convoy is a military combat operation. As a result, it should be treated like one. Troop leading procedures (TLPs) need to be exercised and leaders need to brief operation orders (OPORDs). When planning the convoy or patrol, a leader must plan for contingencies and integrate other branches into his plan.”

ual responsible for initiating the IED. Ground forces can also engage the enemy and fire support assets are possibly used to destroy the enemy. The ground commander has several options to use or combine in an effort to destroy the enemy. More importantly, the convoy/patrol package acts as a deterrent, preventing enemy attacks.

The main task facing our armored force is defeating the enemy. As mentioned before, the best way to accomplish this is to destroy the enemy. The current threat in Iraq is an elusive one and differentiating enemy from innocent bystander is difficult. Therefore, it is not always possible to acquire and destroy the enemy, especially individual attackers. The next best method to defeating the enemy’s intent is by deterrence. By projecting overwhelming combat power through several means, the enemy has difficulty achieving success. The CAC2 concept is one of these methods.

Observation and interdiction through indirect fires is another method. Observation can be achieved through ground elements positioned in observation posts, observing routes traveled by friendly forces. In essence, securing the lines of communication is deemed a priority. Aerial route reconnaissance is another effective course of action. Indirect fires can be used to interdict the enemy by executing fire missions at areas from which friendly forces have been attacked. Indirect fire missions are limited by possible collateral damage caused by proximity to innocent civilians and their structures. They can be used effectively if attacks have occurred away from civilian structures. Commanders must vary the execution of these methods of deterrence to prevent lapsing into a set pattern. Keeping the enemy on his toes deters and interdicts his ability to effectively execute the chosen course of action.

The threat faced in Iraq is different than anything the current armored force has trained for recently. It is true that tanks and

armored vehicles are not designed to fight single individuals in urban or jungle terrain. Light infantry is better suited for this type of fight; however, an armored force can be successful in this type of environment. The enemy will very rarely decide to attack our heavily armored vehicles; instead they focus on the armored force’s Achilles’ heel — its support assets. As a result, new TTPs must be exercised to combat the threat against soft-skinned vehicles. CAC2 is one form of these TTPs. If used, armored forces can take the fight to the enemy and prevent the only form of attack used by the enemy that has any chance of success. Armored leaders must eschew the training mindset and the Soviet doctrine to which they have grown accustomed and develop new TTPs to fight unconventional, asymmetrical, and adaptive threats.

Notes

¹LTC Keith E. Bonn and MSG Anthony E. Baker, *Guide to Military Operations Other Than War*, Stackpole Books, Mechanicsburg, PA, 2000, p. 203.

²Ibid., p. 204.

³U.S. Army Field Manual 101-5-1, *Operational Terms and Graphics*, U.S. Government Printing Office, Washington, D.C., 30 September 1997.

⁴Bonn and Baker, *Guide to Military Operations Other Than War*, p. 204.

CPT Klaudius K. Robinson is currently the S3 (Air), Task Force 3d Battalion, 67th Armor, 2d Brigade Combat Team, 4th Infantry Division, Baqubah, Iraq. He received a B.A. from Florida Southern College, Lakeland. His military education includes Airborne School, Air Assault School, Armor Officer Basic Course, Armor Captains Career Course, Combined Arms and Services Staff School, and Tank Commander’s Certification Course (M1A2SEP). He has held various command and staff positions, to include S1, 1st Battalion (ABN), 509th Infantry Regiment, Fort Polk, LA; and airborne armored scout platoon leader and XO, D Troop, 1st Battalion (ABN), 509th Infantry, Opposing Force, Joint Readiness Training Center, Fort Polk.



Company-Level Cordon and Search

by Captain Dale Murray

(Reprinted from September-October 2004)

As U.S. Armor and Cavalry units conduct combat operations to root out terrorists and bring democracy and the rule of law to Iraq, they learn lessons for future wars. The principles of war are unchanged; however, the methods warfighters use to apply these principles continue to evolve. On the current battlefield, commanders are challenged to carry out search operations, reconnaissance and detection operations, patrols, checkpoint and traffic control point operations, gather intelligence, and conduct stability operations while simultaneously protecting soldiers and U.S. security interests.

These challenges were no different for B Troop, 1st Squadron, 2d Armored Cavalry Regiment when they deployed to Baghdad, Iraq. Here, they faced a dynamic battlespace that called for new methods and principles to prepare and plan for mission success.

Captain Dale Murray, commander, B Troop, set out to prepare his soldiers and key leaders for a different kind of war. As an officer professional development project, he instructed his key lieutenants to codify techniques for follow-on units. This project soon revealed effective methods used by B Troop to successfully conduct patrols and raids in an effort to disrupt terrorist raids operating in the 2d Armored Cavalry Regiment's area of operations in Baghdad.

In the following articles, Captain Dale Murray and Lieutenants Christopher Shepherd, Gregory Hickerson, Michael Gantert, David Tosh, and Morris Estep share how they successfully took the fight to the anticoalition forces to capture or destroy the enemy, won the support of the local population, improved the quality of life for the Iraqi people through rebuilding projects, and prepared local law enforcement and government agencies for transferring authority to the Iraqi people.



Search Operations in Iraq

Company-level armor and cavalry units in Iraq continue to face a dynamic battlespace that is predominantly populated by friendly people and an occasional terrorist, criminal, or anticoalition person (commonly known as a subversive element) or two. The Iraqi populace provides coalition forces with invaluable intelligence on where they think these subversive elements are hiding because they usually want them out of their neighborhoods. That said, there are two types of companies or troops in Iraq — those who have done a cordon and search and those who are going to do a cordon and search to find and capture or eliminate possible subversive elements.

The cordon and search operation is a pretty simple mission in concept but may be a little more difficult when applied to the terrain where the would-be subversive element(s) may be hiding. Having led my troop through a few of these missions, practice makes perfect, and each and every cordon and search is differ-

ent. The fundamental elements of the cordon and search remain the same though — outer cordon, inner cordon, and assault.

The Cordon and Search Concept

While the practical application of this concept depends on the nature of the objective area, a commander will typically divide his company or troop into an outer cordon force, an inner cordon force, and an assault force.

The outer cordon force will usually set along the major avenues of approach into and out of your objective. They will initially focus on the objective to identify and stop personnel and vehicles that are departing the objective area, but will shift their focus away from the objective once the inner cordon is set to block vehicles and personnel from entering the objective area, preventing anyone from interfering with the search.

The inner cordon force will move to isolate the objective once the outer cordon force is set. The force will be positioned on the three sides of the objective that the assault force will not use for entry, where they will find defilade positions in case the assault force is required to fire at the objective. The inner cordon force must block all personnel or vehicles attempting to move away from the objective to prevent anyone from escaping the objective.

The assault force, typically made up of four elements, will move into the objective area last. The first element is a four-man security/support team that secures the entry point and prepares to provide suppressive fire for the entry team should they come under fire. The second element is a four-man entry team that will move through the entire objective and clear it of all personnel. The third element is a three- to four-man search team that will search the objective for contraband, illegal weapons, or bomb-making material. The fourth element is a three- to four-man detention/collection team that secures all detainees and all contraband found.

Once the search is complete and all detainees and contraband are secure for movement, the assault force withdraws from the objective. The inner cordon force will withdraw immediately after the assault force withdraws, leaving the outer cordon force to withdraw last.

Planning

Typically, an Iraqi citizen will provide information on terrorist forces to either a patrol or someone at a base camp. The S2 normally interviews the informant and determines the story's cred-

ibility. Once someone has clarified the information (translation from Arabic to English is often a time-consuming process), the S2 will brief the squadron or battalion commander on the possible subversive element, and the commander will direct the S3 to order a cordon and search of the new target, if the information seems credible (credible intelligence from an informant is a matter of great debate, but for the purposes of this article, we will assume the information is credible).

Immediately on receipt of the mission, the company-level commander conducts a reconnaissance of the target house to be searched. Ideally, the S3 can provide the unit with an eight- or ten-digit grid to the target house, and the S2 can provide either maps or satellite imagery. If possible, avoid sending a patrol to the area of the target house since the patrol may unnerve the target and cause him to flee prior to the search. However, the only information that an informant can usually provide is an address, which means a patrol must conduct a reconnaissance to determine where the target is located. The patrol may not alert the target, if patrols frequent the area, but the patrol does not need to loiter in the area any longer than necessary.

Once a commander knows the location of the target house and the terrain that his unit will encounter, he can begin planning the cordon and search. Typically, the homes in and around Baghdad are stand-alone compounds or connected compounds. Almost every home will have a walled-in courtyard, which must be taken into consideration during planning. Normally, we encountered stand-alone compounds in the more rural areas of Baghdad away from built-up areas. The built-up areas in Baghdad typically consist of connected compounds, where two families share a courtyard wall. The actual buildings may or



"The outer cordon force will usually set along the major avenues of approach into and out of your objective. They will initially focus on the objective to identify and stop personnel and vehicles that are departing the objective area, but will shift their focus away from the objective once the inner cordon is set to block vehicles and personnel from entering the objective area, preventing anyone from interfering with the search."

may not connect, but if they do, the rooftops may serve as a possible egress route for the subversive element.

For a stand-alone compound, the outer cordon force should set first. Our outer cordon force was typically mounted on M1025s, so the high-mobility, multipurpose, wheeled vehicle (HMMWV) could be used to block the road, and one or two dismounts could speak with the locals.

One platoon leader should be in charge of the outer cordon force to facilitate the command and control between various outer cordon elements. The outer cordon force will initially have a dual mission in blocking personnel and vehicles from entering and departing the objective area. Once the inner cordon force is set, the outer cordon force will focus primarily on blocking anyone attempting to enter the objective area.

We typically moved the inner cordon force to the objective dismounted. The inner cordon force should follow one direction of attack and have clearly defined sectors of observation and fire. The inner cordon positions must set where they will be in defilade of the other inner cordon positions and the assault force in the event of a direct fire engagement. Once set, the inner cordon blocks anyone from departing the objective to prevent an escape from the assault force. While not a steady rule, we normally placed the inner cordon force under the control of a platoon leader or platoon sergeant, while the remainder of their platoon secured the vehicles of the inner cordon force and the assault force.

One platoon typically makes up the assault force, which again normally consists of four teams and moves to the objective dismounted. The security/support team will set adjacent to the entry point first, prepare to provide suppressive fire to the entry team, and secure the entry point once the rest of the platoon has passed into the compound. The entry team will follow closely behind the security/support team and move into the courtyard and building using the four-man stack technique, clearing each room one-by-one.¹

The entry team will normally evacuate detainees directly to the detention/collection team. As the rooms are cleared, the search team moves behind the entry team and searches for contraband or any incriminating evidence. As the search team finds contraband, evidence, or illegal weapons, they will evacuate each item to the detention/collection team, which should locate somewhere near the entry point. If the compound has more than one dwelling, the search team should be prepared to act as an alternate entry team. Likewise, once the building is clear, the entry team should be prepared to act as a search team.

Despite the intimidating nature of the terrain, a connected compound is somewhat easier to cordon and search. The fundamentals are still the same, but we modified the task organization a bit to simplify the operation. We typically combined the outer and inner cordon forces, using dismounts from the outer cordon vehicles to move into the inner cordon positions. The assault



"Immediately on receipt of the mission, the company-level commander conducts a reconnaissance of the target house to be searched. Ideally, the S3 can provide the unit with an eight- or ten-digit grid to the target house, and the S2 can provide either maps or satellite imagery. If possible, avoid sending a patrol to the area of the target house since the patrol may unnerve the target and cause him to flee prior to the search. However, the only information that an informant can usually provide is an address, which means a patrol must conduct a reconnaissance to determine where the target is located. The patrol may not alert the target, if patrols frequent the area, but the patrol does not need to loiter in the area any longer than necessary."

force conducts actions in a similar fashion to the stand-alone compound.

Units want to ensure that they have adequately addressed service support issues in their plan. They must ensure that the troop or company can easily provide casualty evacuation. To ease this process, we typically placed our first sergeant and medics in a location near where the assault force parked their vehicles and to where platoons evacuated any casualties. The unit must also plan for detainee and contraband/evidence evacuation, as well.

As a final element, the commander should designate what he wants his platoon leaders to report. We usually reported outer cordon force set, inner cordon force set, entry into the target, cleared buildings, search complete, and any contraband and/or detainees found. The company XO received these reports and sent them on to our squadron tactical operations center (TOC).

Preparing

Rehearsals are the key to successful cordon and search operations, and while units will develop their own requirements for what to rehearse, here are a few suggestions:

- The outer cordon force should review the rules of engagement (ROE), rehearse the set up of their blocking position, and rehearse actions on contact with certain events, such as persons or vehicles attempting to pass the blocking position, a crowd protesting the cordon and search, and rock throwers.
- The inner cordon force should review the ROE and specifically focus on their actions should they identify someone attempting to leave the cordon. The inner cordon force also needs to rehearse their movement to the objective and talk through the sectors that they will observe. Additionally, the inner and outer cordon forces need to rehearse their direct fire plan to reduce the risk of fratricide.
- The assault force will usually have the most to rehearse, so commanders will want to make sure that they identify the assault force as early as possible. The entry team(s) will need to rehearse

multiple-room clearing procedures along with ROE scenarios on what to do if they encounter people inside a room and what criteria differentiates a hostile person from a bystander. The entry team will also need to rehearse entry into the compound and rooms that may be locked or blocked.

- The security/support team will need to rehearse their plan for providing the entry team with suppressive fire, as well as actions on contact with persons approaching the entry point. Additionally, the entry team(s) and the security/support team must rehearse their direct fire plan in the event that their entry into the compound or dwelling is opposed.

- The search team will need to conduct all rehearsals that the entry team conducts, since they will serve as your alternate entry team. The search team should also rehearse what to do with various types of contraband or illegal weapons and how to handle these items in a manner that will preserve this evidence for any military tribunal.

- Finally, the detention/collection team should rehearse searching detainees and actions to take if one of the detainees does not want to cooperate or attempts to flee the area. The assault force platoon should conduct a full rehearsal using buildings on the base camp as models for the objective.

At the troop-level, we usually conducted either terrain model or map rehearsals to ensure that all elements of the cordon and search were synchronized for the operation. Some of the actions we reviewed at rehearsals were actions with a crowd at a blocking position, persons attempting to enter cordon areas or entry points, personnel in the target home, discovering contraband, and most importantly, the direct fire plan. Reporting is a crucial aspect of this operation, so we had our platoon leaders reporting in the rehearsal just like they would during operations. Commanders must ensure that casualty and detainee evacuation procedures are reviewed during this rehearsal.

Precombat checks and inspections do not vary greatly from your normal patrol preparation, but here are a few additional items we usually took along:

- Bolt cutters — needed to enter rooms with padlocked doors or to open wardrobes that the owner has miraculously lost the key to unlock.
- Battering ram — needed to open gates or doors that may be locked from the inside.
- Hand-held metal detectors — needed to rapidly search detainees for weapons or other contraband.
- Mine detectors — needed to search the grounds around the buildings, since contraband is sometimes buried.
- Shovels — needed to dig up any items the mine detector finds.
- Zip cuffs — everyone will need these, but ensure that the entry, search, and detention/collection teams have priority on these.
- Ladder — needed to check the roof of some homes or as an alternate method of bypassing a locked courtyard gate.
- Hand grenades — patrols may normally carry these, but if they do not, make sure that the entry and the security/support teams have them.
- Miscellaneous cash — someone on the assault force should sign for some money from the unit field ordering officer (FOO) to compensate the people in the house for any damages, should the informant prove to be incorrect.

Execution

As the unit approaches the objective, the inner cordon and assault forces must make sure that they have allowed enough time for the outer cordon force to set before actually arriving at the target house. The locals know the sound of a HMMWV, and any subversive element, who may be home, will likely try to flee on hearing the unit approach. While the impact may not be immediate, vehicles and foot traffic (aside from curious onlookers) around the objective will decline quickly once the outer cordon is set, facilitating the movement of other elements to the objective.



“Once the inner cordon is set, the assault force will approach the house to begin the critical part of the operation. We knocked on the courtyard gate and gave the occupants anywhere from two to five minutes to gather all the people in the home and bring them into the courtyard. As the people file out of the home, the entry team prepares to move into the house and the security/support team maintains overwatch in the event that someone decides to resist.”

“The entry team will normally evacuate detainees directly to the detention/collection team. As the rooms are cleared, the search team moves behind the entry team and searches for contraband or any incriminating evidence. As the search team finds contraband, evidence, or illegal weapons, they will evacuate each item to the detention/collection team, which should locate somewhere near the entry point. If the compound has more than one dwelling, the search team should be prepared to act as an alternate entry team.”



Our troop found that the best method to maneuver the inner cordon and the assault force to the objective was dismantled. To do this, we used as many cargo HMMWVs as we could find to minimize the number of vehicles we had to secure (maneuvering a 5-ton truck in downtown Baghdad is not practical, but if operating in a more rural area, this may be the way to go). We occasionally used our headquarters section to secure these vehicles while the inner cordon and assault forces conducted actions on the objective, and we usually designated this same location as our casualty collection point (CCP).

Once the inner cordon is set, the assault force will approach the house to begin the critical part of the operation. We knocked on the courtyard gate and gave the occupants anywhere from two to five minutes to gather all the people in the home and bring them into the courtyard. As the people file out of the home, the entry team prepares to move into the house and the security/support team maintains overwatch in the event that someone decides to resist. While this may seem like an unnecessary delay, it is imperative to ensure minimal impact in this area in case the informant gave bad information, and removing the people from inside the home eased the actions of our entry team since they could then be relatively sure that no hostiles were inside. Again, this three to five minutes is critical to the success of the operation, so we made sure that the security/support team was in a good position to provide suppressive fire.

As the entry team moves into the building, they should communicate with each other to verify that their sector of the room is clear (this is a little more challenging at night with night-vision sights), and inform the search team when they can move into the next room. The search team should bring everything they find to the detention/collection team, which is also guarding the people in the courtyard. Initially, they will look in obvious spots for contraband, such as under beds and inside cabinets, using metal detectors to check various places. If they begin to find contraband or other incriminating evidence, the search team will want to increase the intensity of their search. Remember to view the occupants as innocent until proven guilty, being careful not to unnecessarily alienate them in the event the informant was wrong.

As the entry team completes its task, they should act as an alternate search team to expedite the operation, since the unit wants to minimize the time that the inner and outer cordon forces must block the locals. Once the search is completed, report the findings and get guidance on what higher headquarters wants to do

with any detainees or contraband, and then evacuate the detainees and contraband accordingly.

We normally withdrew from the objective in reverse order by moving the assault force away first, then the inner cordon force, and finally the outer cordon force. Once we returned to base camp, we handed any contraband or detainees over to the S2 and debriefed our soldiers, especially those on the assault force.

While some readers may think that this type of operation is for infantrymen, rest assured that you and your soldiers are the only infantrymen in your area of responsibility. As you begin to conduct cordon and search operations, you and your soldiers will become more and more comfortable with the operation and eventually develop your own battle drills. This is definitely an operation that a tank company can do. Typically, these operations were conducted by two platoons, each manned with 15 to 18 soldiers.

Hopefully, this article will provide a basis for others to use when planning cordon and search operations. As you analyze the terrain and forces available for the mission, remember that every operation is different, and there is no “cookie-cutter” approach. However, the principles outlined in this article generally do apply to most situations and will hopefully help you in future operations.



Note

¹Center for Army Lessons Learned, “Small Unit Leaders Guide to Urban Operations,” *CALL Newsletter 03-4*, Fort Leavenworth, KS, May 2003.

CPT Dale Murray is currently serving as commander, B Troop, 1st Squadron, 2d Armored Cavalry Regiment (1/2 ACR), Operation Iraqi Freedom. He is a Distinguished Military Graduate of Auburn University. His military education includes Armor Officer Basic Course, Scout Platoon Leaders Course, Infantry Captains Career Course, Combined Arms and Services Staff School, and Airborne School. He has served in various command and staff positions, to include assistant S3 planner, 1/2 ACR, Fort Polk, LA; tank platoon leader and squadron personnel officer, 3d Squadron, 3d Armored Cavalry Regiment (3/3 ACR), Fort Carson, CO; and scout platoon leader, K Troop, 3/3 ACR, Bosnia-Herzegovina.



Checkpoint and Traffic Control Point Operations

by First Lieutenant Michael Gantert

(Reprinted from September-October 2004)

In April 2003, the 2d Armored Cavalry Regiment (ACR) deployed in support of Operation Iraqi Freedom. We arrived in Baghdad in the middle of May and immediately began conducting a wide range of operations. Despite major combat operations ceasing in Baghdad in late April, my unit, B Troop, 1st Squadron, 2d ACR, was tasked to execute a mixture of combat, stability, and support operations in and around the city, and we often executed checkpoints and traffic control points (TCP) throughout the deployment.

Checkpoint Operations

During the first six months of our deployment, checkpoint operations proved to be key in our unit's area of responsibility (AOR). Checkpoints allowed us to maintain a visible presence in our AOR, while also deterring enemy forces and criminal activity. We primarily executed two main types of checkpoints. The first was a stationary or deliberate checkpoint. Stationary checkpoints were often done during the day when we could be visible to a high volume of traffic and search several vehicles. The second type of checkpoint we performed was a "rolling" or "flash" checkpoint. Rolling checkpoints were done mostly at night during the hours after curfew.

Stationary checkpoints involved more planning and required more assets to successfully accomplish the mission. A com-

mon task for a checkpoint operation was to identify enemy forces and criminal activity. Our purpose was often to deny enemy forces and criminals the ability to operate throughout our AOR. Vehicle and personnel requirements varied based on the terrain, volume of traffic along the route, and if we decided to stop traffic in both directions.

Conducting successful checkpoint operations requires proper equipment. Our unit used the following items for stationary checkpoints:

- Two checkpoint signs (English and Arabic) warning people to stop and take all commands from coalition forces.
- Cones or warning triangles.
- Female searcher or metal-detecting wands.
- Interpreter.
- Spotlight or Maglight (for night operations).
- Concertina wire.
- Integrated communications (ICOM) or Motorola radios for communication between all checkpoint elements.

While conducting checkpoint operations, it is important to respect local customs and courtesies. It is a major insult for American men to touch Arabic women. A female searcher is good to have; how-

ever, if one is not available a metal-detecting wand will suffice. Because of this custom, criminals attempt to hide weapons beneath the garments of females. Females must be searched!

Often, we used a profiling system to determine which vehicles to search. This system was based on intelligence received prior to executing the checkpoint. The S2 provided a be-on-the-lookout (BOLO) list to commanders. The BOLO list was compiled from intelligence throughout Baghdad, highlighting vehicles of special interest. The list gave a brief description of the car (make, model, color, license plate number, and sometimes occupants). These specific vehicles were often believed to be involved in suspicious activity.

Two soldiers, positioned at the first vehicle (blocking vehicle), identified vehicles to be searched and directed them to the stop line. At the stop line, two soldiers would hold identified vehicles until search teams were ready for them at the search area. Once a vehicle hit the search area, search teams would instruct occupants to open all doors and compartments and stand to the side. It was critical to separate personnel from the vehicle. You do not want people interfering while a search of the vehicle is underway. The Arabic word for "sit" or "kneel" is "*Ajles*" and is good to know. Often, we separated the occupants from their vehicle, searched them, and instructed them to *Ajles* until the ve-

"Once a vehicle hit the search area, search teams would instruct occupants to open all doors and compartments and stand to the side. It was critical to separate personnel from the vehicle."

hicle was completely searched. You must maintain personnel security at all times.

Once the people were consolidated, a two-man team began searching the vehicle with a noncommissioned officer to supervise the operation in the entire search area. The second vehicle at the checkpoint served as the command and control vehicle as well as the rear and flank security. It is important to remember that all soldiers moving within the checkpoint do so in teams of two for security. The concertina wire is set up for any possible detainees at the site. My soldiers took all confiscated weapons to the command and control vehicle. We kept an accurate count of all weapons and ammunition and reported the information to the higher command. This is just one set up that proved successful.

The key to checkpoints is the element of surprise. The enemy and criminals love to travel at night, which makes the checkpoint procedure very effective.

Traffic Control Points

During our combat, stability, and support operations in Baghdad, establishing traffic control points along major routes was another common mission our unit executed. A likely task for this mission is to control traffic flow on major routes with the purpose of facilitating freedom of movement for friendly forces and interests. Often, we blocked traffic to allow large convoys to move freely throughout our AOR. We would also establish a TCP as part of an outer cordon during a raid. The requirement for trucks and personnel was dictated by the amount of traffic and the terrain. Often, two trucks and full crews effectively executed this mission. The trucks with crew served weapons oriented toward the flow of traffic served as the blocking position. The soldiers provided rear and flank security. An interpreter should be used to talk to the locals, explaining to them the reason for the delay.

We occasionally used concertina wire to deter anyone from attempting to pass the TCP on foot. In the event a large crowd forms, it is important to have the interpreter readily available. A bullhorn is a good tool for the interpreter to use. Also, setting up a detainee holding area is a good idea. If the crowd gets unruly, de-



tain one or two of them (preferably the instigators). Once the crowd sees you mean business and that they will be arrested for being unruly, they usually settle down quickly. After the mission was complete, we allowed the detainees to go about their business with a stern explanation to never interfere with coalition forces again.

The 2d ACR conducted full-spectrum operations during the year we spent in Baghdad. Checkpoints and traffic control points were just a few of the many missions we executed. These techniques are a couple of the many ways to accomplish checkpoint and TCP operations. Personnel and vehicle requirements will vary based on mission, enemy, time available, terrain, troops available, and civilian consider-

ations. Through trial and error and many hot summer days, we found these methods to be the most effective to accomplish our mission.



First Lieutenant Michael Gantert is currently serving as the troop executive officer, B Troop, 1st Squadron, 2d Armored Cavalry Regiment, Operation Iraqi Freedom. He received a B.S. from Virginia Military Institute. His military education includes Armor Officer Basic Course and Scout Platoon Leaders Course. He has served in various command and staff positions, to include scout platoon leader, C Troop, 1st Squadron, 2d ACR, Fort Polk, LA; and antitank platoon leader, B Troop, 1st Squadron, 2d ACR, Fort Polk.



"Often, we blocked traffic to allow large convoys to move freely throughout our AOR. We would also establish a TCP as part of an outer cordon during a raid. The requirement for trucks and personnel was dictated by the amount of traffic and the terrain. Often, two trucks and full crews effectively executed this mission. The trucks with crew served weapons oriented toward the flow of traffic served as the blocking position. The soldiers provided rear and flank security."

2006 Armor Warfighting Symposium:

“Mounted Warriors for a Nation at War”

Preparations for Armor Warfighting Symposium 2006 are well underway at the Armor Center at Fort Knox. Armor Warfighting Symposium 2006 will continue the tradition of providing an excellent opportunity for professional development and discussion on a wide variety of topics, as well as social events for attendees to enjoy. The 2006 Armor Warfighting Symposium is scheduled for 16-19 May 2006.

The theme for this year’s conference, “Mounted Warriors for a Nation at War,” refers to the Chief of Armor’s intent to highlight the vital role that the Armor force is playing in the Global War on Terror. This year’s Warfighting Symposium will update attendees on topics discussing the current fight in Iraq, the transformation of the Armor force, and the transformation of the Army.

Major General Williams and Command Sergeant Major Smith have invited leaders from across the battlefield spectrum to offer presentations on current and future operations for the force, ranging from lessons learned during Operations Iraqi Freedom I and II to the ongoing transformation of the Army.

Throughout the four-day symposium, subject-matter experts will brief their areas of expertise and discussion panels will provide a forum to focus on operations ranging from platoon to brigade levels. Vendors and private companies will display the defense industry’s newest military equipment in Skidgel Hall on 16, 17, and 18 May. Social events will be held each evening to allow members of the mounted force to associate with fellow professionals.

The Armor Trainer Update will precede the Armor Warfighting Symposium on 15 May and focus on the U.S. Army Reserve and Army National Guard (ARNG) components of the mounted force. Presentations will include Reserve Component integration with Active Component counterparts, ARNG transformation, and an update on the RC’s role in meeting Armor force mission requirements.

In continued recognition of contributions made to the Armor force, Major General Williams will present the 11th Annual General Frederick M. Franks Award to the individual who has made a long-time contribution to the Armor and maneuver forces of the U.S. Army. In 2004, Lieutenant General Wallace received the award for his leadership of V Corps during Operation Iraqi Freedom I.

The Franks Award recognizes an active duty or reserve officer, noncommissioned officer, or Department of the Army Civilian who has demonstrated

a long-time contribution to the warfighting capabilities of the U.S. Army. In keeping with the theme, “Mounted Warriors for a Nation at War,” this year we will give special consideration to the nominees’ contributions toward the tactics, techniques, and procedures in the current operating environment and shaping of the future Armor force. Additionally, nominees should possess two or more of the following characteristics of duty performance during the year or years preceding the award:

- Offered a vision for the future of the mounted warfighting force that significantly improved combat survivability, lethality, maneuverability, or mobility;
- Developed an innovation in equipment, material, or doctrine that significantly enhanced the effectiveness of mounted elements of the combat arms;
- Exemplified professional excellence in demeanor, correspondence, and leadership on issues relevant to mounted warfare;
- Displayed a love of soldiering through skills, recognition of the sacrifice and achievements of subordinates, and attention to the intent and directions of higher commanders.

In keeping with the example demonstrated by the award’s namesake, any soldier in the Army can recommend another soldier or civilian. For more information please visit the Fort Knox website at www.knox.army.mil/armorsymp.

The Armor Warfighting Symposium is a great opportunity for the Armor and Cavalry Community to celebrate the achievements of the greatest mounted combat force ever. These events never fail to attract a wide audience and this year will be no exception.

Event	POC	Phone*
Armor Conference	CPT Scott Spahr SSG Jared Sargent	(502) 624-2035 (502) 624-5496
Armor Trainer Update	COL Marlin Levendoski	(502) 624-1315
CSM Update	SGM Kirk Baldwin	(502) 624-1321
External Scheduling Conf.	William Rosacker	(502) 624-3555
Vendor Displays	SSG Ernest Shirley	(502) 624-4386
Armor Association	Connie Stiggers	(502) 942-8624 No DSN
VIP Billeting	Reservations Desk	(502) 624-6180
On-post Housing	Carolyn Burton	(502) 943-1000 (502) 624-3491
* DSN Prefix: 464		

2006 Armor Warfighting Symposium and Armor Trainer Update

13 May – 19 May 2006

“Mounted Warriors for a Nation at War”

TIME	EVENT	HOST	LOCATION
Saturday, 13 May			
0900-1600	Vendor Setup		Skidgel Hall
Sunday, 14 May			
0900-1600	Vendor Setup		Skidgel Hall
1500-2000	Initial Armor Warfighting Symposium and Armor Trainer Update (ATU) Registration	SACG	Skidgel Hall
Monday, 15 May			
0730-UTC	External Unit Scheduling Seminar	DPTMS	Rivers Auditorium
0800-1700	Registration for Symposium		Skidgel Hall
0900-1615	Armor Trainer Update	SACG	Haszard Auditorium
1800-2030	No-Host Social for ATU	SACG	Leader's Club
Tuesday, 16 May			
0730-1700	USAARMC CSM Update *	CSM, USAARMC	Leader's Club
0800-1700	Registration for Symposium		Skidgel Hall
0800-0830	CG/Opening Remarks	CG	Haszard Auditorium
0830-0930	Guest Speaker	CG	Haszard Auditorium
0945-1700	Brigade and Regimental Commanders Meeting *	OCOA	Futures Conference Room
0945-1700	Honorary Colonels and Sergeants Major of the Regiment *	OCOA	Chaffee Conference Room
0945-1700	Master Gunner Forum	Chief, MG	Richardson Hall
0945-1700	ATU Total Army School System Update	QAO/DAS	Skidgel Hall
1000-1600	Vendor Displays		Skidgel Hall
1800-2000	Ice Breaker Social		Leader's Club
Wednesday, 17 May			
0800-1600	Registration		Skidgel Hall
0830-0930	Guest Speaker	1 ATB	Haszard Auditorium
0930-0945	Armor Association Annual Meeting	Armor Association	Haszard Auditorium
0945-1600	Subject-Matter Updates/Panels	Varied	Boudinot/Gaffey Hall
1000-1600	Vendor/Static Displays		Skidgel Hall
1630-1830	CG's Garden Party	CG	Quarters One
1900-2100	Regimental Buffet and Assembly	OCOA	Leader's Club
1930-1945	Presentation of 11th Annual Franks Award	CG	Leader's Club
Thursday, 18 May			
0800-1600	Registration		Skidgel Hall
0830-0930	Guest Speaker	1 ATB	Haszard Auditorium
0930-1600	Subject-Matter Update/Briefing	Varied	Boudinot/Gaffey Hall
1000-1600	Vendor/Static Displays		Skidgel Hall
1800-2200	Armor Association Banquet (Coat and Tie)	Armor Association	Leader's Club
1900-1930	Commander's Wall Unveil		Leader's Club
Friday, 19 May			
0800-1100	Registration		Skidgel Hall
0830-0930	Guest Speaker	1 ATB	Haszard Auditorium
0930-1030	Guest Speaker	1 ATB	Haszard Auditorium
1000-1200	Vendor/Static Displays		Skidgel Hall
1030-1130	Keynote Speaker	1 ATB	Haszard Auditorium
1200-1330	Chief of Armor Luncheon	CG	Leader's Club
1330-1400	CG/Closing Remarks	CG	Leader's Club
1430-1630	Former Commanders Update	CG/Former CGs	HQ Conference Room
1600-1700	Command Photo	SGS	Skidgel Hall

* Indicates an "invitation only" event.

An expanded schedule will be available at registration or up-to-date information is available at the Armor Warfighting Symposium web site: www.knox.army.mil/armorsymp



ARMOR

The Professional Bulletin of the Armor Branch
U.S. Army Armor Center
ATTN: ATZK-DAS-A
Fort Knox, KY 40121-5721

Periodicals Postage
Paid at Louisville, KY