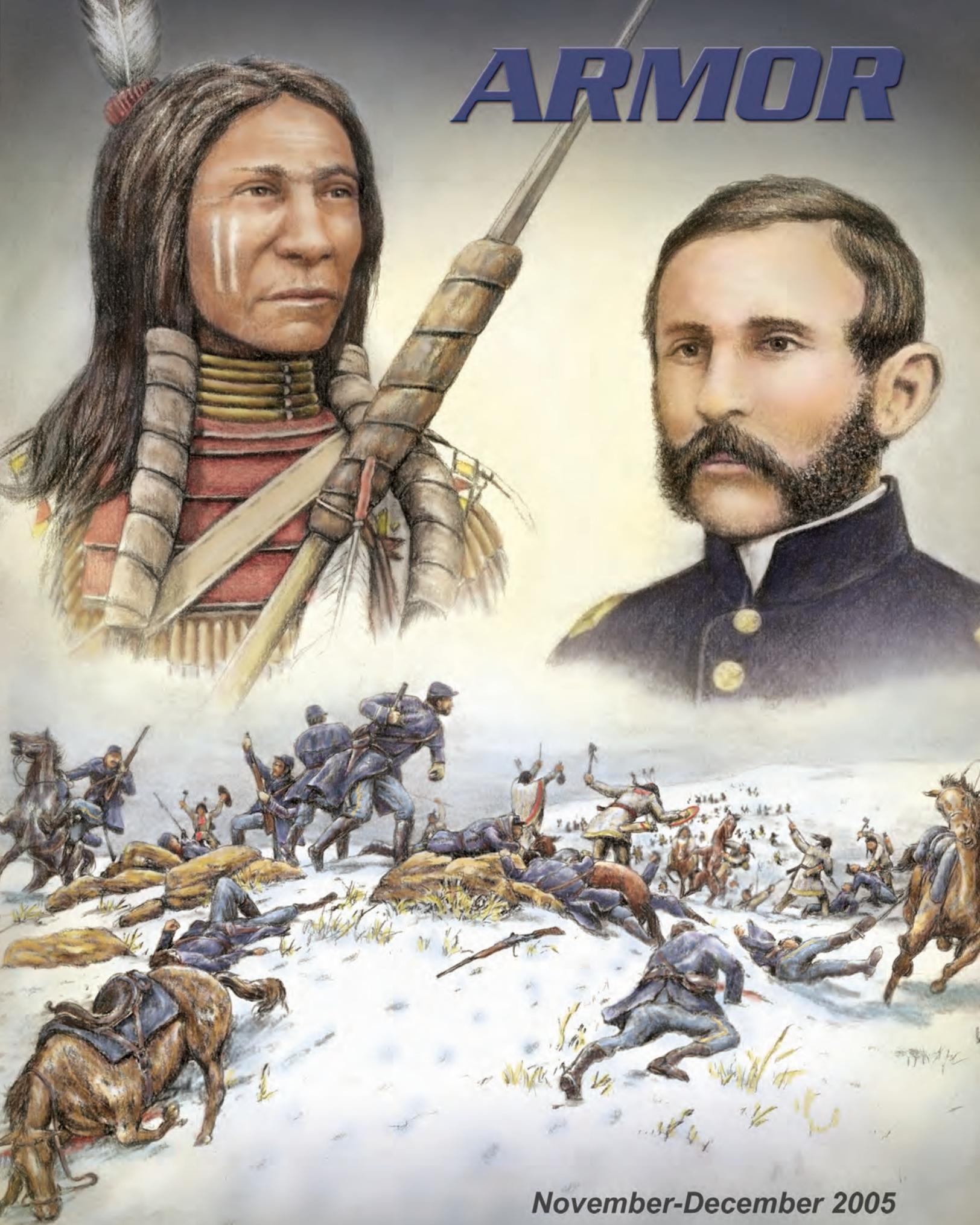


ARMOR



November-December 2005

ARMOR

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“From My Position...”

Since my arrival at Fort Knox this past August, more than a few people have asked me what I will be doing while stationed here. Once I tell them that I am the newest editor-in-chief of *ARMOR* magazine, the ensuing conversation invariably follows a similar pattern.

“Oh wow,” they usually say, “that’s really great!” “Do you have any public affairs experience?”

“Well. . . uh. . . no,” I reply, “actually I served for two-and-one-half years as an operations research analyst a few years back.”

Looking puzzled, my new acquaintance will generally follow up with something like, “Oh really. . . in that case, did you major in English at school?”

Again, my reply, “Well . . . no, actually my major was mechanical engineering,” isn’t quite what they expect.

At this point in the conversation, and with the experience of similarly constructed previous encounters, I have learned to detect the growing uneasiness in the questioner’s voice. I’d be willing to bet that most of them worry about the future of the magazine given the fact that it is now in the hands of a number cruncher.

I’ve found that the best response to this unease is simply to reassure them with something like, “Oh, but don’t worry, my father was the Bureau Chief for McGraw-Hill World News for many years in both Houston and Tokyo!” That statement usually puts them at ease enough to change the subject to something a little less awkward like golf or the status of my household goods shipment.

More seriously, although there is seemingly little in my background to indicate that I might be suited for this job, I am both humbled and honored to have been chosen to serve as the 41st editor-in-chief of a professional journal that is now more than 117 years old. LTC David Manning, the previous editor, left me with a smoothly running and highly effective team and I can promise that I’ll do my best to make sure that the commanding general placed his trust in me for good reason.

Given the fact that we are an Army at war and will be engaged in combat operations for the foreseeable future, I strongly believe that *ARMOR* magazine’s primary reason for being is to support those who are doing the fighting. I see it as the vital link between practical experience and doctrine. Unlike just a few years ago,

when most of us talked about combat in distant and purely theoretical terms, most of the force has now experienced combat up close and has been profoundly changed by its reality. The Armor force as we knew it in the spring of 2003 no longer exists. With a few notable exceptions, mounted soldiers are performing their missions in ways most of us never envisioned while in training at Fort Knox, the National Training Center, or during Warfighter exercises at Fort Hood. Unfortunately, many of the lessons the force has had to learn over the past two years have come to us through brutally harsh experience. Now more than ever, *ARMOR* must be the driving force in capturing those lessons so that soldiers currently engaged will profit from them.

For most of my time as a mounted soldier, irregular warfare was something rarely discussed. Given our focus on high-intensity warfare, there didn’t seem to be much time for it. If we had looked to our history a bit more closely, however, we would have realized that in its 230-year history, the U.S. Army has fought a peer opponent during only about 25 of them. During the rest of that time, the Army has fought some type of insurgency of one form or another between relatively short periods of peace. When the first issue of *The Cavalry Journal* was published in 1888, the U.S. Army was coming to the end of a period of irregular warfare that had lasted for more than 100 years. Based on this rough analysis, therefore, it would seem that rather than being the exception, irregular warfare has been the rule. If ever there were a time to move out of our comfort zones to study previously unfamiliar subjects, that time is now. In fulfilling its educational role, *ARMOR* will continue to welcome opportunities to publish perspectives on irregular warfare taken either from our historical experiences or those of our allies.

In closing, I’d like to take this opportunity to make a special appeal to the force for articles. Tankers and cavalrymen are busier now than they have been since the Vietnam War. Although writing articles takes precious time away from other seemingly more important duties, it is nevertheless time well spent. In fact, I would argue that we are too busy not to write for *ARMOR*. When you write for *ARMOR*, you write for yourself by capturing the most important lessons from your experiences; you write for others by sharing those experiences. By performing this simple act of discipline, you will serve to educate others and improve the combat effectiveness of the force.

S.E. LEE

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Spirited or an Uncaring Article?

Dear *ARMOR*,

The article in the September-October issue of *ARMOR* by Colonel Timothy Reese and Aubrey Henley was provocative to say the least. I wrote an article, "Combatant Arms vs. Combined Arms," in the January-February 1997 edition of *ARMOR* (page 13), in which I stated, "One movement in the direction of change would be the creation of a combined arms officer designation for the Mounted Force rather than the traditional infantry, armor, and field artillery option." Adding, "modernization efforts depend on identifying the vulnerabilities and deficiencies of the past and present, and then making adjustments and corrections as the Army moves to information-age technology and Force XXI." At the time, I was questioning the traditional decentralization of the combat arms, believing it was not suitable for a modern modular combined arms force in a technologically driven army. It raised no interest or a spirited debate. No doubt, the Reese-Henley article will again raise the issue of realigning the combat arms branches. Hopefully, it will get conversations going about the realignment before irrational decisions are made.

The unconcerned aspect of the article was in reference to moving the Patton Museum of Cavalry and Armor. No consideration was given to the psychological impact it would have on thousands of veterans from the "Greatest Generation." These veterans are dying by the dozen daily. What is their legacy? Located next to the Patton Museum are over a hundred memorials to individual armored units that were deployed in World War II. In addition, at the entrance of the museum are hundreds of bricks donated by loved ones to commemorate armored and cavalry veterans.

As a historian, I make frequent visits to the museum, and for decades, I have enjoyed watching veterans who so proudly point to their memorials and explain the fighting vehicles they served on during the war. Their grandchildren always listen in awe to what grandpa accomplished in service to his country and family. "I served with General Patton" is a frequent aging veteran's proud comment. They were mounted warriors as were all of us who carried on their tradition as we began our military careers at Fort Knox. The museum and General Patton are a legacy for us and for future generations. To move it does not make sense, not only to veterans, but also to taxpayers. It would take millions of dollars and an enormous amount of time and manpower to move the museum. Do the civilian bureaucrats at TRADOC understand this? In the process, it will destroy the historical significance of the Patton Museum at Fort Knox, where late in 1931, Colonel Daniel Van Voorhis, Lieutenant Colonel Adna R. Chaffee, and Major Robert W. Grow set seeds that germinated into one of the most effective fighting forces in the European Theater — the armored force. Since then, the Patton Museum has become a monument to all who served. To drastically move monuments and a museum usually ends up diluting the origi-

nal intent and undermining the historical heritage. This is not change or innovation.

GEORGE F. HOFMANN, Ph.D.
History Professor
University of Cincinnati

Today's Armor Force Will Always Be the Combined Arms Maneuver Force of Decision

Dear *ARMOR*,

In their article, "A Modest Proposal to Do Away With the Armor Branch," in the September-October 2005 issue of *ARMOR*, Colonel Timothy Reese and Aubrey Henley are quite on target concerning the dichotomy of light versus mounted warfare. Their specific solutions are arguable, but well worth consideration. I wish to add a few comments to flesh out the issue. I believe that a quick review of the historic evolution of our organizations and their missions may be useful.

Prior to motorization and mechanization, infantry and cavalry had no dedicated reconnaissance and security capability. Infantry units sent out patrols, skirmishers, and pickets, as the situation warranted. Horse cavalry used mobility to range farther ahead and thereby provided security and reconnaissance for itself, infantry, and other units. The challenge was to determine at what level to assign cavalry without frittering away its massed capability. Experience led to consolidating cavalry at increasingly higher echelons. At Gettysburg and beyond, Union cavalry was employed as a corps operating under Army command.

During World War I, U.S. horse cavalry had practically no role. During extended trench warfare, infantry continued patrolling, but also expanded intelligence capability down to battalion level with a detachment of an officer and 28 enlisted men, comprising scouts, observers, and two chief snipers. The scouts accompanied patrols and raids behind enemy lines. The observers established observation posts and advanced them to suitable positions as troops moved forward. This was the historic but indirect antecedent to the battalion scout platoon and why they remain under the S2 rather than S3. [Interestingly, while the infantry regiment also had an intelligence section of one officer and eight observers, the brigade had no such capability. Sound familiar?]

As technology advanced, the Army experimented with motorization (soft-skinned transport vehicles) and mechanization (armor-protected combat vehicles). Infantry focused on machine-gun carrying infantry-supporting tanks and motorized infantry, while the cavalry focused on long-range and high-speed motor cars and armored cars. Eventually, there was some overlap between infantry light tanks and cavalry scout cars, but the driving consideration for both was the exceedingly high cost, low speed, and poor endurance and reliability of heavy tanks. Concurrently, all arms and services relied more and more on motor vehicles for transportation and supply.

The Army established its Experimental Mechanized Force in 1928. A true combined arms unit, it was dissolved in 1931, and all branches continued separate experimentation in motorization and mechanization.

Armor never replaced cavalry; it evolved into a combined arms force and only later absorbed cavalry.

In 1938, the 7th Cavalry Brigade (Mechanized) comprised two cavalry regiments (battalion sized), a howitzer battery, an observation squadron, and ordnance company. Once the 6th Infantry (Motorized) Regiment was added for the 1940 Louisiana Maneuvers, the 7th became a prototypical armored division. The armored force was then created in July 1940. The 7th Cavalry became the nucleus for the 1st Armored Division and the Infantry's Provisional Tank Brigade became the nucleus for the 2d Armored Division. The 70th Tank Battalion (M3 Light) was the first independent tank battalion intended for general support.

Throughout World War II, cavalry (now mechanized) retained its independence as a branch organization and remained the proponent for reconnaissance. Infantry divisions had a cavalry reconnaissance troop; armored divisions had a mechanized cavalry reconnaissance squadron or an armored reconnaissance battalion. Corps (and Army) had mechanized cavalry reconnaissance squadrons and groups, the antecedents of the armored cavalry squadrons and regiments. Starting light with Jeeps and armored scout cars, cavalry quickly evolved into heavier forces with armored cars, light tanks, and assault guns (75mm howitzers). The cavalry branch was finally disbanded and its role, history, and traditions officially merged into armor by Congress' passage of The Army Reorganization Act of 1950.

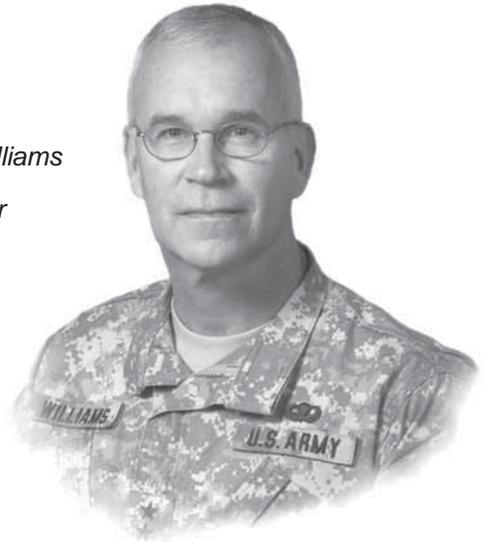
Throughout World War II, infantry battalions did not even have battalion scouts. Tank battalions and mechanized infantry battalions both had identical scout platoons, but they were not organized and equipped as the much heavier mechanized cavalry platoons of troops and squadrons. Jeep-mounted with a single armored half-track for backup, these highly mobile platoons were more suited for liaison, route recon, and traffic control rather than "scouting" as we think of it today.

Battalion scouts remain a doctrinal anomaly. A common battalion scout organization is probably irresolvable given the difference between armor/mechanized and light infantry. Motorized scouts are too vulnerable to operate forward of their parent tank and mechanized battalions. If mechanized, they are little different from equivalent mechanized infantry and are somewhat redundant. Further, light infantry habitually employ motorized scouts (and even motorized cavalry troops) as though they were armored and mechanized units, which is clearly suicidal.

So where does this lead? Simply follow history and most doctrinal proponent solutions are plain.

Continued on Page 41

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



The Armor Force Is Ready to Face the Challenge of Change

ARMOR welcomes Major General Robert M. Williams as the Commanding General, U.S. Army Armor Center, and bids a fond farewell to Major General Terry Tucker — Godspeed.

I began my career as an officer at Fort Knox, Kentucky, and now, more than 30 years later, I am honored to return to Fort Knox as the 41st Chief of Armor. I can think of no finer opportunity for a tanker than to be asked to be the Chief of Armor. The chance to lead a branch with such fine tradition and lineage as Armor is truly a privilege.

Much has changed since I first arrived at Fort Knox in September of 1974. We have seen the 194th Separate Armor Brigade case its colors. We have fielded the Abrams tank, the Bradley Fighting Vehicle, and now the Stryker. We have seen innumerable changes to our training techniques and organizations, and now we share our post with the Recruiting Command and other partners from across the Army. The truth is that Fort Knox and the Armor Center have been at the forefront of change for the past thirty years.

As I take command, I am acutely aware that we are at a time of major change for our Army, our branch, and for Fort Knox. Foremost in many people's minds are the upcoming changes associated with the base realignment and closures (BRAC)

recommendations. Specifically, many are concerned with the pending move of the Armor Center and School to Fort Benning, Georgia, to create a Maneuver Center of Excellence. In addition to the BRAC changes, the Army is undergoing one of its most significant organizational changes in the past 50 years. Furthermore, all of the changes are occurring while our nation continues to be engaged in combat operations in Iraq and Afghanistan.

In the midst of all these changes, I want to make my priorities clear. Our first priority at Fort Knox is, and will remain, support for the Global War on Terror. We, at Fort Knox, will continue to support the war in many ways. First, we will continue to produce the best trained and ready Soldiers, noncommissioned officers, and officers to man our Army. We will also continue to interact with the operational force to ensure combat developments, evolving doctrine, and tactics, techniques, and procedures meet their needs. Second, we must continue to take care of our Soldiers, families, and civilian workforce. The Army is about people; we can never forget that. Finally, we will support the President's plan under the BRAC process. We have a unique challenge at Fort Knox, in that we are both gaining and losing organizations simultaneously. However, we cannot allow our training mission to suffer, nor place unreasonable burdens on

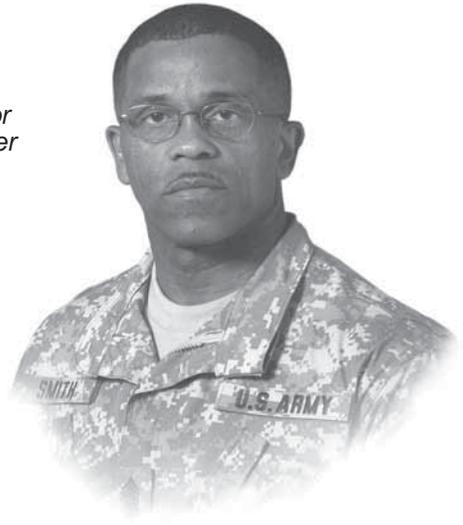
our Soldiers, families, and civilians during this process. I promise all of you that I am committed to ensuring that no organization moves until the gaining installation is ready. Simply put, no unit will leave here for Fort Benning or any other installation until I am satisfied that the proper facilities are in place. On that same note, I will ensure that Fort Knox provides all of our gaining units with the proper facilities they require.

Change for any great institution is difficult at first, and this one will require our collective best efforts. However, the great work of my predecessor, Major General Terry Tucker, has made it much easier. MG Tucker not only left me a good outfit, he ensured that I had as smooth a transition as possible. He leaves a great legacy. The Armor force will bear the fruits of his work for years to come. I look forward to picking up where he left off and leading the change that is necessary for the Armor force of the future. Thank you, MG Tucker, and best of luck to you in retirement.

Despite the many changes and challenges facing the mounted force in the next few years, I remain confident that we are up to the challenge. Our Army's tankers and scouts will be ready to meet our nation's call anywhere, anytime.

FORGE THE THUNDERBOLT!

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



Transforming Armor Soldiers

It is a great honor to be selected as the U.S. Army Armor Center and Fort Knox Command Sergeant Major. I would like to thank the Soldiers, peers, and leaders who trained, developed, and guided me throughout my career. I look forward to working with all of our great armor and cavalry troopers and leaders. Together, we will continue the long-standing traditions and honors of the armor and cavalry forces.

The first prerequisite is ensuring today's armor and cavalry Soldiers are well trained and effective in the current operating environment. Soldier skills continuously evolve to meet the demands of a highly versatile battlefield. At Fort Knox, the Armor School realizes that Soldiers and noncommissioned officers (NCOs) are the decisive instrument that combines many tools of war to defeat our enemy in any environment. We must prepare the armor and cavalry forces for the future.

As the armor force transforms to modularity, our NCOs must produce well-trained, fit, and motivated Soldiers, troopers, and crewmen. To accomplish this, we must have uncompromising discipline and integrity — discipline and tough training best ensures the welfare of our Soldiers. This is what we, as NCOs, must instill in ourselves and in our subordinates. Our most critical task is to follow up and check our subordinates to ensure the mission is accomplished — never give a mission without checking the progress or end result.

Creating a modular Army is a big challenge — restructuring and building a more responsive force with joint capabilities, removed from the “Cold War” structure, yet retaining the ability to fight the Global War on Terrorism. This is merely getting the right combination of capabilities to support our nation. The modular brigade-based force will increase unit cohesion, stability, and provide predictability for Soldiers and their families.

Today, our career management field (CMF) is comprised of approximately 64

percent armor; however, with armor/cavalry transformation, our CMF will consist of more reconnaissance (50 to 69 percent) by FY07. This growth in reconnaissance means some of our 19K Soldiers and NCOs will conduct reclassification training to become 19D. The new brigade-based units will have a large increase in 19D authorization (approximately 3,000) over the next 3 years, and at the same time, CMF 19 will decrease in 19K authorizations (to approximately 1,200).

Conducting reclassification of 19K Soldiers allows our CMF to strengthen the 19D mid-grade NCO inventory. Reclassification training will reduce the over-strength of 19K NCOs, thus allowing CMF 19 to sustain 19K mid-grade NCO promotions. Soldiers and NCOs familiar with armor/cavalry operations will have the opportunity to remain in the armor branch, if they so chose. Finally, it reduces demands on the U.S. Army Recruiting Command's new Soldier recruiting, which means Armor has fewer NCOs detailed to recruiting missions.

The Armor School and Fort Knox have restructured the reclassification training time for Soldiers in skill levels 1 and 2, and the course has been reduced from nine-weeks (as an AIT insert) to a five-week stand-alone course. There are five courses scheduled to start in FY06.

The Armor School has also developed a five-week reclassification course for NCOs. This course is designed for staff sergeants (SSG) and eligible sergeants first class (SFC) to reclassify to military occupational specialty (MOS) 19D. To attend the NCO reclassification course, all perspective attendees in the grades of SSG and SFC will require a grade waiver from the Office, Chief of Armor. The target audience of the NCO reclassification course is SSG (and in some cases SFC), with fewer years in both time in service/time in grade, which will permit these Soldiers to grow and remain competitive in a new MOS. There are no specific time-in-service/time-in-grade requirements for

NCOs to request and qualify for reclassification training.

The following are the prerequisites for cavalry scouts:

- PULHES: 111121.
 - Normal red/green (RG) perception is required.
 - Physical demand rating: *Very Heavy*.
 - Active or Reserve Component must be qualified in an MOS other than 19D.
 - Must be in the grade of E2 through E7 and have not previously completed 19D producing course.
 - Correctable vision of 20/20 in one eye and 20/10 in the other eye.
 - Minimum score of 90 in aptitude area CO (ASVAB) tests prior to 2 Jan 02.
 - Minimum score of 87 in aptitude area CO (ASVAB) tests after 2 Jan 02.
 - Formal training (completion of MOS 19D course conducted under the auspices of the U.S. Army Armor School) is mandatory.
- The focus of the 19D reclassification training program:
- Unit-by-unit reclassification during the unit “reset.”
 - Projected 100 out of 500 total SSGs will be reclassified in FY06.
 - Armor Branch is working to institute the bonus extension and retraining (BEAR) program.
 - Goal is to fill maximum training seats with volunteers.
 - Build/maintain the NCO inventory for CMF 19.

Continued on Page 41

From the Boresight Line:

Continuing Evolution of the M1A1 Abrams: Embedded Diagnostics

by Sergeant First Class David Topaz

The Abrams Main Battle Tank, conceived in the 1970s, fielded in the 1980s, and blooded in the 1990s, will continue to be a mainstay of the U.S. Army's armored force well into the 21st century. While the M1A2 systems enhancement program (SEP) offers the state-of-the-art technology available to today's armored community, the cost per unit prevents the Army from transitioning the force, in its entirety, to the SEP design. Under the Abrams integrated management (AIM) program, the M1A1 AIM tank introduced several improvements, which provided the tank some of the same capabilities as those of the M1A2 SEP. The M1A1 AIM program added Force XXI Battle Command, Brigade and Below (FBCB2) digital communications, the digital electronic control unit (DECU), the pulse jet system, and redesign of the turret and hull network boxes (RTNB/RHNB). The next evolution of the M1A1 tank will incorporate embedded diagnostics (ED) into the M1A1 AIM tank.

The future force is currently conceived to be composed of about two-thirds M1A2 SEPs, balanced by one-third M1A1 AIM EDs. To ensure our master gunners are familiar with this emerging technology, the M1A1 Master Gunner Course at Fort Knox is preparing to add training on embedded diagnostics to its program of instruction.

The M1A2 program introduced diagnostics that were embedded into the tank's computerized systems as a solution to the problem of the impracticality of simplified test equipment/M1-fighting vehicle systems (STE/M1-FVS) test equipment, which was bulky and cumbersome. To make maintenance operations on the M1A1 more efficient, embedded diagnostic systems were designed for the tank. The heart of the embedded diagnostic system for the M1A1 AIM ED is the Sidecar™ module. Small enough to fit in your hand, these miniaturized electronic measurement devices are strategically mounted in the hull and turret, and are located close to the line replaceable units (LRUs)



they are monitoring. They monitor LRU test point signals and pass this information to the host processor in the RTNB. All external sidecar modules are identical and interchangeable, which enhances efficiency of replacement. Sidecars become "unique" within the system by attaching to LRUs via unique personality cables, which either attach to test jacks (on LRUs which have them) or to the LRU via an "in-line" personality cable. The sidecars then are networked via controller area network bus cables. Bottom line: the RTNB digital display reports to the crew all fault messages generated by built-in tests in the ED system and diagnostic fault codes related to either tank system failures or ED system failures. This simplifies the tank mechanic's job from the onset — he is directed to the fault to troubleshoot by the ED system.

The complete system includes the maintenance support device (MSD), which is a tactically hardened laptop computer that allows the mechanic (or master gunner) to isolate faults identified within the ED system. The MSD has the Abrams full diagnostic program installed, which incorporates interactive electronic technical manuals (IETMs) to assist the mechanic in isolating faults on the tank, and provides the ability to conduct standard system tests such as the 1800 test (computer and stabilization test).

The key advantage of the MSD over STE/M1-FVS is that most troubleshooting procedures only require the MSD and a multimeter, as opposed to the STE's

multiple bulky boxes of equipment. The MSD is capable of diagnosing a malfunction by fault code (generated by the host processor in the RTNB) or by an identifiable symptom detected by the crew or mechanic. The IETMs walk the mechanic through a fault-isolation procedure much the same way hard-copy technical manuals walk a mechanic through a fault-isolation flowchart. When running the 1800 test, the only interface with the tank required is through the RTNB, as opposed to the STE system's "octopus cable," which has to be connected to multiple components to conduct the test. The bottom line: the test equipment truly has been simplified.

Our experimentation at Master Gunner Branch produced relevant data to the ED system. We found that the most efficient way to employ the system is to diagnose a fault-by-fault symptom (one of the options in the full-diagnostics program). When diagnosing by fault code, the embedded diagnostic system-generated fault code provides equally accurate results, but requires testing far more components and wiring harnesses. For efficiency, this would seem to indicate that troubleshooting by ED fault code should be done only if no specific fault symptoms can be identified. There is much to learn, and the Master Gunner Branch stands ready to prepare the armor force for its future!

Further information is available through the (AKO) Master Gunner Knowledge Network or through DRS Technologies POC: jcarruthers@drs-tem.com.

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

by John P.J. DeRosa

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 M1113, 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-



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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.

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Tankers Without Tanks in Tuz:

A National Guard Unit Experiences Full-Spectrum Operations

by First Lieutenant Barry A. Naum

The U.S. Army is losing the information war in Iraq. At home, the general civilian perception of the war is one of cable news networks' scrolling tickers relating the latest casualties suffered by soldiers, Marines, and Iraqi civilians; or it is one of images of thick black clouds of smoke following the most recent improvised explosive device (IED) or vehicle borne IED (VBIED) attack in Baghdad. The public depth of actual knowledge usually, and unfortunately, ends there. This prevailing and incomplete understanding of the war is tangible and readily accessible to those who have deployed and subsequently returned from Iraq as members of the U.S. Army National Guard. It is also ill-informed at best and simply false at worst.

One advantage deployed National Guard soldiers have is their dual nature as citizen soldiers. Clearly, as soldiers they have had the privilege of deploying to combat zones and now possess the perception of those who have served in Iraq. As citizens (or more accurately, civilians), they have access to the natural perception of the war as is fed to the civilian community at large, as they overwhelmingly live and work on a daily basis with those who have not served.

Certainly, IEDs and casualties are a very real part of the everyday experience of those who live and work in Iraq; but to the majority of those who have deployed with the National Guard, these topics present a severely limited view of what they experience and accomplish during deployments. The information provided to (or withheld from) the American public presents a situation in Iraq limited primarily to offensive and defensive combat operations. The reality known within the Army community is that Iraq is the textbook example of "full-spectrum operations." Within full-spectrum operations, National Guard Soldiers — along with their active duty brothers and sisters — have been called to accomplish missions well outside of their military occupational specialties and training.

Friendly Forces

The 30th Heavy Separate Brigade (North Carolina Army National Guard) was activated for service in Operation Iraqi Freedom II in October 2003 as the first National Guard heavy brigade to be deployed to combat since World War II. A number of other states, including Ohio, offered units to augment and/or complete

the brigade's personnel requirements. The brigade, known as "Old Hickory" deployed to eastern Iraq (Diyala Province) in March 2004 as part of the 1st Infantry Division.

Initially deployed to Forward Operating Base (FOB) Wyatt/Carpenter on the Iranian border in Khanequin, the 30th Brigade's separate cavalry troop, Troop E, 196th Cavalry, was quickly relocated to FOB Bernstein in Tuz and attached to Task Force (TF) 1st Battalion, 14th (1-14) Infantry, 2d Brigade, 25th Infantry Division, by early April 2004. By June 2004, TF 1-14 Infantry relocated to Kirkuk and the 196th Cavalry remained at FOB Bernstein as an element of TF 1st Battalion, 120th (1-120) Infantry, together with the battalion headquarters and one mechanized infantry company from 1-120 Infantry, 30th Brigade Combat Team (BCT).

The 196th Cavalry received 28 soldiers from 1st Battalion, 107th (1-107) Armor, Ohio Army National Guard. We completed the cavalry troop's ranks by providing a complete tank platoon (4th Platoon) and 12 cavalry scouts to augment the troop's existing scout platoons. Although the 1-120th Infantry deployed to

Iraq with its Bradley fighting vehicles (BFVs), the 196th Cavalry was mobilized and deployed without the benefit of BFVs or tanks. However, through five hard months of training at Fort Stewart, Georgia, the cavalry troopers began to gain confidence in their ability to accomplish the mission without armor, and quickly learned to effectively and efficiently operate as most soldiers in Iraq have — as Humvee scouts or motorized infantry.

Our initial arrival in Tuz was on request from TF 1-14 Infantry for a unit to assume responsibilities in the area of operations (AO) while the TF conducted offensive operations in an-Najaf. For the better part of April, 196th Cavalry troopers proudly and painfully conducted combat operations and stability and reconstruction operations. The unit also took its first casualties as the only coalition presence in the approximate 300-350 square-kilometer battalion-sized AO surrounding Tuz. For the first two weeks, the unit accomplished the mission with only a handful of vehicles — having received only eight or nine non-mission capable M1114s. At the time TF 1-120th Infantry took control of the AO, the 196th Cavalry had an incomplete complement of 14 M1114s, but eventually gained a total of 18 to 20 (miraculously maintained by a phenomenal maintenance section and re-

sourceful operators), which proved to be sufficient (if not ideal) to accomplish its mission.

The troop maintained its organic platoon composition, with each scout platoon operating six M1114s and each tank platoon operating three M1114s. In addition to having primary responsibility for the area surrounding Tuz, each platoon was assigned its own area of responsibility in the sectors immediately surrounding the FOB, with each platoon responsible for combat patrols and stability operations in and around as many as 18 separate villages. To assist the unit with its AO, troop leaders developed strong working relationships with the Special Forces team located in Tuz. This relationship proved invaluable to both the cavalry troop and the Special Forces team in accomplishing individual and collective combat and stability operations.

Terrain

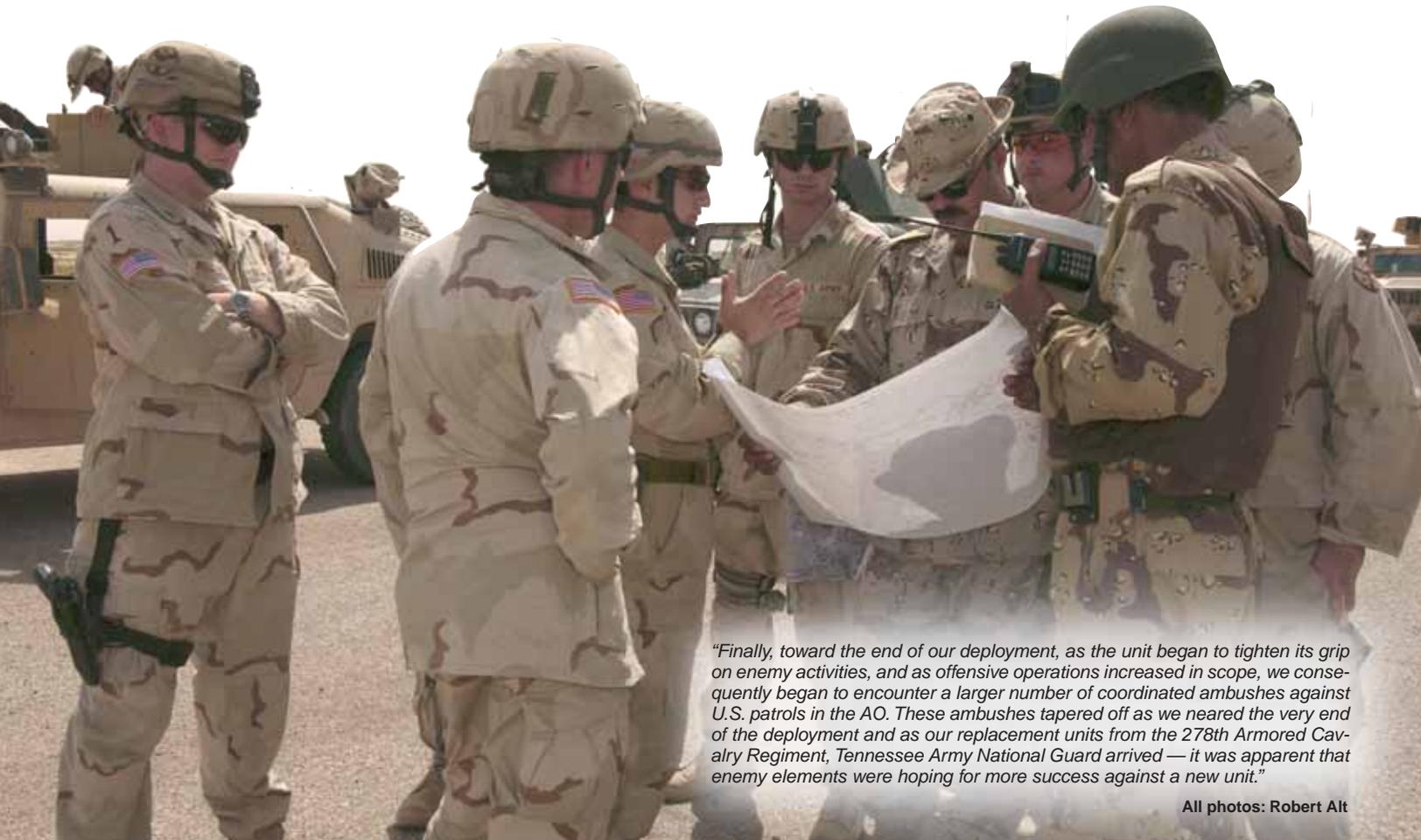
The city of Tuz is strategically located at the confluence of principle arteries, which connect Baghdad to the northern cities and outlying areas of Kirkuk and Tikrit. Along the main highways, one can generally expect a 45-minute to one-hour drive north from Tuz to Kirkuk, and an identical trip west to Tikrit. Because of this important and equidistant location,

Tuz has the fairly unique distinction of natural and manmade symmetry.

The main east-west highway connecting Tuz to Tikrit — known as Route Lime to soldiers stationed at FOB Bernstein — provides a physical demarcation in the immediate area of the “Green Line,” which separates the Iraqi Kurdish population from the Iraqi Arab population. FOB Bernstein, located just a few kilometers north of Route Lime, provides an even more accurate delineation. The south gate opens to the Arab world, while the north gate opens to the Kurdish. The city of Tuz is likewise an ethnically symmetrical city of 60,000 to 80,000 citizens, composed of a population that is approximately 50 percent Kurdish (in the northern section), 25 percent Arab (in the southwestern section), and 25 percent Turkman (in the southeastern section). The numerous surrounding villages likewise mimic this ethnic composition, with Kurdish populations dominating in the north and exclusively Arab or Turkman settlements in the south.

Enemy Forces

In terms of enemy forces and enemy contact, Iraq is a theater of extremes. On one end of the spectrum are cities such as Fallujah, Najaf, and certain parts of Baghdad that merit the vast majority of



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media attention because of the frequency and severity of violence. On the other end of the spectrum are those places seldom, if ever, mentioned due to their lack of newsworthiness — cities such as Sulaymaniya and a thousand other locations known to soldiers but unheard of to civilians. Somewhere in the middle is another thousand places, such as Mosul, which is closer on the spectrum toward Fallujah, and others, such as Tuz, more closely resembling Sulaymaniya.

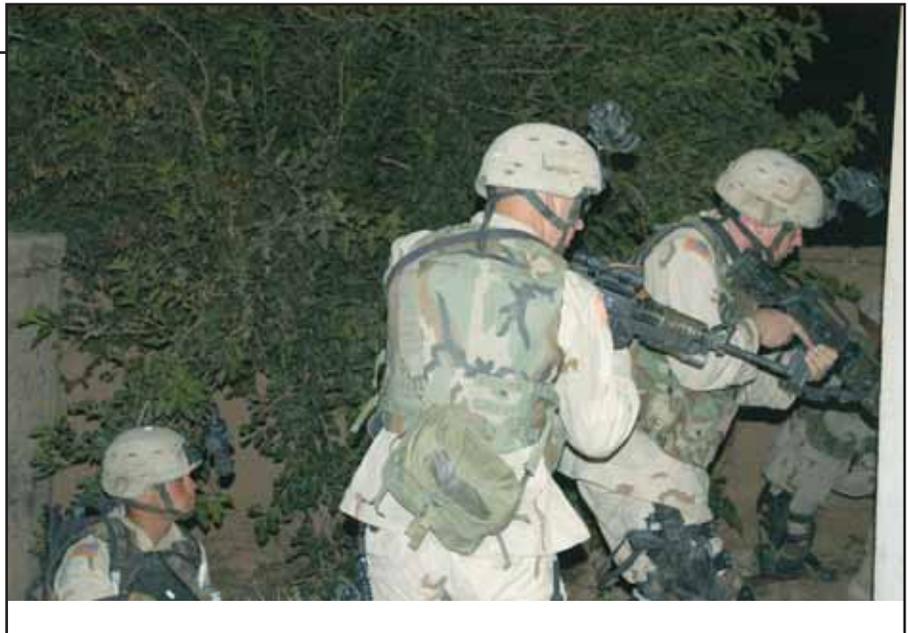
Like so many places secured by coalition FOBs, Tuz had its own “IED Alley,” which is an approximate seven-kilometer span of Route Lime that connects FOB Bernstein to the city. The FOB has also experienced its share of indirect fire attacks in the form of Katyushka rockets, all of which were fortunately ineffective. As such, there was clearly a very real enemy insurgent presence in the area. The nature of this enemy presence, however, was never entirely clear. In the course of the deployment, we did encounter the rare “bona fide” insurgent (possessing terrorist organization-linked documents and training); however, coalition forces in Tuz more frequently encountered the typical “opportunist” insurgent (the ubiquitous unemployed military-aged male who, for various reasons, ranging from personal ideology and angst to the hope of financial gain, chose a violent course of action in opposition to coalition efforts).

The primary, and most dangerous, enemy presence within the AO, however, took the form of banditry along main highways, primarily targeting civilian traffic and the Iraqi national forces responsible for curbing their activities. Rarely did these enemy forces risk contact with U.S. soldiers; however, they would not hesitate to engage in firefights if and when they were confronted or cornered by a U.S. patrol.

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Combat Operations

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cent sheer terror. In the context of operations in the Tuz AO, war was 98 percent stability and reconstruction operations, punctuated by 2 percent combat. Although each platoon assigned to patrol duty was responsible for conducting a minimum of two combat patrols each day, very few of these patrols actually resulted in combat or contact with enemy forces. It is worth noting, however, that the 196th Cavalry conducted numerous other combat operations, primarily cordon and search missions — each month. Additionally, it was common for our patrols to respond to attacks against Iraqi Police or Iraqi National Guard (ING) checkpoints or patrols.

Stability Operations

On arrival in Tuz, each platoon began work immediately in collecting information and submitting project requests to improve the quality of life of the surrounding population. These “sweat” projects became the primary means by which the unit established relationships with the local population and transmitted information operations (IO) themes of the shared responsibility between coalition forces and local communities for providing and maintaining security and stability. Once it became evident that U.S. forces were concerned with the well-being and prosperity of the Iraqi people, it likewise became much easier to gain the support of those often skeptical of our motives.

Altogether, through the course of countless combat patrols and “leader engage-

ments,” the 196th Cavalry helped establish a working city council in Tuz, coordinated and administered a neighborhood council of area Mukhtars and Sheiks from local villages of all three ethnicities, completed or submitted over \$1 million in public works projects, and facilitated the training of the local ING battalions and Iraqi Police units.

Of the many important stability operations conducted within the AO, perhaps the most vital mission conducted, in terms of long-term effects, was training and developing the Iraqi security forces. Included in each platoon’s weekly patrol schedule was a requirement to conduct a joint patrol with a platoon from the ING. During periods of particular violence against Iraqi security forces, each platoon had an additional requirement to assist with 24-hour security at the permanent ING checkpoint on the Tuz-Tikrit highway and at the joint command center downtown Tuz.

As the months of the unit’s deployment advanced, so did the professionalism and proficiency of the ING soldiers. We detailed one noncommissioned officer (NCO) from each platoon as a permanent ING trainer to direct training management, assist with operational planning of the ING companies, and coordinate the ING’s presence during joint cordon and search operations with the task force maneuver company. On a few occasions, these NCOs fought alongside their ING wards in firefights, which immeasurably assisted with developing an internal es-

prit de corps, as well as a sense of brotherhood with their U.S. counterparts.

Throughout stability operations in the Tuz area, the 196th Cavalry met with eager cooperation from the local populace. Initially, this was primarily confined to Kurdish sentiment; but over time — as we developed good will and relationships with leaders of all three ethnicities — this cooperation was seen from Arab and Turkman leaders as well. Although there was certainly a palpable antagonism in the region, evidenced by increasing hostility in a few isolated villages, the vast majority of the civilians in the area wanted U.S. forces to be successful and willingly assisted in our efforts — if for no other reason than the hope of our eventual departure from their country. Without minimizing the real dangers and belligerence experienced throughout Iraq, this general cooperation and goodwill from the Iraqi people is unfortunately one of the best-kept secrets of the war in Iraq.

Ethnic Tension

The most difficult and persistent challenge facing the 196th Cavalry in general, and 4th Platoon in particular, was the long-festering ethnic tension between the three ethnicities in and around Tuz. Centuries-old ethnic troubles and prejudices — often resulting in violence — are continually evident in daily life throughout the region. An utter lack of trust and latent hatred of each other is a prevalent

attitude shared by nearly every civilian, regardless of ethnicity.

Because of the city's strategic location between Tikrit and Kirkuk, the former regime had an active role in perpetuating these problems and sentiments through the Arabization programs of the past three decades. Within ten kilometers of the north gate of FOB Bernstein, in 4th Platoon's area of responsibility, are the remains of at least five Kurdish villages destroyed by the Iraqi government under Saddam Hussein. Hundreds of such villages, often accompanied by mass graveyards, are found throughout the region surrounding the city.

The primary catalyst for current ethnic tensions in the area is the unavoidable relocation and rebuilding of these hundreds of Kurdish settlements. As these people return to their former homes, there are naturally increased threats and incidents of violence against the Arab communities who have resided on and used the land for two or three decades. The challenge facing the cavalry troopers was to find or create a delicate balance whereby these two opposing groups could live together in peace and security.

Fundamental to this issue was the problem of deciphering the claims of each group to determine, if possible, who had the better claim or more truthful account of events. This was nearly impossible in every instance as the Kurdish people have honest and legitimate claims of persecu-

tion under the former regime, and the Arab people have legitimate claims under the laws of Iraq for the past 30 years. Further compounding the problem was the overwhelming expectation of both Kurdish and Arab leaders that U.S. forces would naturally act in favor of Kurdish interests as allies in the coalition that removed the Saddam regime. Through consistent application of public works projects and persistent visits and engagements with Arab (and Turkman) leaders, much benefit and progress was gained in convincing these men of the sincerity and genuine concern of the U.S. Army for the security and stability of all people in Iraq, regardless of ethnicity. Without establishing this dialogue, it would have been impossible to obtain further improvements.

Although much work was left to be completed by the end of our deployment, the 196th Cavalry secured and maintained a tentative peace in its area of responsibility. Joint meetings were held periodically and well-attended by leaders of opposing villages and tribes, which resulted in a provisional agreement that neither side would attempt to resolve matters independently before the fledgling Iraqi government had an opportunity to hear the claims and issue rulings.

Lessons Learned

The 196th Cavalry's presence in Tuz resulted in successful operations that undoubtedly contributed to the objective of security and stability in an around Tuz, as well as the entire theater of operations. This reflects a prevalent, though under-reported, success story that should be told from all parts of Iraq where the U.S. Army is conducting or has conducted operations. Still, there was a great deal left to be done in and around Tuz, and many lessons learned, both at the micro and macro levels, from hard experience, disappointment, success, and failure.

It should be noted that a great deal of the 196th Cavalry's success in Tuz was due in large measure to our status as National Guard soldiers — a characteristic that is all too often seen in the Army community as an impediment. Because National Guard soldiers are by nature civilians first and soldiers second, there was a distinction in our daily interaction with the people of Tuz that was vocally appreciated at every level. Without sacrificing security, the soldiers of the 30th BCT at FOB Bernstein seemed to be particularly suited to the often-nebulous work of patrolling among and interacting with civilians, and particularly suited to understanding and applying rules of engage-



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ment. Our deployment to Tuz ended without a single incident of either a U.S. soldier wounded or killed as a result of a breach of security, or of an innocent civilian killed or wounded as a result of an erroneous aggressive action or decision.

Our experiences in Iraq also demonstrated the particular abilities of National Guard units to succeed in a stability and support operations environment. Again, by its nature, the National Guard unit brings a wealth of experience in civilian fields that greatly assists the military mission. The 196th Cavalry had six construction contractors and subcontractors that inherently understood requirements and intricacies of completing contracts for public works projects. The law-enforcement experiences of a great number of soldiers in the troop ensured a willing and capable base of talent for training Iraqi security forces. The general automotive and industrial mechanic training of our scouts and tankers enabled a level of operator maintenance of the M1114 that was invaluable to sustained operations. Other diverse education and life experiences in fields, such as education, law, and medicine, further contributed to the success of the unit in the stability and support operations environment.

From an operational standpoint, we learned a difficult lesson in accurately conducting intelligence preparation of the battlefield when establishing unit boundaries. For the duration of the deployment, the task force boundary remained along geographical lines that seemingly made logical sense from a patrolling standpoint. Unfortunately, these geographical delineations did not adequately reflect the political realities of the region. Many of the villages in very close proximity to the city of Tuz did not belong to the Tuz city government. The former regime had re-districted many villages to ensure Arab adjudication of Kurdish villages and an influx of Arab villages within Kurdish-controlled regions. As such, ethnic tensions in the area often required coordination and leader engagements with the mayor and city council of nearby cities located outside the task force's AO. This reduced the effectiveness of submitting and getting approval of projects for these villages through task force means, as the TF worked closely and exclusively with the Tuz city council in identifying the primary needs of nearby villages.

From a big-picture perspective, our deployment to Iraq demonstrated a potential need to reconsider the National Guard's role in future conflicts, as well as how these units are trained and prepared for future combat roles. Throughout current



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operations in Iraq, National Guard soldiers have been deployed to perform functions far different from their military occupational specialties and the mission essential task lists of their units. This has not proven to be an insurmountable obstacle. How this fits into the future of the National Guard, and particularly the National Guard armor force, as it deploys in future conflicts is unknown.

Currently, National Guard armor forces prepare through the course of each training year for combat operations on their armor platforms. The reality of the contemporary operating environment (COE) may force active duty and National Guard units to re-examine time and resources required to complete training annually. If the reality of the COE determines that the National Guard will likely never deploy armor forces to combat in those roles, the painful decision should be made to restructure these forces to effectively and efficiently meet the needs of the Army in current and future environments.

Given the equipment and doctrine to train primarily as mounted M1114 scouts or motorized infantry specifically for stability operations, the National Guard can maximize its effectiveness and reduce the current financial strain on state and federal governments by training units for dual exclusive roles in the same training year. This will have the ancillary effect of eliminating much of the mental and emotional strain on families by reducing overall deployment time. This will also increase the deployment rate of units and

provide an overall value to the Army by decreasing the turn-around time required to train and retrain units to tasks that will not likely be performed.

Despite the dearth of information provided to the general American citizenry, the citizen troopers of the 196th Cavalry from North Carolina and Ohio, as well as the soldiers of countless other National Guard units from every other state have proven their ability to perform the unique requirements of combat and stability operations in the COE. If given the task and requirements of preparing for these environments as primary missions through each training year, the National Guard will not only be better at responding to domestic crises at home, but, as in the spirit of the Ohio National Guard motto, will be superbly positioned to "respond when called with ready units."



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The Role of the American Advisor

by Major O. Kent Strader

Advisors will play a key role in the future of a free Iraq. As such, the advisor must keep the mission firmly planted in his or her mind. Many years of advising and assisting the Iraqi National Guard remain ahead. The attitude of the advisor will live long after he or she departs the country.

The U.S. Army benefited greatly from foreign advisors who came to America during the Revolution to serve in the Continental Army. However, none contributed quite as significantly as Major General Baron Fredrick von Stuben. In actuality, von Stuben was a captain in the Prussian army, not a major general. Nonetheless, his contributions as General George Washington's Inspector General of the Army instilled discipline and professionalism into an army that previously lacked formalized training. His drill manual, taken from the Prussian army, was the backbone of the Continental Army throughout the Revolutionary War. As a benefactor of advisors, such as von Stuben, the U.S. Army has since undertaken the role of the advisor on numerous occasions throughout its long and illustrious history. State militias trained during the Civil War were benefactors of Regular Army noncommissioned and commissioned officer training prior to service in com-

bat. In our own backyard, South America stands as a classic example of the U.S. Army's role in advising and training. The emergence of Special Forces placed the onus of advising and training foreign troops on a specific branch. Vietnam stands as the most comprehensive example of Special Forces and conventional Army advisory capacity to train an indigenous force. Throughout the remainder of the 21st century, advisors will continue to train and assist armies throughout South America, Southeast Asia, and in the Middle East.

This article addresses the importance of advisors in the post 9/11 era. For democracy to come to the Middle East, the United States must remain engaged through military-to-military contact. This contact will come in the form of theater security cooperation programs, namely U.S. Army soldiers. Advising another country's Army is a difficult task, fraught with potential pitfalls and cultural faux pas. However, if properly trained, prepared, and indoctrinated, the advisor can literally be a force multiplier for the country team, the program manager, the combatant commander, the Department of Defense, and the United States. It is the ambassadorial attitude that is most important to inculcate into would-be advisors. Every ac-

tion, every word, every attitude, must be subjected to close scrutiny in light of U.S. foreign policy.

In the Army's recent history, the combat training centers have been a repository of available advisors to the Afghan National Army. Members of the 11th Armored Cavalry Regiment, the operations group, the U.S. Army infantry centers, one-station unit training (OSUT) brigades, and many others have been sent to Afghanistan to create an Afghan National Army. Most recently, drill instructors have been sent to Iraq to train the fledgling Iraqi National Guard, as well as soldiers from divisions assigned to Operation Iraqi Freedom.

The future appears to predict an increased role for the advisor as divisions conduct stability and reconstruction operations (SRO) and soldiers are assigned to the Iraq or Afghanistan country team. A senior coalition advisor in Iraq notes: "It is unrealistic to assume that progress will be smooth and continuous. There will be many more problems and reversals. There are forces that are corrupt and disloyal. At the same time, there is progress and that progress is gathering momentum."¹ The honest and transparent frustration of this advisor is not unlike advisors who

40 years ago sought to assist the South Vietnamese army in eradicating the threat of the Viet Cong and establishing a free, democratic society.

There are some striking parallels to the situation in Iraq that mirrors the situation on the ground in Vietnam in 1964. General William C. Westmoreland relates in his memoir, *A Soldier Reports*, "For all the domestic foment, the U.S. Military Assistance Command during the latter months of 1964 made at least a measure of progress in the basic assignment of providing security for the people and helping defeat the Viet Cong. Progress centered in a program that I code-named HOP TAC, which in Vietnamese means co-operation. It was designed to gradually expand security and government control and services — pacification — outward from Saigon and into six provinces that form a kind of horse collar about the city."²

The goal of the "pacification" program was to defeat a local counterinsurgency, create an independent military and police force, and assist the government of South Vietnam in creating a politically, economically, and socially stable environment for a democracy to flourish. However diluted these objectives may have become or however frequently their emphasis changed, the mission was invariably the same. The same is true of Iraq. Create a free, self-determined government, capable of combating the internal threat of terrorism and participate as a functioning member of the world community.

Advisors will play a key role in the future of a free Iraq. As such, the advisor must keep the mission firmly planted in his or her mind. Many years of advising and assisting the Iraqi National Guard remain ahead. The attitude of the advisor will live long after he or she departs the country. I remember my counterparts reciting for me the lineage of advisors they had worked with throughout their careers. Invariably, one here and one there would have a less-than-stellar reputation.

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As an advisor, it is important to build and keep a good reputation. Imagine five or ten years from now, U.S. forces have left Afghanistan and Iraq, but a large advisory presence remains. Your assignments officer calls and informs you that you are going to Afghanistan to be an advisor for a year, unaccompanied. You immediately think back to your time in Afghanistan as a company commander and remember the frustrations of dealing with tribal rivalries and cross-border incursions by Taliban. How are you going to survive the year and learn as much as possible? You may have to overcome your attitude or prejudices first. To be a successful advisor, follow the twenty principles of advising:

The relationship with counterparts is sacred. The first rule is: never lose trust and confidence in counterparts. Above all, never relinquish your integrity. These two things, in rare circumstances, may come into conflict. If that were to happen, your conscience will most assuredly be your guide. Never promise anything you cannot deliver. Clarify, in detail, your responsibilities and those of your unit, if you are providing training on bringing in a mobile training team. For example, if the classroom does not have desks and chairs and you only agreed to teach the block of instruction, ensure the commander knows it is his responsibility to supply tables and chairs.

Cultural awareness and sensitivity. As an advisor, assimilating and synthesizing the relevance of a particular culture quickly and correctly is vitally important. Invest in books on the subject of Islam and use internet sources and research the cul-

ture and customs of your host. One source that provides an excellent overview of Islam is Karen Armstrong's book, *Islam, A Short History*. Fortunately, the Office of the Program Manager (OPM) has a valuable link, which addresses the position of the new advisor and what to anticipate. Additionally, OPM requires all new advisors to attend a new advisor's orientation course that provides some invaluable information and sources, but the preponderance is a learning environment. There are also U.S. Army resources on the role of an advisor that could help future advisors, such as Ronald H. Spector, *Advice and Support: the Early Years, 1941-1960*, published by the Combat Studies Institute, Command and General Staff College, Fort Leavenworth, Kansas. The important thing to remember is go into your experience without prejudice and with a willingness to understand the culture. Every culture appreciates a guest who tries to observe their customs and courtesies.

Dealing with state department representatives. Upon my arrival in Saudi Arabia, I discovered that there was little to no existing relationship with the Consulate. Nonetheless, we were dependent on the Consulate for warden information, "Tea" rations, entertainment, mail, and other American citizen services.³ Mutual support is vital in remote foreign assignments. Building relationships with the Consular section, local representatives, and political and economic officers all provide further insight into the country and the scope of the mission.

Local nationals. Local nationals are an invaluable asset with whom you must develop a rapport and perhaps a personal





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bond. If you are required to travel extensively, as was my case, the hotel manager was an invaluable ally. His relationship with the local governor's office more than once allowed me to avoid a terrorist incident. His relationship with the community provided an opportunity to experience local cultural events. It is also essential to develop a rapport with the soldiers or officers you advise. They are your customers, and although you may be tempted to keep a professional distance, don't! In a preponderance of the world, relationships are the key to successful business.

Religion/history. Muslims are proud of their religion and history — respect this! In the Arab world, most Muslims will attempt to convert you to Islam, because their faith demands it. Entertain the religious differences between your faith and theirs, always remaining respectful. If you are uncomfortable talking about your religious beliefs, you should not be afraid to make that known. However, expect to be bombarded with leaflets, copies of the *Koran*, and perhaps even taken to a Mosque to speak with a Shi'ite Imam or Mullah or Sunni cleric. Take time to learn about heritages and the culture significance of certain regions and clans.

Mission focus. Just as it is important to understand the commander's intent two levels higher, it is imperative that the advisor understand the program manager's intent and guidance. U.S. advisors are

viewed as having lots of money to throw at their counterparts' "worthy" projects; therefore, you may be expected to provide everything, which may have happened with past advisors. However, at some point, it will become incumbent on the local national government to develop a defense budget, allocate resources, and hold local commanders fiscally accountable for expenditures. You may be faced with budgeting priorities directed from the local government. For example, the Central Region Brigades in and around Riyadh received new light armored vehicles, were supplied one advisor per battalion, and allocated intensive training and resources. Meanwhile, the light brigades in the east and west received next to nothing. Capably advising and assisting the light brigade, despite the lack of resources, was a challenge. Nevertheless, it was imperative to help my counterpart understand that he was not the main effort, which was very challenging. Regardless of the realities, as his advisor, it was incumbent on me to encourage him to find imaginative ways to train. Remember, work with your counterpart honestly and frankly; but, be cognizant, you cannot expect to run into his office and tell him how dysfunctional his organization may be — let it be self-discovery, never force fed.

Influencing is the key. Influencing your counterpart can be extremely difficult — he will have several reasons why some-

thing could not be done or why he failed to make a decision that was in the best interest of his unit. The unknowns are the power plays, the power brokers, the real decisionmakers on tribal issues and much more. In his book, *The Arab Mind*, Raphael Patai states, "In the men's [Arab men] world, age differences are of the utmost importance. He learns who his other superiors are, in addition to his father: all older men than he, including even a brother or a cousin who is his senior by only a year or so."⁴ Doctor Patai's analysis synthesizes Arab male culture so we can understand how basic power is derived and understand the leadership framework of the Middle East. For example, I served as an advisor to one senior Saudi officer who was incapable of making a decision. Later, I realized he was not empowered to make any key decisions. In our understanding, rank relates to decisionmaking, but not in the Arab world. It took me months to figure out why he would not make what seemed to be a simple, yet vital, decision. Finally, I went to his boss and got a decision. Influencing in this case required figuring out who was the real power broker and dealing with him, not my counterpart.

Influencing revolves as much around who to influence as it does influencing. In foreign armies, rank can be meaningless. It can be a symbol of longevity, it can be a reward for faithful service, it can mean a lot of things, but never assume that it means someone has power to make decisions. Invariably, you will spend the first six months of your tour figuring out who are the real power brokers and the last six trying to influence things that you identified within the first 30 days of your arrival. Do not get frustrated — in some cultures, such as the Middle East, anger is a sign of weakness and will close down a negotiation or discussion quickly. All true power brokers, and your counterpart considers you a power broker, remain calm and are well spoken. Influencing is an art.

Developing leaders. You will have ample opportunity to interact with junior leaders, some of them may be officers and others sergeants. Take every opportunity to build a rapport and solicit information from the junior officers. You will find they share your frustrations and this can be an opportunity to impart invaluable wisdom. Think of advising as a mutual fund; it simply needs maturing to grow. Sometimes advisors get frustrated because they do not see themselves getting enough accomplished. The process may take years, patience, and repetitive training to see the fruits of your labor.

Showcase freedom and democracy. Many of the nations in which U.S. Army advisors serve are fledgling democracies or places we want to stimulate democracy. Take every opportunity to emphasize our democratic values. It may seem obvious, but arrogantly telling another foreign national about the virtues of democracy will not endear him to the idea. Seek out individuals who are interested in the democratic process and discuss it with them. One local national was such a man and we had numerous discussions on the subject. He once shared with me how his friends in the capital city had defined democracy. To them, drunkenness and philandering was their vision of democracy in a repressed country. My friend firmly reminded them that an American democracy is not doing what you please, but respecting the law and rights of others. Furthermore, he admonished, "Until Saudis learn to respect one another, democracy will never come to their country." I found his recounting refreshing, and I had coincidentally made my point. Take every opportunity to discuss our way of life. You never know what benefit it will have.

Avoid being the "big-nosed" American. Some advisors find it very difficult to be humble. As a guest in another country, displaying arrogance is a sure way to fail your mission. There are those who arrive in country ready to train their hosts; however, they will quickly lose interest and be frustrated, irritable, and disinterested in their mission when their methods are not well received. Frustration is to be expected; nevertheless, you must find a way to present an affable and pleasant attitude. Otherwise, your tour will be miserable as will everyone around you. Being demanding and discourteous in not ambassadorial, it is simply rude.

Negotiation skills. Experience in Iraq and Afghanistan has taught us a lot about the importance of negotiation. Arabs respect negotiation, haggling is expected, but demanding a fair bargain is also expected. Reading books on business negotiating before you arrive in country will help you understand the concept. More importantly, review the Center for Army Lessons Learned (CALL) website for lessons learned from Iraq on negotiations or go to the Combined Arms Center website for resources. Do not answer your port of call without some sort of reference in your kit bag, because negotiating is inseparable from advising.

Avoid instructing; focus on advising. There will be times when you will be required to instruct or demonstrate a par-

ticular skill or expertise in a given task. Do not do your counterpart's job for him. I was amazed to observe the creative mental energy some of my counterparts placed into trying to coop the advisor into doing their work. Encourage your counterparts to read doctrinal manuals or seek information from available research sources.

There will be times when your counterpart may avoid failure and embarrassment by simply not complying with his training schedule, as opposed to trying and failing. In these circumstances, the advisor is required to demonstrate exceptional wisdom to identify and address his counterpart's intransigence. If this is the case, remember the rule: make it his idea. Always give your counterpart credit when it is deserved. Tell his boss how great he is while he is present, which will garner you a lot of *wasta* (power/influence). You will have to figure these things out by doing. Nevertheless, it is all about influencing your counterpart to become self-sufficient. We should be working ourselves out of a job, if we are effective.

Know the enemy. Nearly every country in the world has an anti-American element. Those individuals will demonstrate hostility toward you by their expressions or perhaps actions. Be prepared for both. Those individuals who would oppose you are not worth your time or energy. Avoid them and move to the next willing advisee. Secondly, you will have enemies in your area of operations who want to dam-

age the American image for their own benefit. Do not fall victim to their designs. Know who your enemies are and their mode of operation. Never allow yourself to be caught in a vulnerable situation without an escape plan. Avoid dead ends, neighborhoods located off main roads, and identify the "rough" part of town. Know the patterns of your enemies and work opposite; avoid setting patterns.

Instill the warrior ethos. Many armies do not have a warrior spirit; mainly because they lack history. Second, they do not grow up in physical environments playing contact sports. Third, some find manual labor culturally reprehensible. You will have to instill this spirit. The U.S. Army physical fitness program is a great place to start: let them see you exercising, influence your counterpart to establish a graduated physical fitness program, and help him visualize his command goals.

Instilling the warrior ethos by tying them to combat tasks is another effective method. My counterparts did not understand this component of soldiering. When I asked them how they expected to repel an attempted takeover of the government, they replied, "You Americans will come and help us." Certainly, our presence in their country might lead them to believe their stability is in our national interest, so I reminded them that it was in their best interest to prepare mentally and physically for that challenge.



"There will be times when you will be required to instruct or demonstrate a particular skill or expertise in a given task. Do not do your counterpart's job for him. I was amazed to observe the creative mental energy some of my counterparts placed into trying to coop the advisor into doing their work. Encourage your counterparts to read doctrinal manuals or seek information from available research sources."

Identify detractors and develop a plan of action. There will be times when your counterpart will send you chasing ghosts; those ghosts may detract from the significant issues. For instance, your counterpart may know that his riflemen have never qualified to standard, but he will make excuses why his soldiers are unable to qualify correctly. Back up, regroup, and take another tack. If he thwarts you three times, consider it a dead issue and move on. If it is important enough to the mission, look for delicate ways to work around him without destroying your relationship.

Force protection. Since your mission will no doubt be in an emerging nation, protecting yourself, your fellow advisors, and support staff will always be a consideration. Take physical security and force protection seriously. Ensure you have a clear understanding of the operating environment from your security manager and/or the regional security officer at the Consulate or Embassy. Maintain a strong relationship with the local police, your unit S2/G2, and the expatriate community. Common practices, such as bomb sweeps, checking your rear view mirror frequently, driving in the far right or left lane, maintaining proper spacing for a quick exit when stopping at traffic lights, and never taking the same way to work or home, should become routine habits. If you are authorized to carry a weapon, become familiar with the weapon and review the rules of engagement regularly. Ensure you have a workspace and home barricade or “bug out” plan. Never take anything for granted and remain vigilant.

Expatriate relationships. Americans and other English-speaking foreign nationals may be your sole source of socialization. Small expatriate communities can be very cliquish. Nevertheless, it is important to maximize your social opportunities, so do not be afraid to venture outside your comfort zone. If you are non-social, you will probably not enjoy being an advisor. The more social you are, the more you will flourish. Never get involved in the expatriate community gossip or personal squabbles. You are expected to remain professional; you will be held accountable. There are advisors who destroy the reputation of a country team with alcoholism, indiscretions, and other means.

Enjoy yourself. Many advisors are required to travel to and from their compounds daily and rarely venture out to see the country. For example, if you ad-

vise the Iraqi army, make sure you go to Babylon and Ur. If you advise the Saudi army, trek up the Hejaz Railway and visit Petra. If a particular sport is available, take advantage of it. Most of the expatriate communities have hash runs, orienteering clubs, desert trekking clubs, cycling clubs, rugby leagues, and much more.

Other foreign military advisors and contractors. The U.S. military advisory team will probably not be the only team in the country. If you happen to share the same turf with another advisory team, work together. Failing to work together develops a negative adversarial attitude. Perhaps our government and the other advisory team’s government are competing for foreign military sales contracts; nevertheless, it is vital to work together because in most cases, they are our allies. Cooperating with advisory teams from other nations has several advantages: you will learn a tremendous amount by sharing ideas and experiences; you are both aliens in a foreign country and need each other for survival; and it is good to perpetuate the spirit of cooperation among our allies. Many of them perceive Americans as arrogant and pushy. Getting to know them can dispel that notion. Contractors can be a difficult group to address: in one situation, you might find a conscientious and hardworking contractor; in others, you might find lazy, shiftless, and basically, noncontributing individuals. You must be prepared to deal with both; however, if they do the mission a disservice, get rid of them.

Interpreter/translators. If you are serving as an advisor, you will not just need a translator; you will need someone to interpret and translate documents and letters. All written documentation that you provide your counterpart will have to be translated. For instance, all the advice you provide your counterpart should be written, which will be better received and suffice as formal documented advice. This will also provide your future replacement a paper trail for reference. Your interpreter/translator will have to get to know you and your phraseology, and you will have to develop confidence in his skill as an interpreter. If you have a senior translator, make sure he does quality control on every document your interpreter/translator prepares. You may also request the senior translator to occasionally observe your translator to determine the quality of his work. If interpreter/translator schools are available, recommend your translator attend as often as

possible. There are training courses in the United States and England for translators who are more advanced; sending them is a benefit to the organization and your mission.

Advising is a tremendous experience. Invest the time to understand diverse cultures and the advisory mission, and learn how to influence foreign militaries and assist their nation’s ability to determine its own destiny. In light of the current National Military Strategy, it is logical to assume that advisory demands will increase as our troop strength decreases in Iraq and Afghanistan. The advisor represents our great nation as a diplomat and a soldier to train a foreign military and demonstrate the virtues of the American way of life.



Notes

¹Anthony H. Cordesman, *The Critical Role of Iraqi Military, Security and Police Forces*, Center for International and Strategic Studies, Washington, D.C., 2004, p. 3.

²General William C. Westmoreland, *A Soldier Reports*, De Capo Press, New York, 1976, p. 82.

³The United States Consulates and Embassies throughout the world maintain contact with American citizens through appointed information conduits called “wardens.” These individuals attend a regularly scheduled meeting at the Consulate or Embassy to acquire relevant information for dissemination. “Tea rations” are alcohol rations purchased from the Consulate for authorized diplomatic passport holders in remote locations.

⁴Raphael Patai, *The Arab Mind*, Charles Scribner & Sons, New York, 1973, p. 35.

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Blitzkrieg: Revolution or Evolution?

by Major James T. Bushong

The blanket statement that the German Blitzkrieg tactics were a radical new form of warfare is widely held as truth. It is also incorrect. Blitzkrieg was a happy marriage of new technology (mechanized forces) and time-tested cavalry tactics. This evolutionary combination deserves the credit for the German's success at the onset of World War II, rather than a revolutionary new approach to warfare. This article examines Blitzkrieg tactics and compares them to tactics that cavalry soldiers have used throughout history to outmaneuver and destroy their opponents. It demonstrates that theorists, such as J.F.C. Fuller, found solutions to the problems of the World War I stalemate through history books and advances in technology, rather than actually creating a new form of warfare. This article includes an analysis of how modern theorists approach the problems of modern warfare, and poses the question: "Do we really have revolutionary new tactics or just revolutions in technology?"

The end of World War I found the Germans and the British badly bloodied from four years of trench warfare. Technological advances in machine guns and artil-

lery had caused such a stalemate on the battlefield that all parties involved were looking for ways to break the deadlock. The logical solution was to fight against these technological advances by seeking newer technology. The answer appeared to be the tank, a slow moving behemoth of the battlefield that could crush wire obstacles, roll through bomb craters and over trenches, and provide reasonable crew protection to the men inside. It was meant as a support vehicle for infantry in the assault, but was never really considered for any other mission.

On 20 November 1917, the British successfully used over 300 tanks at the Battle of Cambrai in support of their infantry. The British advanced over five miles using this new weapon. This was an astonishing rate of advance compared to the previous battles, but no real thought had been given to how tanks could be employed after initial advances. This left the British the same tactics with which they had started the war and the German counterattack regained virtually all the ground that had been lost. The use of tanks at Cambrai proved that new technology could be used, but required new doctrine

to make armored forces a truly effective part of the combat team. Major J.F.C. Fuller, Chief of Staff of the British Armoured Corps, began to address these issues.

"Plan 1919" was Fuller's solution to the problem of what to do with the tanks. While Plan 1919 was technically a plan and not doctrine, it was the first attempt at a design for future warfare. Fuller summarizes his plan by saying, "Instead of launching frontal attacks against an enemy's front, it was decided to launch it against his rear — his command and supply system — by suddenly and without warning passing powerful tank forces, covered by aircraft, through his front. Next, direct paralyzation [sic] of his rear had disorganized his front, to launch a strong tank and infantry attack of the Cambrai pattern against that front."¹ The war ended in November 1918 and Fuller never implemented this "dramatically different" approach to warfare.

Because armor and aircraft technology was in its infancy and problems with logistical support arose, the merits of the plan were questionable at best. It did pro-

"The end of World War I found the Germans and the British badly bloodied from four years of trench warfare. Technological advances in machine guns and artillery had caused such a stalemate on the battlefield that all parties involved were looking for ways to break the deadlock. The logical solution was to fight against these technological advances by seeking newer technology. The answer appeared to be the tank, a slow moving behemoth of the battlefield that could crush wire obstacles, roll through bomb craters and over trenches, and provide reasonable crew protection to the men inside."



vide a basis for continued innovation during the interwar period with the British conducting armored maneuvers in 1927, 1928, and 1931.

Ironically, and perhaps tragically, the British "displayed scant interest in pursuing armor's potential, but rather tied its development entirely to the infantry and cavalry establishments" with "the cavalry display(ing) the most resistance to new

ideas and technology."² This resistance continued despite the fact that ten years earlier, in April 1917, two cavalry brigades had been sent forward to exploit a gap created by three tanks at the battle of Arras. An officer in the Highland Light Infantry commented, "an excited shout was raised that our cavalry was coming up. It may have been a fine sight, but it was a wicked waste of men and horses, for the enemy immediately opened on

them a hurricane of every kind of missile he had. The horses seem to have suffered the most."³ Given the British penchant for preserving tradition, it is perhaps predictable that the cavalry soldiers would display such resistance to the new technology, which clearly had potential in the arena of maneuver warfare. British cavalry leaders had made their successes with horse cavalry and had become so fettered to their horses that the thought of replacing the animals with machinery was abhorrent. The Germans were not so reluctant to change.

The Germans developed the stormtrooper tactics in the last two years of World War I as an answer to the stalemate that had evolved in the trenches.⁴ While these tactics were innovative and would be used as a basis for the advancement of future doctrine, they failed to take new technology into account. Failure to sustain manpower losses created by these tactics effectively nullified the tactical victories won and ultimately led to Germany's defeat in 1918.

The Germans learned from their losses and established committees to review the lessons of World War I. They created a model for training and development that was based on the "principles of initiative, exploitation, and maneuver that lay at the heart of the army's basic doctrine."⁵ It was here that the Germans learned and incorporated the lessons of the British army.

During World War I, the Germans learned to cope with tanks rather than use them. They only produced 20 tanks to the more than 5,000 that the British and French produced. However, after the British maneuvers of the 1920s, a Reichswehr report stated, "with existing models, one can now clarify what will happen with tanks behind the enemy's main line of resistance after a successful breakthrough. We recommend that, in exercises, armored fighting vehicles be allowed to break through repeatedly in order to portray this method of fighting and thus to collect added experience."⁶ With the lessons of World War I being reviewed by experienced soldiers unopposed to change, the German army was preparing for a radical change in the way they conducted warfare. They drew everything they needed from their history books and after action reports.

The Blitzkrieg was hailed as a revolutionary new approach to warfare. The Germans "created" it and put it into practice in 1939 in the Polish offensive. The British felt that they needed to adopt the principles of this breakthrough in doctrine and put it into practice in such offensives as Goodwood and Market Garden. Blitz-

krieg focused on the principles of speed, maneuver, versatility, and overwhelming force at a decisive point. These are the same principles that have defined and guided tactics, particularly as they relate to the use of cavalry, for centuries. Cavalry forces evolved into four categories throughout the ages: the cuirassier or heavy cavalryman, the lancer, the dragoon or mounted infantryman, and the light cavalry.⁷ The Germans employed all four categories while creating blitzkrieg tactics: tanks were the heavy cavalry; lancers were close-air support or dive bombers; the dragoons were mechanized infantry; and the light cavalry were lightly armored reconnaissance elements. All of these elements must conduct operations together, and in conjunction with infantry, to create success on the battlefield. The Germans realized this and created a doctrine that unified this lethal team.

The infantry is the basis for any military. Cavalry can seize, but cannot hold ground,

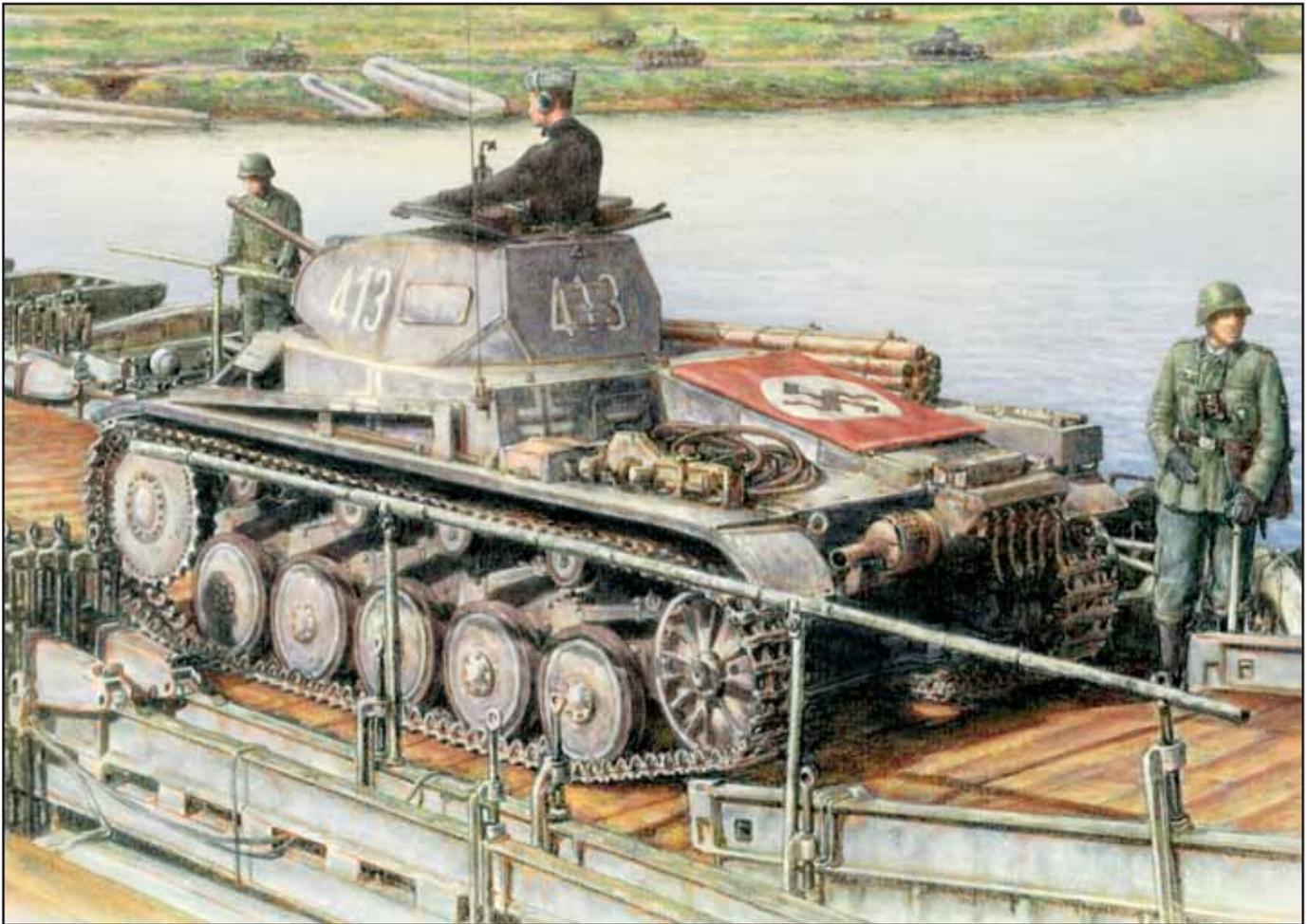
and the Germans realized this. "On 10 May 1940, Germany had 136 divisions in the West, of which 10 were armored, seven motorized, one cavalry, and one airborne."⁸ This left 117 infantry divisions to be supported by the 19 other divisions. It is unclear whether there were many more infantry units because they were the meat of the German army or there simply were not enough resources to outfit more divisions as motorized. Either way, the decisive arm of the German military was made up of the Panzer divisions that in two weeks time had completely cut French lines of communications and forced the British Expeditionary Forces into full retreat across the Channel.⁹

The tactics used dated as far back as Alexander, whose "battles comprised a concerted infantry push in the centre to create the opportunity for a decisive cavalry charge on the right."¹⁰ While the Germans did not have the resources, or perhaps the desire, to outfit their entire army as cav-

alry, they certainly took a lesson from the Romans who "began a trend by which the army became a force of cavalry regiments, as opposed to infantry legions, as a premium was placed on mobility."¹¹ Clearly, the Germans used history from the times of Alexander through World War I in developing their blitzkrieg tactics, but their work was not revolutionary. Rather, they had analyzed their weaknesses from the previous war and developed new technology, not new tactics, to overcome those weaknesses. The U.S. Army is using the same process today with the advent of modularity.

The modular army being analyzed in the Pentagon today maintains the same principles that the Germans focused on using blitzkrieg tactics: speed, maneuver, versatility, and overwhelming force at a decisive point. The modular brigade depends on the ability to arrive anywhere

Continued on Page 50



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Effects-based Operations: Defined

by Captain H. Ripley Rawlings IV

On the morning of 21 December 1866, along the Wyoming Bozeman Trail, a mix of cavalry and infantry soldiers of the 2d Battalion, 18th Infantry, commanded by Captain William J. Fetterman, rode out from Fort Phil Kearny to rescue an ambushed logging party. A successful Civil War commander, Fetterman was a war hero in his own right. With 81 troopers, he led a charge with a strong conviction of numerical, tactical, and weapons superiority.

Disregarding his commander's specific orders not to cross Lodge Trail Ridge, Fetterman and his troops were not only fooled into an ambush by Sioux warriors more than ten times their strength, but were destroyed to the last man by Chief Red Cloud. Fetterman and his soldiers were scalped and their bodies desecrated and filled with arrows as a sign of disrespect toward their tactics, leadership, and presence in traditional Sioux lands. With one fell swoop, he not only lost 81 men and a number of horses, but set Fort Phil Kearny's fighting force so far back that the stability of the fort, its families, and civilians were



Through the Mistakes of the Past

a concern. The seeds for this destruction, however, were sown far before Fetterman put on his spurs that snowy winter morning. In what has come to be called the “Fetterman Massacre,” we begin an exceptional study for mounted warriors into effects-based operations.

The Lead

This article guides the reader through the concept of effects-based operations, examines the historic battle of the Fetterman Massacre, and recommends how this concept might have been

used to better prosecute its mission; we conclude by drawing parallels to today’s battlefields.

As the United States continues to conduct operations against terrorists, the services carry on in earnest to write new tactics, techniques, and procedures (TTP) for fighting asymmetrical battles and conducting stability and reconstruction operations (SRO) against an often ill-understood opponent. As some shelve our doctrine with the words “break glass in case of Soviet-style attack,” we begin to write the next page in our collective histories



and sluggishly turn to fight this new opponent. This seemingly new-style adversary has the talent to remain largely unseen and defiant of our mechanized behemoth. They are an enemy who uses the advantages of urban terrain and the media to profound effect — one whose ability to seize the initiative daily with relatively old weapons and few resources, challenges our understanding of the modern battlefield. Rather than abandon our doctrine, we only need to know our own history to understand how to fight in a theater of war where our opponent's greater flexibility enables him to change his tactics more quickly than we can change ours.

We are all striving academics of our profession at arms, and as such, we can learn from those who make academia their business. A quote from Cicero, the great Roman orator, reads: “Nescire autem quid ante quam natus sis aciderit, id est semper esse puerum” [*Who knows only his own generation, remains always a child*], which is written above the University of Colorado Library as a warning to scholars and learned men alike to struggle always for higher wisdom. We have often been guilty of repeating the mantra that we are destined to fight the previous war, in military schools and during wargames or field exercises. The armor and cavalry communities are no exception to this dilemma. Yet the histories of our forefathers' generations are rife with stories of attempts to fight what we now call a “three-block war.” A fight against an ideologically driven enemy who has little knowledge of the laws of land warfare and to whom the doctrines of a collapsed Soviet state are wholly and largely a phantom is to be ignored. As we journey again down the roads of mistakes, false starts, and defunct combat tactics, the worst mistake we can make as battle leaders is to reinvent our procedures while ignoring the hard-fought lessons of the past. Iraq is too recent, too emotional, and too complicated to be an effective topic of debate for a contemporary study concerning effects-based operations. However, if we examine an older battle through the lens of our new tactics, there is much we can learn from allegory. Properly applied, this new technique is emerging as an answer to the asymmetrical battlefield, and as with all our tactics, it will evolve with our doctrine and not invalidate it.

Defining Effects-Based Operations

Effects-based operations (EBO) have been variously defined by all services. Broadly, it is a concept that embraces all means

of employing “power, military and nonmilitary, focused on a desired effect on an enemy throughout the spectrum of conflict.”¹ The history of EBO comes mostly from the effects created by direct or indirect fires on an enemy, commonly called, “effects on target.”

As a natural progression, the artillery community has embraced and developed this concept as a ‘way ahead’ for their branch in a future requiring them to “move forward from fires coordinators to effects coordinators.”² Often misunderstood, when artillerymen say they have achieved effects on target, they may have caused no casualties or measured material damage, but have instead created an unmeasured consequence on the enemy. This may be the enemy buttoning up, moving from hide positions, reorienting their fires, or the less tangible effect of being shocked, in a state of disarray or in panic.

Consequences of these latter effects can be more devastating than simply maiming or killing a few adversaries, as it causes a “disruption of his decisionmaking process by direct influence and effect on the adversary’s ability to act.”³ With these effects, we are inside the enemy’s decisionmaking cycle and may enjoy the added benefit of causing him to make flawed tactical decisions or convincing him to capitulate. This is generally referred to as the first- and second-order effects. There is parity, however, between this older definition and the modern concept of EBO. The idea of EBO as it applies to the modern battlefield is best defined by U.S. Joint Forces Command (JFCOM): “The physical, functional or psychological outcome, event, or consequence that results from specific military or nonmilitary actions.” It is “a process for obtaining a desired strategic outcome or effect on the enemy through synergistic, multiplicative, and cumulative application of the full range of military and nonmilitary capabilities at the tactical, operational and strategic levels.”⁴

Application of EBO: Targets and Objectives versus Effects

Often compared to a mini-Marshall plan when literally applied, the desire of EBO is to achieve the commander’s intent in the form of an effect on the enemy instead of using combat targets or becoming objective oriented, as has been done previously. Far from a mere theory, it is now being applied by many units in Iraq and Afghanistan. It does not negate a focus on direct combat options. Instead, it challenges battlefield commanders at all levels to think of direct combat operations (first- and second-order effects) as part of a much larger product that, if used with efficiency and synchronicity, is capable of a much larger and more lasting effect (third- or fourth-order of effects). Ultimately, this leads to all levels of tactical-operational-strategic out-thinking and adapting more quickly than the enemy is capable. Certainly, it has been suggested that even the most junior soldier and Marine must be a part of this larger effect on the modern battlefield: flexible, agile, and aware of the consequences of his decisions in the larger context of the combat zone.⁵

Battle Description

The Fetterman Massacre of 1866 had a number of key players. The U.S. soldiers were predominantly Civil War veterans. The Native Americans were from a more decentralized and fluid organization with leadership and loyalties shifting based on needs. To understand the battle, we should introduce the men who comprise both sides and highlight some interesting points about their combined histories:

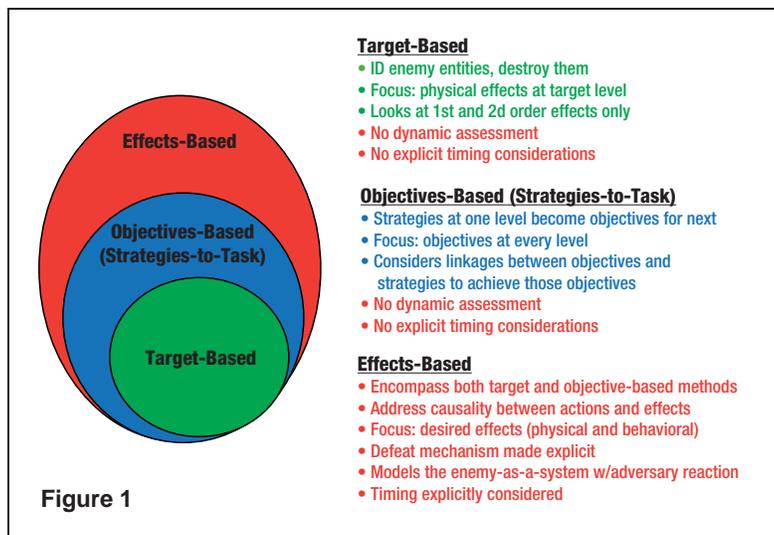


Figure 1

Colonel Henry Beebe Carrington, commander of the 18th Infantry Regiment. A lawyer by trade, Carrington was certainly methodical and led mostly through the written order. Though a participant in the Civil War, he spent the majority of the war recruiting soldiers for his regiment while other men commanded it to great success. After the final battles of the Civil War, he finally joined his command, an issue never forgotten by his subordinate commanders. An astute politician, his absence from the battlefield gave him time to make many political friends in Ohio and was probably the reason for his subsequent assignment to the 18th after the war in an otherwise top-heavy Army.

Captain William J. Fetterman. His Civil War achievements were brilliant and perhaps prideful. Cited for gallantry on a number of occasions, his battle honors included Stones River (Tennessee) and General Sherman's Georgia campaign, which is indicative of the patterns of his later tactics. He commanded Company A, 2d Battalion, and dispatches of his actions include "displayed great gallantry and spirit," and that "Captain Fetterman threw up a salient and maintained his positions against repeated attempts to dislodge him by the enemy."⁶ He was promoted to brevet lieutenant colonel then downgraded to captain in the post-war period.

Chief Red Cloud. Not the sole commander of the Indian Wars, but credited for being the inspiration for the daring siege on Fort Phil Kearny, which lasted through the winter of 1866. Chief Red Cloud was an imposing figure and leader of the Sioux in the Powder River region. His ominous warnings to the Army garrison at Fort Laramie went unheeded.⁷

Crazy Horse. Leader of the Oglala fighters present at the massacre. Committed to his tribe, he was fiercely loyal to traditional ways. Crazy Horse was most famous for using his lessons learned from the Fetterman Massacre against General George A. Custer some ten years later. He also invented and championed an ambush technique, which brought about Fetterman's demise.

The Road to War

The year 1865 heralded the end of the Civil War, and a nation eagerly attempted to bind its wounds and begin an uncertain future as a country reunited. One issue that was not uncertain, however, was the continued expansion westward. Even as the echoes of battle subsided in the east, gold was discovered in the west, and the expansion seemed a likely progression for a nation in need of huge supplies of natural resources to reconstruct.

Montana, the Wyoming Territory, and other western states offered three trails west:



Colonel Henry B. Carrington
ARCHIVES AND WESTERN HISTORY DEPT.,
UNIVERSITY OF WYOMING LIBRARY



Captain William J. Fetterman
NATIONAL ARCHIVES



Red Cloud
BUREAU OF AMERICAN ETHNOLOGY,
THE SMITHSONIAN INSTITUTION

the Oregon, the Santa Fe, and the National. A lesser-known trail, called the Bozeman Trail, was named for its founder, a veteran mountain man who promised shorter routes with only one crossing of the Continental Divide. This trail, however, created a dangerous legacy through a land that was considered sacred by the Sioux and other tribes.

For several previous generations, treaties had been negotiated with the Plains Indians in attempts to smooth passage through their lands to the gold fields. 1851 saw the formation of the Fort Laramie Treaty, and even the Confederate President, Jefferson Davis, made a treaty with the Indians prior to the end of the Civil War. All were broken in one form or another, some were downright criminal. In the summer of 1865, for example, General Patrick Connor led an expedition into Sioux territory along the Powder River with strict orders: "You will not receive overtures of peace or submission from Indians, but will attack and kill every male Indian over twelve years of age."⁸

In the fall of 1866, soldiers from an Army still big from war were ordered to occupy forts and provide security to settlers and miners moving through the Wyoming Territories and other states. The Department of the Platte established a command called the Mountain District along the Powder River, Wyoming. Colonel H. B. Carrington of the 18th Infantry Regiment was ordered to "move immediately" and occupy Fort Reno and two other forts along the Bozeman Trail. At the same time, the prominent Sioux leaders, Red Cloud and Crazy Horse, had concluded that the white man's treaties were worthless, that he was making treaties on the one hand and sending warriors on the other, and to preserve their way of life, this was the time to stand and fight.⁹

The Massacre

Colonel Carrington had the 2d and 3d Battalion at his command. These consisted of 700 men in total. About half were Civil War veterans, the rest were new recruits. Included were combat trains with civilian logging parties and scouts, twelve officers' wives, eleven children, and a regimental band. The band, interestingly, came outfitted with the troops' only repeating Spencer rifles.¹⁰ The group's journey began from Fort Kearny, Nebraska, westward.

In mid June of 1866, the group moved by horse, carriage, and foot to Fort Laramie. It was here where they received the first ominous portent of the events to come. A commission from Washington D.C. was to sign an agreement to open the Bozeman Trail. Chiefs of many tribes attended, including the Brule, Sioux, and Crow. The delegation requested that a piece of land only wide

enough to fit the wagon's wheels be authorized. The commissioners of the agreement overlooked the simple fact that the Indian signers were from peaceable tribes, many of whom had no right to the land they ceded or had little interest to fight the United States.¹¹

Colonel Carrington and his officers were present for the ceremonies. Chief Red Cloud and his band of Sioux warriors also attended and listened closely, but refused to sign the treaty. They were already suspicious of the delegation, and as negotiations concluded, Red Cloud stood and pointed to Carrington and said, "The Great White Father sends us presents and wants us to sell him the Trail, but you come with soldiers to steal it before we say yes or no. We have many warriors." He continued, "I will talk with you no more. I will go now and I will fight you."¹² The Sioux leader stormed from the fort with his party. Through a gross misinterpretation of the events, however, the government negotiators returned to Washington and declared the Bozeman Trail open and safe for travelers. This misunderstanding would lead to false expectations of safety for gold seekers moving west, and ultimately, to media sympathy for the Indians.

The group proceeded 60 miles up the Bozeman Trail, and on 13 July, they began building Fort Phil Kearny (named for Major General Philip Kearny and not to be confused with Fort Kearny, Nebraska). They selected ground in open terrain bordered by the Big Piney River. Problems should have been immediately apparent; the fort was in relative low ground, and activities within could be seen clearly from the surrounding hills. The fort's construction also called for a considerable amount of lumber, which required a seven-mile journey, including five slow miles with wagons laden by the livestock's hay. On 16 July, a party of Cheyenne, including Chief Black Horse, visited to warn Colonel Carrington that Chief Red Cloud was insisting they join him to drive out the white man. Black Horse instead offered 100 warriors to help the fort fight the Sioux, Colonel Carrington declined.¹³ The Chief also made it "dramatically clear to Carrington that every move he had made since leaving Fort Reno had been observed and reported to Indian encampments throughout the area."¹⁴ He continued that Red Cloud intended to cut off the trails leading back to Fort Reno.

On 17 July, the first two men died from a brutal Sioux raid. The casualties were two night lookouts guarding livestock, caught unaware at their posts while they played cards. One of Red Cloud's braves, named Brave Eagle, had observed that the livestock followed the wagon master's bell horse around the fields. In a daring raid, the braves killed the few guards; then, using the wagon master's horse, stampeded the livestock, stealing 175 animals. A poor first exchange. A fortress mentality began; the Indians owned the night and the cover and concealment of the woods, which forced the cavalry and dismounts to guard any and all movement outside the gates. Patterns began to emerge in Carrington's plans; the Indians watched and learned.

For communication, Carrington used a modified Civil War tactic of look-out flags and a steam whistle, allowing him to disseminate signals of command to outlying convoys. It was slow and did not allow for decentralized decisions on the part of the individual guard or reactionary forces. Crazy Horse studied this behavior and began to attack the convoys to judge their reactions and signals, once even successfully attacking three convoys simultaneously. He realized that upon attacking a logging party, the braves could set ambushes for reactionary forces coming to the logging party's rescue to the effect of greater casualties. The needed reinforcements, Carrington was informed by mail, would not arrive until November.

In September, two major raids caused great losses. The Sioux shrewdly led a heard of buffalo near the fort's grazing cattle, then

sprang up from among them and drove both the cattle and buffalo away from the camp. Simultaneously, a hay-cutting party was driven away from their costly cutting equipment, which was burned along with the much needed hay. Ominously, three soldiers and a civilian went missing. Private Gilchrist's bloody clothes were found days after his disappearance; Private Johnson was separated and ridden down by Sioux, never to be found. Mr. Ridgeway Glover, a reporter for an eastern newspaper disappeared while taking photographs. Glover's naked body was later discovered scalped, with a tomahawk in his back, a mere two miles from the fort. The officers and civilians of the fort began to voice their opinions about Carrington's lack of leadership in the events.

At the end of September and early in October, the fort ran dangerously low on ammunition. Snow began to drift across the Piney River area. A mail wagon arrived at the fort with the scalped dead body of the mail carrier. The mail was, remarkably, intact and contained a letter admonishing Carrington for not protecting women and children along the trail, as had been reported in newspapers in the Platte region. Carrington was puzzled by this inference, and fired back a message that the claim was without merit. A message from the famed scout and mountain man, Jim Bridger, also informed the fort there were 500 lodges of Sioux — all hostile — encamped along the Tongue River.

In October and November, stores finally arrived, but the contractors bringing them had stolen a quantity of the supply. Lack of discipline and internal problems now abounded in the fort. After performing a belated commander's inspection, Carrington discovered that the Springfield rifled-muskets, used mainly by the infantry, were in disrepair. In Company C alone, 20 out of 37 rifles were found to be unserviceable.¹⁵ The band, however, had been issued the fort's best weapons, Spencer repeating carbines, which were reported in good condition. The fort needed reinforcements, and in November, Captain Fetterman arrived leading the two companies of replacement cavalry.

No more an opposite figure to Carrington's judiciousness could have been invented than the intrepid Captain William J. Fetterman. On his second day reporting to the command, he came to the Colonel with a plan to trick the Indians into an ambush. He boasted that "With eighty men I could ride through the whole Sioux nation."¹⁶ Fetterman's bold talk and the respect for his Civil War experience, served to further the schism between Carrington and his officers. Fetterman's ambush attempts failed and he returned to cautions by Carrington that his experiences fighting Confederates did not apply in the west. Infighting and disdain began in earnest among the officers. Many of the officers now began to openly side with Fetterman.

December brought bad weather and the worst losses. It also



Spencer Carbine

began with a written rebuke from Carrington's superior, General Philip St. George Cooke (a cavalry officer), to act more boldly in fighting the Indians. On 6 December, Carrington personally rode out from the fort to support an ambushed logging party. The overeagerness of his officers split his command, however, and as he tried to sound recall, he was attacked by Indians with war clubs and lances. Lieutenant Bingham, in charge of a company of cavalry, charged headlong into an Indian trap. He was killed gruesomely and Captain Grummond, also caught in the ambush, abandoned his spurs and desperately stuck his sword into his horse to accelerate the animal and escape the braves. The fort was now in a practically inhuman frenzy of anger for retribution. After the fight, Fetterman drilled his soldiers using his Civil War experiences. The old scout, Jim Bridger, said to Carrington, "Your men who fought down south are crazy. They don't know anything about fighting Indians." The lesson of the day was not lost on the Indians though.

Red Cloud and his braves, including Yellow Eagle, who led much of the action, discussed the battle. They had seen how brash and ill disciplined the soldiers were becoming from the continued harassment. It was decided that on the next full moon, they would lure the soldiers into an ambush using their decoy trick then wait for the reactionary forces and attack and kill as many as possible. Maybe with a mass of casualties, the soldiers would reconsider their occupation of Sioux lands.

A mere four days before the fort would celebrate its first Christmas, a logging party set out on its usual five-mile trudge through the snow-caked landscape. Red Cloud struck; using his favorite diversionary tactic, he ambushed the loggers, fixing the soldiers in a shallow depression. The fighters signaled an ambush as Red Cloud had predicted. Back at the fort, Fetterman demanded an opportunity to engage in decisive battle. Permission was granted and he chose Captain Grummond, 77 men from various companies, and two civilians — a total of 81. Roughly, half were mounted. Remarkably, this was the number of men he had earlier boasted with which he could ride through the Sioux nation.

Carrington, having now dealt with Fetterman's brashness on many occasions, issued the order (three times) not to pursue the enemy across the Lodge Trail Ridge. Whether Fetterman intended to bluntly disobey his commander or simply skirt the edge of his order will never be known.

Tricked by the Indian's use of decoys led by Crazy Horse, Fetterman attacked. The decoys ran zigzagging in front of the soldiers, shouting taunts and coming within rifle range. With every advance, the braves would fall back further until the soldiers were finally drawn over a cresting rise of the Bozeman Trail beyond the Lodge Trail Ridge. The soldiers entered the kill zone, and with a signal, the braves sprang from hiding in the grasses surrounding the trail. Bows and arrows were often used as indirect fire weapons, and were devastating at medium range. It is estimated that as many as 40,000 arrows were fired in the 40-minute attack.



As the troop's ammunition dwindled, the braves closed in. From all sides, the Sioux fought intensely with war clubs, knives, and lances. Captain Grummond was prob-

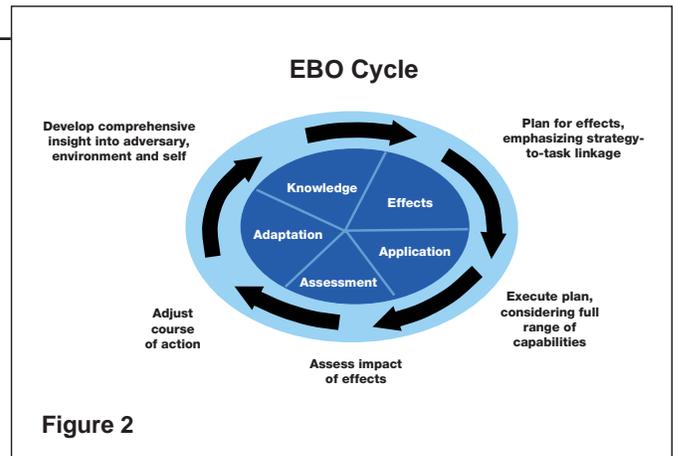


Figure 2

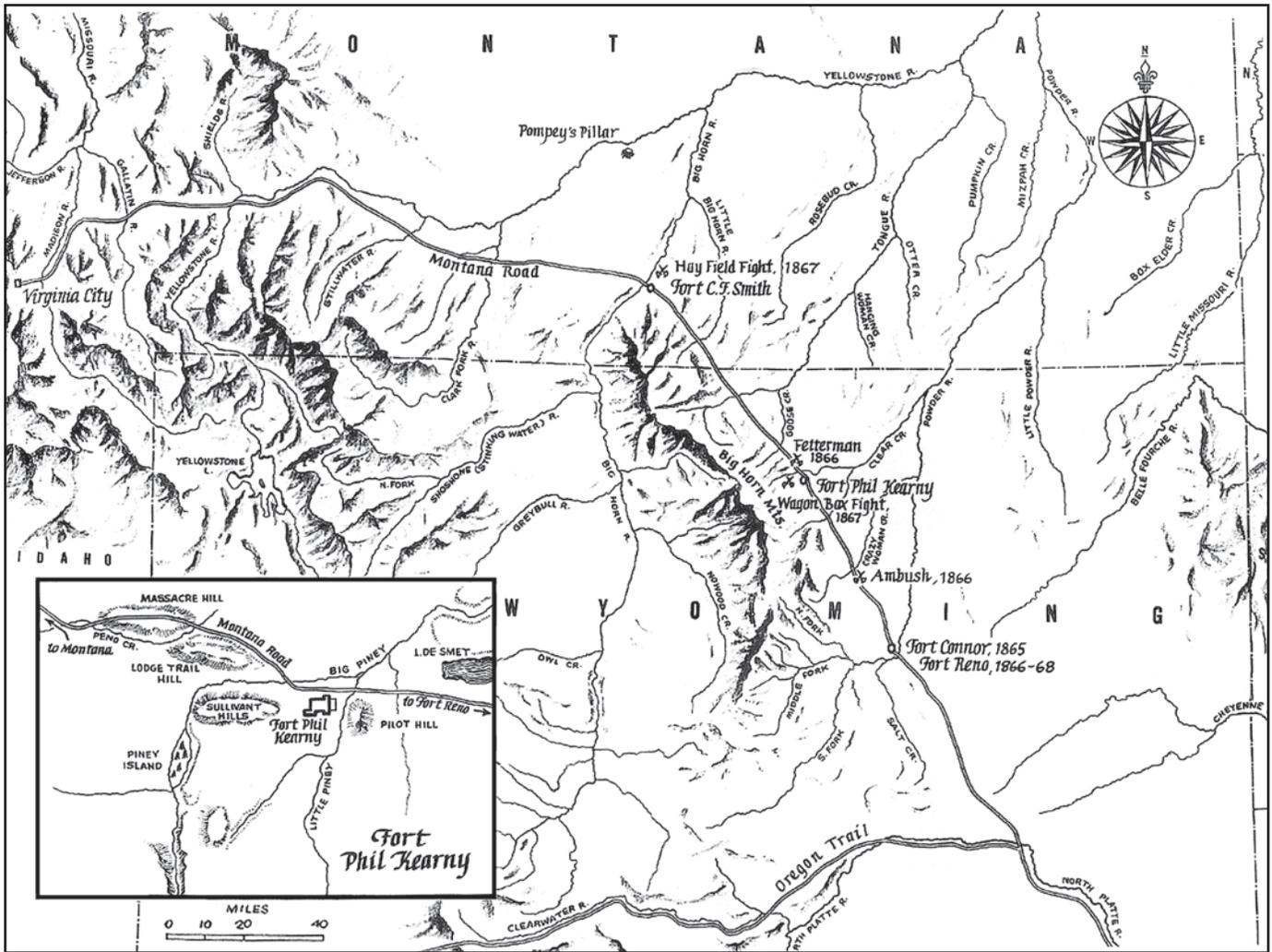
ably killed in a rear guard action at the location where his horse was found. Fetterman and Brown fought with the infantry on a rocky outcropping. They saved their last bullets and shot each other simultaneously in the head. The cavalry were the last to survive. In an attempt to climb over the ridge and make a last dash for the fort, they were cut down by a final charge from the Indians. Only one soldier was not dismembered and filled with arrows as Carrington's closed report would later reveal — a bugler named Adolph Metzger who fought off the attackers with everything, including his bugle. His abandoned body, left undecorated and as a sign of respect from the Indian warriors, was covered with a buffalo robe.

The aftermath of the massacre was worse than the fight. The women and children were rounded up and sent to the magazine with procedures put in place to blow themselves up inside should the fort be compromised. The colonel put everybody on alert and armed all the civilians. Routine orders for Carrington's turnover of command were received amid the chaos. The damage was done, and scenes of the battle were drawn by newspapermen in the east who had not even been present. The newspapers included erroneous word of Carrington being relieved of command for the massacre. For a country that had no official word of Indian hostilities along the Bozeman Trail from the government, the press fabricated where truth failed. Stories were printed of a colonel irresponsibly antagonizing the peaceful people and a Civil War hero senselessly slaughtered by friendly Indians.¹⁷

Carrington was investigated, exonerated, but treated with suspicion for the rest of his shortened career. He retired to spend the rest of his life trying to clear his name. The Bozeman Trail and the three forts constructed along its length were given up. Red Cloud burned the forts to the ground and planned his next action. History would be repeated 10 years later; Colonel George A. Custer made exactly the same errors.

The Fetterman Massacre: An EBO Analysis

Things may have been different if Carrington had the benefit of effects-based operations. Integrating EBO into the intelligence preparation of the battlefield (IPB) and the military decisionmaking process (MDMP) has become a natural progression in our methodology on the modern battlefield. The EBO cycle (see Figure 2 above) begins with receipt of mission and is used as a part of determining "the focus for future operations by analyzing past and current operations and the information environment."¹⁸ It should then become "a vital and ongoing part of the decide, detect, deliver, assess (D3A)" aspect of our "way ahead," including fragmentary orders (FRAGOs) issued to adjust our effects as we gain momentum, especially in the realm of information superiority.¹⁹



The Fetterman Massacre analysis focuses on grasping a basic understanding of the applied framework of EBO in a battle far removed from current operations in Iraq. Our steps include organizing troops and resources using mission, enemy, troops, terrain, time, and civilians (METT-TC), including a focus on effects beyond the first order, then applying the EBO cycle.

Mission: The original higher headquarters mission statement read: "18th Infantry establishes the Mountain District of the Platte command. Move immediately to occupy Fort Reno and open two new forts along the Bozeman Trail."

The mission statement could have been adapted to EBO (method-task-purpose): "On 280600 MAR 1866, 18th Infantry secures the Bozeman Trail in order to (IOT) allow unimpeded transit of civilian and military forces.

- Be prepared to conduct convoy operations along the trail.
- On order (O/O) conduct support and stability operations in conjunction with local inhabitants.
- O/O degrade belligerent Indian influence on Mountain District (information operations).
- O/O task organize forces and resources available to protect the Bozeman Trail."

Enemy: A modified observation, indirect fire, direct fire, obstacles, chemical, air, reserve, and electronic (OIDOCARE) warfare model works well for analyzing the Indian pattern of attack:

Observation afforded to the braves was terrific. A network of scouts and the advantage of years of experience in the wilderness made him a master at scouting.

Indirect fire and *direct fire* we see some effects beyond the first order.

The first order: the direct effect of fires was a perception of weapons superiority by the soldiers and an underestimation of the Native American weaponry. The soldiers had, after all, just fought and won the Civil War, they had more technologically advanced weapons and the Indians had inferior weapons, or were they?

Effects beyond the first order: the Indians had many weapons that worked better in close quarters than Carrington's, but had the additional shock effect, more so than a penetrating bullet.

- The war club and hatchet were gruesome weapons. More impressive was the Indian's willingness to use them in close quarters with violent zeal, causing shock and demoralizing the soldiers who viewed the gore. The soldiers had few equivalent weapons, as only the officers carried sabers and pistols.

- The bow and arrow was another weapon with advantages; it could be used as an indirect weapon as opposed to Carrington's direct firing rifles and pis-



tols. This allowed the Indians to hide below a crest and fire volleys without being exposed. It had a fast rate-of-fire and was relatively accurate at close and medium range.

- The soldier's weapons had great stand-off range, but a slow rate-of-fire meant the Indians could close distances during re-loading and fight on their terms. The Spencer carbines dominated the battlespace with a fast rate-of-fire and good accuracy while mounted, but were used only by the regimental band that rarely left the fort.

- The strengths of the enemy's weapons needed to be acknowledged and methods set to defeat their point-blank ambush style and minimize their shock-effect tactics. The soldiers' weapons needed to be better task organized.

Obstacles. The fort served as a manmade buffer for the soldiers. Yet by having a great command of the woods, the Indians had the marked advantage to maneuver through the natural terrain; this was ambush country.

The first order: effect of ambushes caused a loss of troops and materiel for the fort.

Effects beyond the first order: a huge loss of morale and a loss in confidence in Carrington's leadership. It also gave an increase in confidence to the Native Americans, which may have been prevented by:

- Establishing a more appropriate plan for dealing with hostile ambushes. Battle drills and frontier fighting skills were needed. Jim Bridger and the native Cheyenne were only too eager to assist and instruct the soldiers with frontier fighting styles.

- Placing the fort closer to natural resources to speed reaction times and limit soft targets exposure to the enemy.

Chemical issues do not apply; however, continually interrupting grazing livestock and burning valuable feed-hay, the Native Americans had greatly sickened and shortened the food stocks and health of the soldiers' mounts.

Air. Does not apply.

Reserve. The Indians had the advantage of more than 4,000 braves camped on the Tongue River. The soldiers had a two-month wait for reinforcements and even then, they only received two under-strength cavalry companies.

Electronic warfare. EW was nonexistent; however, we can analyze the information operations (IO).

First order: The IO campaign was scarcely engaged by Carrington. He performed little analysis of the preeminent chiefs in his area or their methods of communication. His lack of cultural information actually had the effect of antagonizing the Indians in effects beyond the first order.

Effects beyond the first order: Due to the initial misunderstanding at Fort Laramie, the Sioux made substantial gains in IO by leaving the impression with the Washington D.C. commissioners they were not at war, which had the following effects:

- It limited the need for reinforcements and supplies in the minds of Carrington's superiors and downplayed his predicament. Carrington was forced to answer claims about a lack of safety on the trail as General Cooke received more information, albeit false, from the press and not directly from Carrington. Later, he was put on trial mostly because the media propagated the idea that the Indians were peaceable but reported little of Carrington's predicament. Keeping his superiors regularly updated with facts, safeguarding his imbedded media sources (Ridge-way Glover), and making selected reports to the media would have helped him greatly, even if disaster had not struck.

- The chiefs in the local area held sway over their areas of operation. Knowledge of the customs and tribal loyalties in the area and the chief's spheres of influence were never analyzed. Many of Carrington's tactics, including the later hiring of the hated enemy of the Sioux, the Winnebago tribe, as scouts, served only to antagonize the Sioux.

- The Native Americans watched closely and learned Carrington's signal plan, the colonel failed to analyze the Indians' use of signal mirrors, and his intelligence on the enemy was severely lacking.

Terrain and Weather:

- Observation and fields of fire. Includes mostly the fort's location. The fort was open and in low terrain, which allowed the Indians, on many occasions, to observe the soldiers' actions and gain forewarning of their future actions.

- Avenues of approach. A modified combined obstacle overlay (MCOO) of the area would show the weaknesses of placing the fort in broad, open terrain, with multiple avenues of approach, since the Indians were guilty of the same on the Tongue River.

- Key terrain. The Sullivant Hills were located in a position of marked advantage, used predominantly by the Native Americans to observe the fort.

- Obstacles and cover and concealment. The terrain was undulating and had much micro terrain that was used to the Indian's advantage for observation and cover during ambushes. It was through the use of this type of terrain the Indians would launch their most successful ambush on Captain Fetterman.

- Weather. With the theft of livestock and interruption of supplies, the Army was ill-equipped to winter in the fort.

Troops and Support: Carrington had his valuable Spencer carbines task organized with his regimental band. This asset clearly would have been better used by his cavalry. The weapons system could have been arranged around a quick reaction force, capable of a shock attack or quick reinforcement. Training his soldiers in this new task organization and establishing immediate action drills and standard operating procedures was desperately required. The fort did none of this until the attack on 6 December, which cost them the life of Lieutenant Bingham. The colonel's signal plan and strict adherence to personally directing action caused a lack of decentralized command. His fighting forces were not structured to allow subordinate commanders to make quick, independent battlefield decisions.

Time: If we had the forethought of the pending attack on Captain Fetterman's company, we would have from 13 July to 21 December 1866. Calculating this, we have 161 days (5 months and 8 days), which was more than enough time to have a profound impact on the surroundings and conduct a wide EBO campaign.

Civilians: First order effect was an initial indifference and misunderstanding of Native American culture, which was steadily becoming more distrustful. The local Native Americans were initially thought to be a minor impediment to the pacification of the Mountain District. Likewise, the motivations and sphere of influence of Chief Red Cloud had been severely underestimated. Red Cloud and Crazy Horse turned out to be formidable foes.

Effects beyond the first order: If Red Cloud had requested nothing from the United States, simply acknowledging and respecting his leadership during their first meeting in Fort Laramie would have improved future relations. For instance, Chief

Black Horse offered 100 braves to assist the fort. Clearly, this was an opportunity to be acted on. Working with local, peaceful tribes, who were aware of the culture and understood customs and Indian tactics, could have had been a profound influence. The Indian fighters could have been integrated into the reactionary forces, conducted joint patrols, and acted as cultural liaisons to the commander, placing a Native American face on much of the mission the soldiers needed to accomplish.

Also, the Native Americans valued their medicine men to a great extent. Could the fort's doctors have been used to support the local cultures with medical and dental care? Possibly; the mysticism and respect attributed to medicine men could have been attributed, in part, to the fort sharing knowledge, which would have reflected well on Carrington, giving the fort much needed local respect.

Applying the EBO Cycle/Adapt and Adjust

At this point, we delve further into the EBO cycle. Looking at our previous analysis, what can we do to maximize the impact of the effects and adjust our future courses of action accordingly?

There are many ways to apply EBO. For example, the first analysis is that we are fighting like-versus-dislike armies. Our weapons are as dissimilar as our tactics. The EBO cycle forces us to constantly examine our own actions, which leads to more questions, but we have to keep a kernel of adaptability at all times. Recognizing that, as a collective fighting force, Carrington and his men were still fighting the old doctrine of the Civil War with weapons ill adapted to the new frontier would be a large step toward applying the inner cycle. Even Jim Bridger was able to see that the tactics of the soldiers were not working. Examining our methods and admitting the need for change is a difficult thing to ask of any leader in the middle of combat, but it would be a defining step. What are we doing institutionally that may be wrong or, more simply, may not be applicable to this battlefield?

Checking our analysis, we see one recurring theme — Carrington did not appreciate his foe. Understanding the tribes and influences of the various chiefs would be paramount to success. Failing to take cultural considerations into account is disastrous. Lack of knowledge of spheres of influence and cultural concerns were at the heart of Carrington's failure. Properly applied, Carrington could have completed a large part of his new mission statement by degrading the Sioux influence, mostly through a better understanding of the enemies' culture.

Most importantly, Carrington needed to share the information of success and failure with superiors and adjacent commanders. Failing to share lessons learned from this conflict and the Army's quick attempt to assess blame, created the boundaries for Colonel Custer's demise some 10 years later. Chief Crazy Horse, however, applied his lessons from the fight with Carrington and massacred Custer just as soundly as he had Captain Fetterman. Can we apply the lessons of EBO to our own modern battlefields?

EBO: The Intelligent Approach

The Fetterman Massacre has remarkable similarities to today's battlefields and the current operations in Iraq. We are fighting a less-equipped, lesser trained enemy, often on his home territory. As with Colonel Carrington, our enemy stood up to us with an early warning of his Jihad. Our battlefields are asymmetrical, contradictory to many previous global conflicts, and our enemy's fighting style is unlike what we are taught in our manuals and doctrine. The enemy ambushes our convoys with less tech-

nologically advanced weapons, he chooses the terrain on which to fight, he uses low-tech shock weapons (improvised explosive devices and rocket-propelled grenades) and chips away at our morale by ensuring the media is present to record our failure (IO dominance). He is better adapted and better acclimated to the terrain and weather and observes and adapts to our fort-style defenses. The enemy blends with the civilian population. He knows the customs and culture and works them to his advantage. We have, on the other hand, had difficulty with the media and are slow to coordinate with adjacent commanders, other services, and allies. These lessons we are being forced to learn now are the same lessons learned in the distant past.

We must prevent the enemy's domination of the battlespace. We must be better students of our own history to understand how to fight future battles. We must understand what is important to our enemy — customs, religion, culture, and tribal loyalties — and use that knowledge to our advantage. Knowledge and information are power. We must be adaptable and wisely use the means at our disposal to accomplish our objectives, but also to create an effect on our enemy that reaches beyond the boundaries of the next objective or target-based mission. We must create a permissive environment for our own troops while simultaneously creating a non-permissive environment for our enemy. Effects-based operations are an adaptable, open-ended concept that provide the simple framework for us as combatants to examine our given mission and succeed using a more intelligent approach.



Notes

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¹⁰Ibid., p. 20.

¹¹Ibid., pp. 38 and 39.

¹²Goble, p. 25.

¹³Brown, p. 76.

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¹⁵Ibid., p. 141.

¹⁶Ibid., p. 150.

¹⁷*Frank Leslie's Illustrated Newspaper*, 01/19/1867, No. 590, vol. XXIII, pp. 280-281.

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Tactical Agility:

Linking the Cognitive and Physical using Networked Battle Command

by Captain Robert Thornton

The U.S. Army has made great strides in leveraging digital battle command in its tactical operations centers (TOCs) through the Army Battle Command System (ABCS), as well as on its platforms through the Force XXI battle command brigade and below (FBCB2). Proof lies in the agility of the Stryker brigade combat teams (SBCTs), the 3d Infantry Division (3ID), and other networked forces that redistribute combat power and coordinate employment by sharing a common operational picture (COP) that provides locations of friendly forces, common graphics, a means of transmitting digital orders, and a way to update enemy activities, enabling all to reach a more common understanding of the fight. This shortens our reaction time to changes in the conditions of mission, enemy, terrain, troops, time, and civilians (METT-TC).

The article takes some of what has been written and some of what is being applied and turns it into something digestible to assist leaders and staffs at the battalion

and below levels in getting the most out of a networked force. Network centric operations are about people sharing information that allows us to be “first with the most” at the decisive points on the battlefield, wherever and whenever they occur, with the systems and soldiers we have.

A Network Centric Force: People not Routers

Our digital systems are only going to get better. The goal is to provide the U.S. Army with a single system that supports battle command on the move (BCOTM) through the warrior machine interface (WMI). This will enable battalion and brigade staffs to execute their roles and responsibilities on the move using common hardware and systems on platforms down to the lowest tactical levels. Network accessibility down to the soldier level, combined with an increase in unmanned systems, such as unmanned aerial vehicles (UAV), unmanned ground vehicles (UGV), and unattended ground

sensors (UGS), provides the means to leverage information better and faster. This is a current ongoing effort to support modularity with the best available networks and sensors.

Hardware and software programs make these increased capabilities a physical possibility, since they reside in both the physical and information domains. The other part of the equation is in the cognitive domain: how tactical leaders and staffs understand masses of information and filter that information so their decisions give us the advantage over any enemy. As shown in Figure 1, agility crosses all four domains and is generated from understanding the situation as generated from digital and analog sources.¹ It then crosses from the cognitive back into the physical through action and execution, or from knowing what needs to be done to doing something about it.

In a paper titled, “Network Centric Operations Conceptual Framework,” written by John Garstka, Office of Force





“Network accessibility down to the soldier level, combined with an increase in unmanned systems, such as unmanned aerial vehicles (UAV), unmanned ground vehicles (UGV), and unattended ground sensors (UGS), provides the means to leverage information better and faster. This is a current ongoing effort to support modularity with the best available networks and sensors.”

Transformation, and David Alberts, Office of the Secretary of Defense, the authors qualify agility as being six interrelated attributes:

- **Robustness:** effectiveness across different contexts (the ability to maintain effectiveness across a range of tasks, situations, and conditions).
- **Resilience:** overcoming losses, damage, or setbacks (the ability to recover from or adjust to misfortune/damage, and the ability to degrade gracefully under attack or as a result of partial failure).

- **Responsiveness:** the ability to react to a change in the environment in a timely manner.
- **Flexibility:** identifying multiple ways to succeed and move seamlessly between them.
- **Innovation:** the ability to do new things and the ability to do old things in new ways.
- **Adaptation:** the ability to change work processes and the ability to change the organization to take advantage of characteristics of a situation.

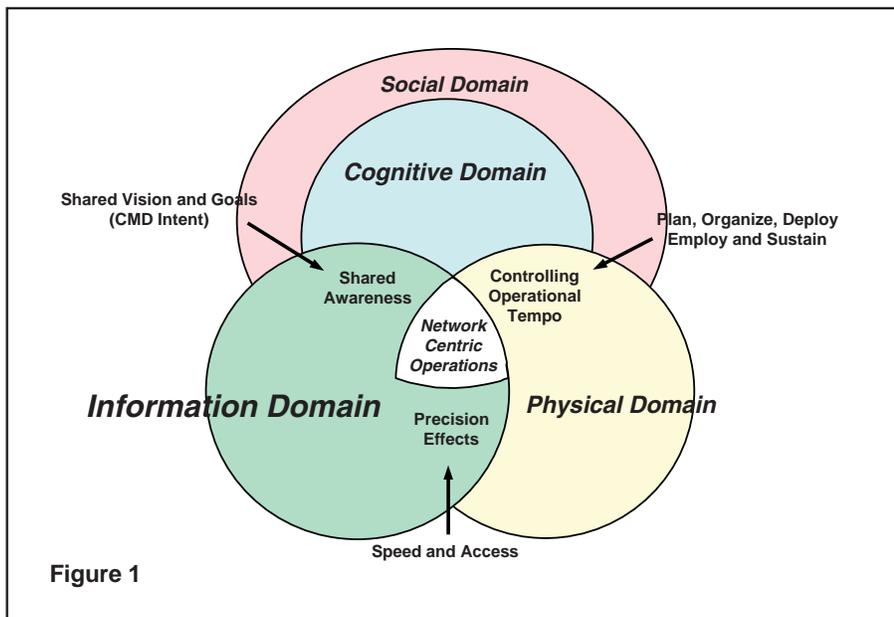


Figure 1

Recognitional Decisionmaking

While a networked force provides part of the means for agility, the execution of agility comes through recognition of changes in METT-TC by staffs and leaders — people — then having the means to take action: units and assets not committed or in contact that have the required combat power to get to the decisive point and do something about it. This requires what is called “intuitive or recognitional decisionmaking.”

While we teach troop leading procedures (TLPs) to leaders and the military decisionmaking process (MDMP) to officers and noncommissioned officers who will serve in staff positions, this focus is on an estimate that occurs before the line of departure (LD) is physically crossed. The intent is that through reports, the base plan can be updated (fragmentary orders) to account for new information that accounts for changes in conditions. The problem is that we fail to recognize a change in conditions until it is too late. Addressing three vital issues may help recognize changing conditions as they occur: find a better way to share information (an ongoing technological evolution); avoid perceptions while writing the original estimate or order (often referred to as fighting the plan); and recognize the relevance of new information and how it fits (keys in on agility) and then do something about it.

In Malcom Gladwell’s book *Blink*, he talks about recognitional decisionmaking as the unconscious processes framed by individual experience that go on during the first two seconds when confronted with something new, and how those processes affect our decisions.² We often refer to it as an intuition that comes through experience, but whatever you call it, it is a key component of network centric operations. The importance comes back to speed or how fast information can be processed and action taken to prevent the enemy from gaining or ever regaining the initiative.

Organizational Culture to Network Centric Culture

There is a cumulative effect from the strategic, to the operational, to the tactical. Our current military planning culture has a predominantly sequential view of time. Consider the steps of the mission analysis and the MDMP; we are constrained to varying degrees by higher echelons’ ability to turn out products. This is why we observe a 1/3:2/3 planning timeline and squeeze time by conducting parallel planning. Because of the varying

degrees of unknowns, we are limited to varying degrees of sequential planning.

The idea of a fully networked force is to achieve a *synchronous* planning culture. Synchronous meaning that through a collaborative environment and a COP (blue and red feed) that benefits from joint and national asset feeds and analysis at all echelons, tactical echelons will reach similar conclusions near simultaneously and then confirm those conclusions (assuming that all parties believe in the fidelity of what the COP presents). Pushing additional sensors (a higher density of UAVs, UGVs, and UGS organic to every tactical echelon from squad to brigade) throughout the area of operations, the COP fidelity will improve not only because we have more sensors, but because those sensors are continuously refocused based on information collected — confirming or denying changes in conditions.

The net gain is a force that once altered, regardless of its location, can begin to plan at every tactical level, and as soon as it

has the required amount of combat power physically generated at the aerial port of debarkation (APOD) or seaport of debarkation (SPOD), it can begin offensive operations. During movement to the objective, the force can adapt to changes in METT-TC down to the platform and soldier levels, which is the idea of self-synchronization — those within a networked force will see changes in conditions and react as parts of a whole to achieve the purpose, if they have a common enough understanding of what they see.

Cultural Changes: from TOCs to Mobile Command Groups

In the Future Combat System (FCS) Unit of Action Experimental Element, Unit of Action Maneuver Battle Lab, Fort Knox, Kentucky, we have placed leaders and staffs into cells that are on the move (vehicle mockups for simulation) and provided them a COP beyond today's standards. However, even in this laboratory environment where connectivity (digital and analog) between vehicle mockups is

hardwired and the COP is optimal and cells can use chatrooms and instant messaging, an absolute shared situational understanding is still not self-evident. This is due in large part to organizational culture benefits that are hard to reproduce in disparate, but well connected, command and control cells.

Organizational Dynamics versus NCO Dynamics: the Bill

Making sense of all the information presented on a COP benefits from having a fixed-site command post — a staff in a single location, with access to multiple types of information feeds, can communicate on various levels. Depending on the echelon, you can factor in varying levels of comfort and multiple qualified personnel to pull shifts during continuous operations. Understanding, recognizing patterns, establishing linkages, issuing guidance and recommendations, and giving orders all require cognitive abilities and benefit from human interaction. Achieving the capability to conduct

"While we teach troop leading procedures (TLPs) to leaders and the military decisionmaking process (MDMP) to officers and noncommissioned officers who will serve in staff positions, this focus is on an estimate that occurs before the line of departure (LD) is physically crossed. The intent is that through reports, the base plan can be updated (fragmentary orders) to account for new information that accounts for changes in conditions."



BCOTM from distributed cells for all battalion and brigade elements that is as good as or better than a fixed command post is both the goal and the challenge.

Technical solutions will help overcome some challenges, such as sharing information through collaborative chatrooms or being able to collaboratively manipulate planning products, such as graphics or rehearsal tools, in real time. Command, control, communications, computers, intelligence, surveillance, and reconnaissance (C4ISR) tactics, techniques, and procedures (TTP), such as cell drills, which equate to TOC battle drills but are built for BCOTM, will help identify friction points and focus battlefield operating systems (BOS) for short durations. However, the real challenge is getting people to share the same intuitive understanding across tens to hundreds of kilometers, while moving across varied terrain, possibly in contact, that they would otherwise enjoy in a fixed-site TOC with coffee.

To some degree, we are already doing this through other than strictly military applications. High school and college students, as well as younger soldiers, are spending time with “online” gaming where they work with known and unknown players to execute tactical scenarios in various games. Many of us conduct video teleconferences, WebExs, and teleconferences from separate locations to discuss complex issues instead of bringing entire groups together on every occasion. The skills required to intuitively recognize changes (sometimes subtle) in conditions, make appropriate assumptions, alert connections, and give orders or recommendations to others over digital and analog communications is the skill set required to leverage the TTP, and the technology required to leverage network centric operations.

From Information Superiority to Physical Action

To take advantage of this information, there is a physical catch. If the idea is to begin movement without committing too many assets to any one course of action, then longer range fires, such as nonlinear of sight (NLOS) and beyond line of sight (BLOS), become critical. NLOS corresponds to observed indirect fires; BLOS means the shooter still sees the target, but through a sensor (manned or unmanned) other than himself. We are fairly comfortable with NLOS, but BLOS is something new. The closest examples would be somewhere in the middle between armed UAVs, such as the Preda-

tor, and UAVs used to observe for fires. Consider it the link between the shooter and the sensor, either a video or targeting chip is sent back so the shooter can see his target and the solution is fed into the missile or round. It is easier and faster to move a missile or a round through the air to take advantage of new information than to move a platform or a unit across terrain.

Networked fires is the method we will use to leverage BLOS and NLOS fires and other effects. The idea is that every soldier and platform can generate fire missions and because every level of command shares the COP, high-payoff targets can be identified and targeted with the right asset (kinetic or non-kinetic), and decisive points can be identified as they are occurring versus where they were templated. Munitions and platforms can be massed to achieve synergistic effects that maneuver can exploit.

Consider the vignette below between a combined arms battalion commander and his Charlie Company commander:

“Guidons, this is Raider 6, standby.”

“Cougar 6, this is Raider 6. IMS [intelligent munitions system] hits in the city core, confirm what the other sensor hits, joint feed indicates the enemy is repositioning several companies worth of mechanized infantry toward your objective from north to south. It is like we discussed a few minutes ago, the enemy apparently knows the decisive point. Over.”

“Raider 6, this is Cougar 6. Roger, I see the hits on my COP. We are getting ready to pass through Armageddon Company. I think my lead element will reach the objective within five minutes, but it will take us a few more to kill a platoon’s worth of militia and reorganize into a hasty defense. Over.”

“Cougar, this is Raider. You are now my priority. All the IMS fields in the city are active, so that will slow and disrupt them, probably piecemeal them into you. I’m having Shadow [the recon element from the combined arms battalion] reposition some additional CL III’s [UAVs] over the city to support additional network fires. Armageddon will reposition a CL II UAV to your southern flank and overwatch that avenue of approach so you can concentrate on the counterattack. He’ll also provide some additional BLOS fires. The enemy’s lead elements should arrive at your objective in about 10 to 15 minutes. Over.”

“Okay, sir. I’m issuing FRAGOs to my lead platoons to bypass the strong points

and shift north about a block to set in a couple of blocking positions. It will take me a little longer to seize the traffic circle with just 3d platoon and the sappers you gave me. I think Bandit and Dragon companies can bypass to the south and get to their objectives. As soon as I get my part of the LOC [lines of communications] opened up, I’ll let you know. Any chance I can get the mortar battery to focus on the traffic circles to support 3d platoon’s assault?”

“Roger Cougar, Raider 8 just took Mad Dog [the battalion mortars] out of network fires and they are shooting for you as long as you need them. We also got the brigade to retask some of its LAMs [loitering attack munitions] and we’re trying to get some close air support from the south diverted for our use. I’ll hold some of the CA [civil affairs] assets at Armageddon’s position along with a LOG-PAC and the MAC [heavy engineer equipment]. You can call them forward when you need them. Bandit and Dragon should take some of the heat off of you when the enemy realizes that they are headed for their objectives. Do you need anything else? Over.”

“No sir, I’m going to jump down to my company push and see if my folks have received and understand the graphics and text FRAGO we pushed out. My 5 will be on this push to report and I’ll pop back up when the fight is done. Over.”

“This is Raider 6. Roger. All other guidons acknowledge.”

In this vignette, the battalion commander only confirmed the last part of what he realized was going to happen. What’s more, prior to his transmission, he shared that information with the element most likely to be effected as an informal warning order (WARNO). The company commander recognized the impacts and gave his battalion commander verbal acknowledgment as to what the impacts meant to his assigned purpose. What is not seen here is the staff executing its BOS functions to reallocate and synchronize combat power for what has become the decisive point. It is fully engaged in leveraging all assets to support the Charlie Company commander. You can take this up and down the tactical chain as brigade assets and higher are tapped into, all the way down to how the company commander will push these assets down to support his platoon leaders. All of this has to happen through chatrooms, analog nets, and other collaborative tools. Since the staff is distributed, it must have a higher understanding of not only its BOS func-

tions, but what the other BOS element impacts are — this all happens on the move, from separate locations.

A Recognitional Model for Staffs and Leaders

A recognitional model should establish a dynamic (or constantly evolving) process for initial evaluation and continual reevaluation of the tactical estimate where intelligence on METT-TC identifies options for maneuver to exploit. Based on see first, understand first, act first, and finish decisively, and observe, orient, decide, and act, the idea is to quickly recognize an emerging enemy decision through sensors (includes soldiers), then generate options across the BOS that allow us to fight the fight and not the plan.

The idea is that this process will enable leaders and staffs to “self-synchronize,” in net-centric speak, or collaboratively plan in near-real time with minimal products since everyone can access the information on the network. The only things needed are: higher headquarters’ first cut on a mission statement that generates a task and purpose (purpose being the critical of the two), some intent graphics, and any existing graphic control measures. These baseline guidance measures, combined with what is represented on the COP, provide the mechanics for planning; a simple and dynamic process is needed to join together the disparate cells.

The process for a recognitional model will have to provide the mechanics for collaboration. It will need to provide cyclic feedback that assists disparate staff functions in cells and on the move, as well as the opportunity to reevaluate and update BOS estimates while overcoming individual and cell bias. The process has to be simple to account for the friction generated by people in different locations viewing, interpreting, and working together on the information available on the COP. It has to be fast enough to leverage new information and generate options that can be physically taken advantage of before the enemy can compensate for advantages we might have gained.

Network centric operations are about people. While the technology promises access to greater amounts of timely information and the ability to access that information from the individual soldier to joint and national levels, without people to control it, technology only provides advantages to individual elements, not the combined-arms synergy we seek.

If we have the right people and processes, it does not matter what METT-TC con-

1. ID the Objective of the BLUFOR purpose — is it terrain, friendly or enemy based?
2. Begin to ID the terrain/infrastructure/events/people/services [can be thought of as high-payoff targets (HVTs)] we (BLUFOR) have to have or influence — this is an ongoing battlefield operating systems (BOS) process that accounts for possible enemy reactions to our actions.
 - a. Intelligence, surveillance, and reconnaissance (ISR) looks at purpose and task of OPFOR, and IDs terrain/infrastructure/people/services [can be thought of as high-value targets (HVTs)] — this is an ongoing BOS process based on BLUFOR reactions — if ISR products give current disposition (or indications of dispositions) then HVTs should match current information; if not, then ask why? What is the enemy trying to do and how will he do it? What did I/we miss? What do I/we not see?
3. Match up the BLUFOR and OPFOR estimates.
4. Look at enemy disposition (templated or confirmed) and give first reactions to BLUFOR contact.
 - a. What decisions is the OPFOR making and is he applying or redistributing combat power?
 - b. What are the indicators to confirm the action?
 - c. What named areas of interest (NAIs) and assets are needed to catch the indicators? What needs to be retasked?
5. What options does this generate for BLUFOR? Staying in front of the observe, orient, decide, and act (OODA) loop.
6. What BOS assets can we bring to bear to support the lower tactical echelon?
7. How can we exploit the option (at all tactical echelons)?
8. What is the enemy reaction?
 - a. Here, steps 1-7 are reassessed to address a dynamic enemy.

Figure 2. Leveraging Network Centric Planning in 8 steps or less

ditions we face or what platform or type of formation we have (heavy brigade combat team, infantry brigade combat team, SBCT, or FCS), we get the advantage of a networked force that gains and maintains the initiative. The advantages are speed and flexibility; the faster you acquire and share information, the more options you can generate before the information has no value. Network centric operations supporting BCOTM will require a cultural shift in the way headquarters elements are designed and think. The TTP for planning and execution need to accommodate the shortfalls that are traded to gain advantages in other areas.

Finally, a recognitional model should not be a substitute for an analytical model, such as the MDMP prior to crossing the LD, where assumptions outnumber facts. Even as ISR products increase the number of “knowns” on the battlefield, we still require an analytical process to create a common understanding among BOS. In other words, if there is nothing to recognize because actions have not generated reactions, then there is little value in a recognitional process. Instead, the recognitional decisionmaking process should be used to validate or invalidate assumptions made prior to LD, then act

on the facts quick enough to maintain or increase our decision superiority.



Notes

¹Figure 1, “Network Centric Operations Conceptual Framework” by John Garstka, Office of Force Transformation, and David Alberts, Office of the Secretary of Defense, illustrates the cross-over effects between the cognitive, the information, the physical and the social domains. This illustrates the importance of people over technology and the impacts domains have on one another.

²Malcolm Gladwell, *Blink: The Power of Thinking Without Thinking*, Little, Brown, and Company, New York, 11 January 2005.

Captain Robert Thornton is currently an operations officer, Future Combat System Unit of Action Experimental Element (UAEE), Unit of Action Maneuver Battle Lab (UAMBL), Fort Knox, KY. He received a B.A. from Austin Peay State, and is currently pursuing an M.S. from American Military University. He has served in various command and staff positions, to include commander, A Company, 1st Battalion, 24th (1-24) Infantry, 1st Brigade (Stryker Brigade Combat Team), 25th (1/25) Infantry Division, Fort Lewis, WA; commander, Headquarters and Headquarters Company, 1-24 Infantry, 1/25th Infantry Division, Fort Lewis; S3, 1-24 Infantry, 1/25 Infantry Division, Fort Lewis; and platoon leader and XO, 1st Battalion, 187th Infantry, 101st Airborne Division, Fort Campbell, KY.



Gunner, Canister, Troops!

by Major Benjamin Harris

“Gunner, canister, troops!” No Abrams tank commander has ever given that fire command until now. The M1028 canister is going to Iraq. Almost simultaneously, the U.S. Army and U.S. Marine Corps approved plans to accelerate fielding of this newest 120mm tank round, which is long overdue, to support Abrams crewmen in Iraq.

U.S. Forces Korea first requested the round in December 1999. The canister requirement was to defeat dismounted soldiers carrying lightweight rocket-assisted grenades or other handheld antitank weapons. It took several years to get funding, but in the end, the Department of the Army authorized a two-year research and development effort beginning in late 2002. U.S. Army engineer designs, from the Armaments Developmental Engineering Center, Picatinny Arsenal, New Jersey, were shared with General Dynamics Ordnance and Tactical Systems after the Product Manager for Large Caliber Ammunition competed the concept worldwide.

Today, that excellent work has paid off with a devastating antipersonnel round, designed to engage massed formations of dismounted “threats,” exactly as observed in several key battles in Iraq. The round operates similar to a shotgun, in that it expels nearly 1,100 tungsten balls at the

muzzle. The comparison ends there — these balls are 3/8 of an inch in diameter and travel at velocities in excess of 1,400 meters per second. A ball that massive and fast can have devastating effects on buildings, sport utility vehicles, and other objects when fired at close range in urban operations. For the combined operations commander, it is like having 1,100 soldiers simultaneously fire their M16s, without fire distribution issues, from behind the protection of 70 tons of armor! This is truly a shock-effect weapon.

But the canister is not new to the Army; it has been used effectively in nearly all wars in which the United States has been involved, with the exception of Operation Desert Storm. Remember Pickett's Charge at Gettysburg and how effective the canister was at stopping the assault?

There is some concern that the canister might be too devastating in an urban operation; in fact, the opposite is true. In comparison to high-explosive or depleted uranium ammunition fired from an Abrams, the canister has a shorter effective firing range. Even the loader's and tank commander's machine guns have greater killing range. This is due to the unique ballistic characteristics of a ball versus those of a bullet. The advantages of the canister are realized when used at close range and against concentrations

of massed threats that cannot be quickly engaged with the tank's machine guns.

As the Product Manager for Large Caliber Ammunition accelerates production to meet the needs of Abrams crewmen worldwide, the U.S. Army Armor Center is working to develop tactics, techniques, and procedures (TTP) and special text training material to support the warfighter in the Global War on Terror!



Major Benjamin Harris is currently the assistant Training and Doctrine Command System Manager for Abrams, U.S. Army Armor Center, Fort Knox, KY. He received a B.S. from the U.S. Military Academy and a M.S. from Central Michigan University. His military education includes Airborne School, Armor Officer Basic Course, Armor Officer Advanced Course, and resident U.S. Army Command and General Staff College. He has served in various command and staff positions to include, assistant product manager for large caliber (Abrams) ammunition, Picatinny Arsenal, NJ; administrative contracting officer, Lima Army Tank Plant, Lima, OH; combined arms team armor advisor, 42d Army National Guard, Fort Dix, NJ; commander, Headquarters and Headquarters Company, 1st Battalion, 70th Armor, 194th Separate Infantry Brigade, Fort Knox, KY; and scout platoon leader, D Troop, 4th Cavalry, 197th Separate Infantry Brigade, Fort Benning, GA.

LETTERS from Page 3

Historically, armor is a combined arms mounted force, not just Abrams tanks and Bradley cavalry fighting vehicles. The armored division and mechanized infantry division are for all practical purposes one and the same — heavy organization. Furthermore, even the air assault division is conceptually and doctrinally closer to a mechanized division than to light infantry.

Armor has absorbed the cavalry role and missions of reconnaissance and security at division and above, though recent practice is bringing it down to brigade level. But scouts are not cavalry. Scouts are organic to their parent battalions. The various proponent centers should assume responsibility for their respective scout platoons.

Light (motorized) cavalry should be eliminated outright — acknowledge reality, pay the price for deployment and logistics, and assign true armored cavalry and mechanized units to support light infantry brigades and divisions.

The Stryker is simply another mechanized vehicle, not a type of unit. We did not have “half-track battalions and regiments” in World War II and should not have “Stryker battalions and brigades” today.

If anything, it is light infantry that is the historic anachronism. The World War II U.S. infantry division was motorized in fact, if not in name. The light division was tried and abandoned during World War II; it simply could not sustain itself even before the fight. Dismounted infantry soldiers will always remain part of the combined arms team, but do we really need light infantry divisions? All of the rest of the light division is motorized anyway. You simply cannot manhandle 105mm howitzer, 120mm mortar,

and TOW ammunition for any distance, never mind the equipment.

Under today's concepts, I readily see the deployment of light infantry battalions as part of tailored brigade teams, but I question if we will ever need a light infantry brigade, as opposed to a common modular brigade headquarters and headquarters and headquarters company to command and control battalions as assigned.

As time goes on, what we now call the “armor” or “heavy force” will always be the combined arms maneuver force of decision. The sad irony will be to see light infantry displaced from its historic home at Fort Benning, Georgia.

CHESTER A. KOJRO
LTC, U.S. Army, Retired

Simplifying Target ID for Air Attack

Dear *ARMOR*,

This letter is in response to the article by Captain Shawn Hatch, titled “Air-Ground Integration,” in the July-August 2005 issue of *ARMOR*. I read the article with great interest, as I am a retired master army aviator who served two tours in Vietnam. During both tours, I served in C Troop, 1st Squadron, 9th Cavalry, which was the 1st Cavalry Division's reconnaissance squadron. I was surprised that identifying ground targets for air attack was still a major problem.

I was happy to note that it is standard to employ at least two helicopters as a team, and that hovering in an urban environment, as well as over enemy locations, was a good way to

get shot down, which is what happened to the crew in *Black Hawk Down*. Such hovering tactics make helicopters sitting ducks for rocket-propelled grenades.

During Vietnam, each troop was assigned to a brigade and a liaison party was established in the brigade headquarters. The troop commander would visit the brigade to be briefed on the brigade's situation and any missions that required the services of the air cavalry troop. In that environment, the troop's primary job was to conduct reconnaissance in its area of responsibility to locate enemy forces and destroy them by fire or by placing infantry troops on the ground. Air troops were assigned to brigades in the simple order of: A Troop to 1st Brigade, B Troop to 2d Brigade, and C Troop to 3d Brigade. The squadron had a D Troop (wheeled vehicles) that was generally used in convoy escort missions or to support air troops as needed. The system worked well and ensured a good degree of teamwork.

With respect to identifying targets for attack, we had to use the verbal method of talking into the target, such as “the lone tree on the horizon and two fingers to the right,” that both air and ground units could see. I don't understand what happened to the device that could identify the target by lasing it, which provided the aircraft a heads-up display that would show the laser spot. These aids for identifying targets were in development, but I don't know if they were ever deployed. It would certainly simplify target identification for Army and Air Force support aircraft. Since artillery is not being used much, do the fire support teams still have the ground-laser teams used for ranging and target identification? These could be used for identifying targets for air and direct-fire systems. Such a combination of systems would greatly simplify target locations for attack.

CECIL L. SHRADER
COL, U.S. Army, Retired

Military Review Seeks Essays for 2006 Professional Military Writing Competition

For the 2006 General William E. DePuy Professional Military Writing Competition, *Military Review* seeks original essays on subjects of current concern to the U.S. Army. This contest is open to all. The Global War on Terror, evolving threats, force reform, insurgency/counterinsurgency, cultural awareness in military operations, tanks in urban combat, transitioning from combat to stability and support operations, ethical challenges in counterinsurgency, historical parallels to current operations, better ways to man the force — the possible topics are limitless. Winning papers will be carefully researched, analytically oriented critiques, proposals, or relevant case histories that show evidence of imaginative, even unconventional, thinking. Submissions should be 3,500 to 5,000 words long.

First prize is featured publication in the May-June 2006 edition of *Military Review*, a \$500 honorarium, and a framed certificate. Second and third prizes offer publication in *Military Review*, a \$250 honorarium, and a certificate. Honorable mention designees will be given special consideration for publication and certificates.

Essays should be submitted with an enrollment form not later than 1 April 2006 to *Military Review*, ATTN: Competition, 294 Grant Avenue, Fort Leavenworth, KS 66027-1254, or via e-mail to milrevweb@leavenworth.army.mil (Subject: Competition). For a copy of the enrollment form and additional information, visit *Military Review's* website at <http://www.leavenworth.army.mil/milrev/>.

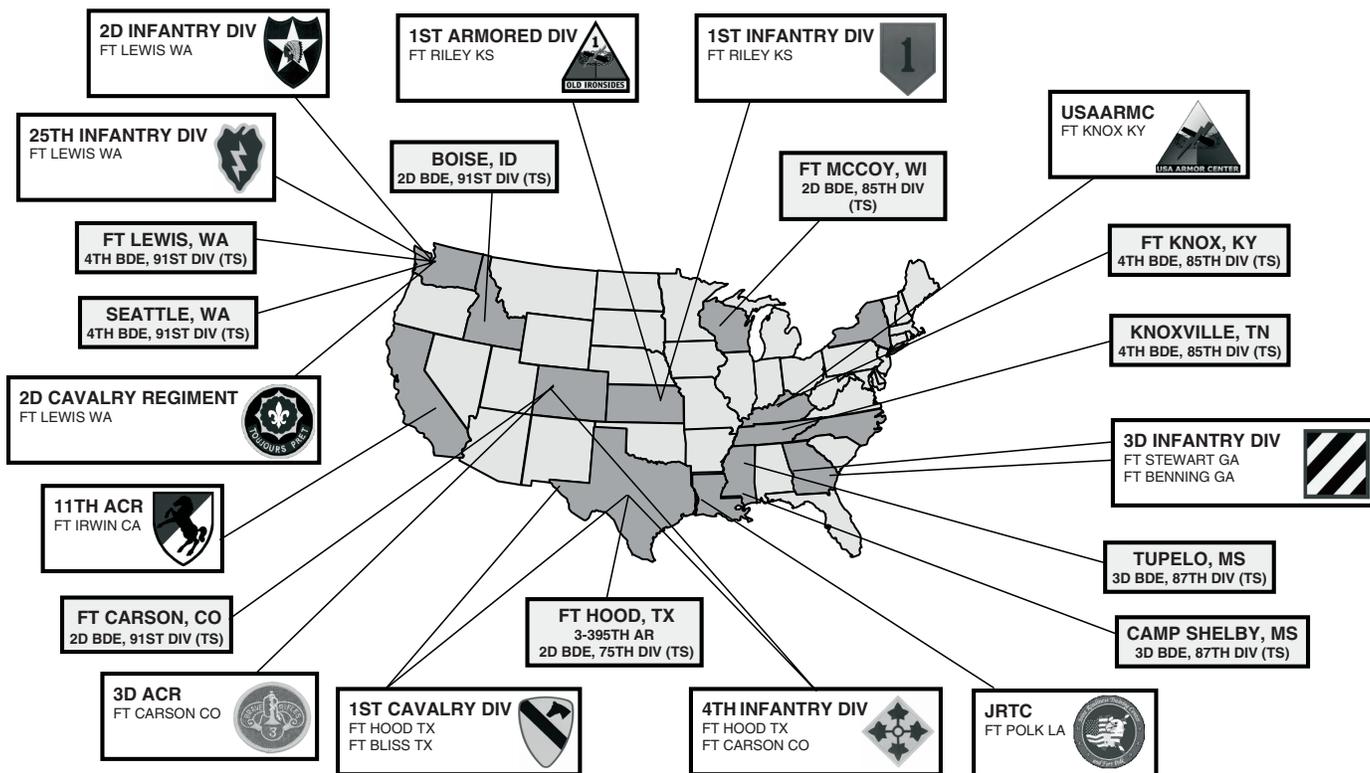
DRIVER'S SEAT from Page 5

Armor units are leading the fight in Iraq and are the force of choice in urban operations. In all aspects of our profession, we continue to develop NCOs through critical assignments. The emphasis is on providing our armor/cavalry NCOs with a series of operational assignments, supplemented by NCOES, and generating assignments. The Armor Center has published professional development model/standards to assist the NCO to achieve tactical and technical proficiency.

In closing, I would like to thank Command Sergeant Major DeSario for leaving such a fine outfit and Major General Tucker for trusting me to be his wingman. Sir, thanks for the chance to excel under your command.

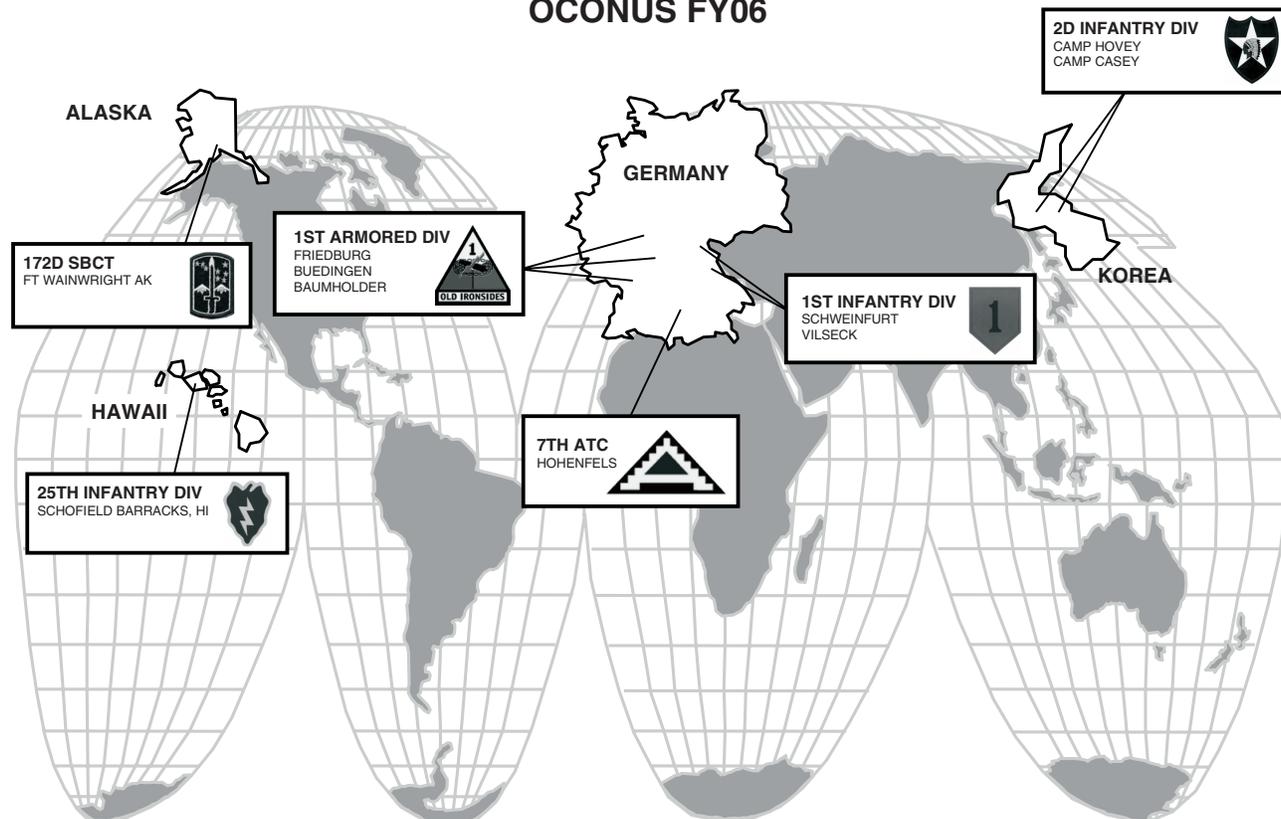
Active Component Armor/Cavalry Home Station Locations

CONUS FY06



Note: Gray boxes indicate Active Component support to Reserve Component units (AC/RC Commands).

OCONUS FY06



Active Component Units

Source: Office, Chief of Armor, Proponency Division

Unit	Location/APO/ZIP	Phone/DSN	CDR/CSM
1st Armored Division (Wiesbaden, FRG)	1st Brigade	Friedberg, FRG 09074	324-3072 COL Sean B. MacFarland CSM Raymond R. Houston
	1-37 Armor	Friedberg, FRG 09074	324-3072/3071 LTC Vincent J. Tedesco III CSM Mark Schindler
	2-37 Armor	Friedberg, FRG 09074	324-3080/3206 LTC John K. Tien Jr. CSM Gary L. Williams
	2d Brigade		
	1-35 Armor	Baumholder, FRG 09034	485-6368 LTC Anthony E. Deane CSM Ramon Delgado
	3d Brigade	Ft. Riley, KS 66442	856-5014 COL David J. Bishop CSM Phillip F. Johndrow
	1-13 Armor	Ft. Riley, KS 66442	856-4511/5833/1878 LTC Eric J. Wesley CSM Carlos J. Alersmillan
	2-70 Armor	Ft. Riley, KS 66442	856-5820/1036 LTC Leopoldo A. Quintas Jr. CSM Michael R. Matthews Sr.
	1-1 Cavalry	Buedingen, FRG 09076	321-4884 LTC John A. Peeler CSM David S. Davenport
1st Cavalry Division (Ft. Hood, TX)	1st Brigade	Ft. Hood, TX 76546	737-0831 COL Paul E. Funk II CSM Stanley D. Small
	1-12 Cavalry	Ft. Hood, TX 76546	737-0823 LTC Kevin S. MacWatters CSM Donald L. Battle
	2-8 Cavalry	Ft. Hood, TX 76546	737-3516/4178 LTC Scott L. Efflandt CSM Pablo H. Squiabro
	2d Brigade	Ft. Hood, TX 76546	737-6560 COL Bryan T. Roberts CSM James F. Lee
	1-8 Cavalry	Ft. Hood, TX 76546	737-0431/7659 LTC Jeffrey T. Sauer CSM Horace Gilbert
	4-9 Cavalry	Ft. Hood, TX 76546	737-0683 LTC Patrick E. Matlock CSM James P. Daniels
	3d Brigade		
	3-8 Cavalry	Ft. Hood, TX 76546	738-1968/1552/7404 LTC Kevin R. Dunlop CSM Roland E. Glenister
	1-7 Cavalry	Ft. Hood, TX 76546	738-2711 LTC Keith M. Gogas CSM Raymond F. Chandler
	4th Brigade		
	1-9 Cavalry	Ft. Bliss, TX 79916	LTC Keitron A. Todd CSM William Beevers
1st Infantry Division (Wuerzburg, FRG)	1st Brigade	Ft. Riley, KS 66442	856-4014 COL Bart Howard CSM Robert Moore
	1-34 Armor	Ft. Riley, KS 66442	856-1703 LTC Michael S. Higginbottom CSM Peter D. Burrowes
	2-34 Armor	Ft. Riley, KS 66442	856-9068 LTC Oscar J. Hall IV CSM Douglas Falkner
	2d Brigade		
	1-77 Armor	Schweinfurt, FRG 09226	353-8648/8646 LTC Miciotto O. Johnson CSM Ernest Edwards
	3d Brigade		
	1-63 Armor	Vilseck, FRG 09112	476-2748/2850/2450 LTC Michael A. Todd CSM Ansley Harris
	2-63 Armor	Vilseck, FRG 09112	476-2748/2850/2450 LTC Jeffrey J. Kulp CSM Thomas A. Bartoszek
	1-4 Cavalry	Schweinfurt, FRG 09226	353-8602 LTC Christopher D. Kolenda CSM John W. Fortune

Unit		Location/APO/ZIP	Phone/DSN	CDR/CSM
2d Infantry Division (Korea)	1st Brigade	Camp Casey, Korea 96224	730-2770	COL Michael W. Feil CSM James Williams
	1-72 Armor	Camp Casey, Korea 96224	730-4991/6229	LTC John I. Salvetti CSM Randy Zinger
	3d Brigade			
	1-14 Cavalry	Ft. Lewis, WA 98433	357-3033	LTC Jeffrey D. Peterson CSM Brian Shover
	4-7 Cavalry	Camp Hovey, Korea 96224	730-5937	LTC Joseph D. Wawro CSM J.P. Norman
3d Infantry Division (Ft. Stewart, GA)	1st Brigade			
	3-69 Armor	Ft. Stewart, GA 31313	870-2355	LTC Mark D. Wald CSM Patrick W. Muskevitch
	5-7 Cavalry	Ft. Stewart, GA 31313	870-4167	LTC Jody L. Petery CSM Darry C. Webster
	2d Brigade	Ft. Stewart, GA 31313	870-8106	COL Joseph P. Disalvo CSM Gabriel Berhane
	1-64 Armor	Ft. Stewart, GA 31313	870-7728/7730	LTC Kevin W. Farrell CSM Robert Callender
	3-7 Cavalry	Ft. Stewart, GA 31313	870-7420	LTC Michael J. Johnson CSM James Kennedy
	3d Brigade			
	2-69 Armor	Ft. Benning, GA 31905	784-2211	LTC R.R. Roggeman CSM Gregory Proft
	4-73 Cavalry	Ft. Benning, GA 31905	Forthcoming unit reorganization	LTC John S. Kolasheski
	4th Brigade	Ft. Stewart, GA 31313	870-8300	COL Thomas S. James Jr.
	4-64 Armor	Ft. Stewart, GA 31313	870-7690/7600	LTC Robert M. Roth CSM Clarence Stanley
	6-8 Cavalry	Ft. Stewart, GA 31313	870-6885	LTC Michael J. Harris CSM Robert Taylor
	4th Infantry Division (Ft. Hood, TX)	1st Brigade	Ft. Hood, TX 76546	737-4887
1-66 Armor		Ft. Hood, TX 76546	737-7882/8028	LTC Robert J. Kmiecik CSM Ricky Young
7-10 Cavalry		Ft. Hood, TX 76546	737-3464	LTC David E. Thompson II CSM Willie Keeler
2d Brigade		Ft. Hood, TX 76546	738-7509	COL John N. Tully
1-67 Armor		Ft. Hood, TX 76546	738-6590	LTC Patrick J. Donahoe CSM Ernest Barnett
1-10 Cavalry		Ft. Hood, TX 76546	663-0673	LTC James J. Love CSM Charles F. Davidson
3d Brigade				
1-68 Armor		Ft. Carson, CO 80911	691-5570/9563/9571	LTC Thomas S. Fisher CSM Gary Rimpley
2-9 Cavalry		Ft. Carson, CO 80911	691-1041	LTC Louis J. Lartigue
4th Brigade				
3-67 Armor		Ft. Hood, TX 76546	737-3435	LTC Mark A. Bertolini CSM Edwin Rodriguez
8-10 Cavalry		Ft. Hood, TX 76546	737-0769	LTC Gian P. Gentile CSM Rafael Rodriguez
2d Cavalry Regiment (Ft. Lewis, WA)		1st Squadron	Ft. Lewis, WA 98433	347-5588
3d Armored Cavalry Regiment (Ft. Carson, CO)	3d ACR	Ft. Carson, CO 80911	691-6292	COL Herbert R. McMaster CSM William Burns
	1st Squadron	Ft. Carson, CO 80911	691-9669	LTC Gregory D. Reilly CSM Robert Gonzales
	2d Squadron	Ft. Carson, CO 80911	691-2675	LTC Christopher M. Hickey CSM L.E. Teel
	3d Squadron	Ft. Carson, CO 80911	691-5034	LTC Ross A. Brown CSM Glenn Dailey

Unit	Location/APO/ZIP		Phone/DSN	CDR/CSM
25th Infantry Division (Ft. Shafter, HI)	1st Brigade			
	2-14 Cavalry	Ft. Lewis, WA 98433	357-2492/4241	LTC Mark A. Davis CSM Andrew Walden
	2d Brigade			
	5-14 Cavalry	Schofield Barracks, HI 96857	Forthcoming unit reorganization	LTC David S. Davidson CSM Charles S. Cook
172 Stryker Brigade Combat Team	4-14 Cavalry	Ft. Wainwright, AK 99703	353-4013	LTC Mark A. Freitag CSM David W. Dunham

U.S. Army Armor Center				
16th Cavalry Regiment (Ft. Knox, KY)	16th Cavalry	Ft. Knox, KY 40121	464-7848	COL Michael W. Alexander CSM Roger Ashley
	1st Squadron	Ft. Knox, KY 40121	464-7965/4072	LTC Eric J. Winkie CSM A. Poppert
	2d Squadron	Ft. Knox, KY 40121	464-6654/7481	LTC Steven W. Duke CSM Larry Hester
	3d Squadron	Ft. Knox, KY 40121	464-5855	LTC Patrick A. Clark CSM Walter E. Jenks
1st Armor Training Brigade (Ft. Knox, KY)	1 ATB	Ft. Knox, KY 40121	464-6843	COL Peter D. Utley CSM David L. Morris
	1-81 Armor	Ft. Knox, KY 40121	464-6345/7910	LTC Chester F. Dymek III CSM Norman English
	2-81 Armor	Ft. Knox, KY 40121	464-2645	LTC John S. Zsido CSM Alex Gongorabarreiro
	3-81 Armor	Ft. Knox, KY 40121	464-1313	LTC David C. Cogdall CSM Charles Waters
	5-15 Cavalry	Ft. Knox, KY 40121	464-8286/8226	LTC Ricky J. Nussio CSM Guidad Leandre

Combat Training Centers				
National Training Center OPFOR	11 ACR	Ft. Irwin, CA 92310	470-3499	COL Peter C. Bayer Jr. CSM Ricky Pring
	1-11 ACR	Ft. Irwin, CA 92310	470-3706	LTC James R. Blackburn CSM Earnest Washington Jr.
JRTC		Ft. Polk, LA 71459	863-0484	BG Michael D. Barbero
CMTC		Hohenfels, FRG 09183	466-2191	COL Hal M. Davis CSM David L. Pierce

Training Support Brigade Commands				
Unit	Location/APO/ZIP		Phone/DSN	CDR/CSM
2d Brigade, 85th Division (TS)	Ft. McCoy, WI 54656		280-2235/2234	COL Patrick T. Warren
4th Brigade, 85th Division (TS)	Ft. Knox, KY 40121		464-2119/2106	COL Damon C. Penn
2d Brigade, 87th Division (TS)	Patrick AFB, FL 32941		854-2420/6631	CSM Joel Cochrane
3d Brigade, 87th Division (TS)	Camp Shelby, MS 39407		921-3000/3036	COL John A. Hadjis CSM C.M. Keithley
2d Brigade, 91st Division (TS)	Ft. Carson, CO 80911		691-5725	COL Kelly F. Fisk CSM C. Bilodeau

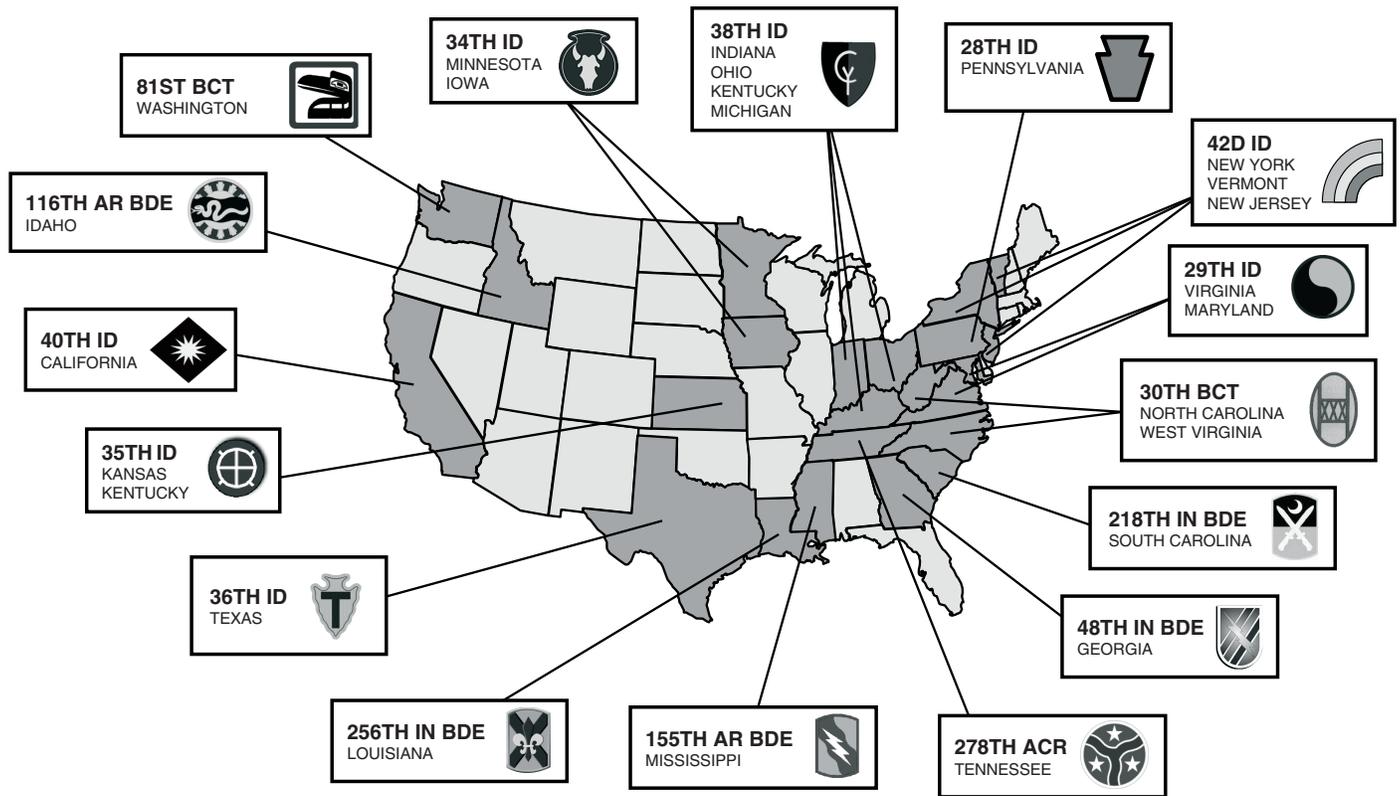
Marine Corps Tank Battalions

Source: U.S. Marine Corps Detachment – Fort Knox

Unit	Parent Unit	Location	Phone/DSN	CDR
1st Tank Battalion	1st Marine Div	MCAGCC, Box 788260, 29 Palms, CA 92277	957-6793	LtCol A.T. Slaughter
2d Tank Battalion	2d Marine Div	Box 20091, Camp LeJeune, NC 28542	751-1851	LtCol A.D. Bianca
4th Tank Battalion (Reserve)	4th Marine Div	9955 Pomerabo Rd., San Diego, CA 92145-5295	577-8109	LtCol N.M. Vuckovich
Marine Detachment Fort Knox		Garry Owen Regt. Rd., Bldg 2372, Fort Knox, KY 40121	464-5950	LtCol R.D. Angel

Army National Guard Armor/Cavalry Home Station Locations

CONUS FY06



Army National Guard Units

Source: Office of the Special Assistant to the Commanding General (ARNG), Fort Knox

Heavy Brigade Combat Teams

Unit	Conversion Date	Address	Phone/Fax	CDR / CSM/OPS SGM
1-34th Brigade Combat Team	FY05	1025 Broadway Street NE Minneapolis, MN 55413	(651) 268-8766 (651) 268-8779	COL David Elecerio CSM Douglas Julin
30th Brigade Combat Team	FY05	101 Armory Road Clinton, NC 28328	(910) 251-7225 (910) 251-5108	BG Danny H. Hickman CSM Larry D. Morgan
81st Brigade Combat Team	FY05	1601 W. Armory Way Seattle, WA 98119	(253) 512-8389 (253) 512-8049	COL Michael McCaffree CSM Robert J. Barr

Divisional Brigades

Unit	Conversion Date	Address	Phone/Fax	CDR / CSM/OPS SGM
2d Brigade 28th Infantry Division	FY07	125 Goodrich Lane Washington, PA 15301	(724) 223-4570 (724) 223-4426	COL John Gronski CSM Horace C. Pysher
55th Brigade 28th Infantry Division	FY07	900 Adams Avenue Scranton, PA 18510	(570) 963-4558 (570) 963-3139	COL Robert E. Sembower CSM Vincent Conti
56th Stryker Brigade Combat Team 28th Infantry Division	FY07	2700 Southampton Road Philadelphia, PA 19154	(215) 560-6010 (215) 560-6036	LTC Joel Wierenga CSM John E. Jones
37th Brigade 38th Infantry Division	FY07	3990 E. Broad Street Columbus, OH 43216	(614) 336-6040 (614) 734-7542	LTC Jack Lee CSM Terry Dillon
46th Brigade 38th Infantry Division	FY08	1200 44th Street SW Wyoming, MI 49509	(616) 249-2741 (616) 249-2470	COL William Ewald CSM John M. Shipley
3d Brigade 42d Infantry Division	FY05	27 Masten Avenue Buffalo, NY 14204	(716) 888-5641 (716) 888-5672	COL John Luthringer CSM Renaldo Rivera

Divisional Brigades (continued)

Unit	Conversion Date	Address	Phone/Fax	CDR / CSM/OPS SGM
50th Brigade 42d Infantry Division	FY08	151 Eggert Crossing Road Lawrenceville, NJ 08648	(609) 671-6610 (609) 671-6635	COL Frank Caruso CSM Jerome Jenkins
86th Brigade 42d Infantry Division	FY07	161 University Drive Northfield, VT 05663	(802) 485-1802 (802) 485-1850	COL Matthew McCoy CSM Kevin White
149th Brigade 35th Infantry Division	FY08	2729 Crittenden Drive Louisville, KY 40209	(502) 637-1250 (502) 637-2650	COL Charles T. Jones CSM Eric Schumacher
2d Brigade 40th Infantry Division	FY07	7401 Mesa College Drive San Diego, CA 92111	(858) 573-7001 (858) 573-7019	COL Munoz Atkinson CSM Stephen Hallman
3d Brigade 40th Infantry Division	FY07	933 Kansas Avenue Modesto, CA 95351	(209) 550-0339 (209) 527-7907	COL Clay Bradfield CSM William Clark
56th Infantry Brigade 36th Infantry Division	FY07	5104 Sandage Avenue Fort Worth, TX 76115	(817) 923-1010 (817) 924-7018	COL James K. Brown CSM Eddie Chamblis
71st Brigade 36th Infantry Division	FY08	1775 California Crossings Dallas, TX 75220	(972) 556-0350 (972) 401-0610	COL David N. Blackorby CSM Bruce Hendry
72d Brigade 36th Infantry Division	FY08	15150 Westheimer Parkway Houston, TX 77082	(281) 558-1742, ext. 3811 (281) 558-6206	COL Manuel Ortiz CSM Kenneth Boyer

Separate Brigades

Brigade	Conversion Date	Address	Phone/Fax	CDR / CSM/OPS SGM
48th Separate Infantry Brigade	FY07	475 Shurling Drive Macon, GA 31211	(478) 464-3104 (478) 464-3194	BG Charles S. Rodeheaver CSM James Nelson
155th Separate Armor Brigade	FY06	P.O. Box 2057 Tupelo, MS 38803	(662) 891-9707 (662) 891-3721	BG Augustus Collins VACANT
218th Separate Infantry Brigade	FY08	275 General Henderson Road Newberry, SC 29108	(803) 806-2018 (803) 806-2040	BG Herbert L. Newton CSM Sherman Cooper
278th Armored Cavalry Regiment	FY06	P.O. Box 10167 Knoxville, TN 37939	(865) 582-3278 (865) 582-3208	COL Dennis Adams CSM James T. Pippin
116th Separate Armor Brigade	FY06	4650 W. Ellsworth Street Boise, ID 83705	(208) 422-4664 DSN 422-4659	BG Allen Gayhart CSM Leroy Lewis
256th Separate Infantry Brigade	FY06	1806 Surrey Street Lafayette, LA 70508	(337) 593-2065 (337) 262-1422	BG John P. Basilica CSM James Mays

Units by State

State	Unit	Parent Unit	Address	Phone/Fax	CDR / CSM/OPS SGM
Alabama	1st Battalion, 131st Armor	149th Brigade, 35th Infantry Division	3971 US 231 S. Ozark, AL 36360	(334) 774-8075 (334) 774-2858	LTC Jeffrey Smitherman CSM Jay Stallings
California	1-185th Combined Arms Battalion	81st Brigade Combat Team	266 E. 3rd Street San Bernadino, CA 92410	(909) 383-4532 (909) 884-7753	LTC Barry Sayers CSM James Woods
California	2d Battalion, 185th Armor	2d Brigade, 40th Infantry Division	7401 Mesa College Drive San Diego, CA 92111	(858) 573-7011 (858) 573-7040	LTC Timothy J. Swann CSM Clayton Mitchell
California	1st Battalion, 149th Armor	3d Brigade, 40th Infantry Division	140 Colonel Durham Street Seaside, CA 93955	(831) 393-8407 (831) 393-8406	LTC Mark Malanka CSM Scott Waterhouse
California	1st Squadron, 18th Cavalry	40th Infantry Division	950 N. Cucamonga Ontario, CA 91764	(909) 983-5998 (909) 983-1174	LTC Lonergan CSM Flannery
Georgia	1st Battalion, 108th Armor	48th Separate Infantry Brigade	P.O. Box 36 Calhoun, GA 30703	(706) 624-1340 (706) 624-1341	LTC John King CSM D. Knowles
Idaho	2d Battalion, 116th Armor	116th Separate Armor Brigade	1069 Frontier Road Twin Falls, ID 83301	(208) 422-7000 (208) 422-7003	LTC Michael Woods CSM H. Chin
Iowa	1st Squadron, 113th Cavalry	34th Infantry Division	3200 2d Mech Drive Sioux City, IA 51111	(712) 252-4347 (712) 252-4348	LTC Michael Amundson CSM Stephen Wayman
Kansas	1st Battalion, 635th Armor	1st Brigade, 40th Infantry Division	1709 S. Airport Road Manhattan, KS 66503	(785) 539-0241 (785) 539-3487	LTC Matthew A. Raney CSM Joseph C. Romans
Kentucky	2d Battalion, 123d Armor	149th Brigade, 35th Infantry Division	920 Morgantown Road Bowling Green, KY 42101	(270) 607-2214 (270) 607-2250	LTC D. Mike Farley CSM Wilson

Units by State (continued)

State	Unit	Parent Unit	Address	Phone/Fax	CDR / CSM/OPS SGM
Louisiana	1st Battalion, 156th Armor	256th Infantry Brigade	400 E. Stoner Avenue Shreveport, LA 71101	(318) 676-7614 (318) 676-7616	LTC Thomas B. Plunkett III CSM Steven R. Stuckey
Maryland	1st Squadron, 158th Cavalry	29th Infantry Division	18 Willow Street Annapolis, MD 21401	(410) 974-7400 (410) 974-7304	LTC David W. Carey CSM O'Connell
Michigan	1st Battalion, 126th Armor	46th Infantry Brigade, 38th Infantry Division	1200 44th Street SW Wyoming, MI 49509	(616) 249-2756 (616) 249-2751	LTC Curtis Royer CSM L. Ott
Minnesota	1-194th Armored Reconnaissance Squadron	1st Brigade, 34th Infantry Division	4015 Airpark Boulevard Duluth, MN 55811	(218) 723-4769 (218) 723-4876	LTC John McCombs VACANT
Minnesota	3-194th Combined Arms Battalion	1st Brigade, 34th Infantry Division	1115 Wright Street Brainerd, MN 56401	(218) 828-2572 (651) 268-8111	MAJ(P) Jeffrey Turner CSM Paul Herr
Minnesota	2-136th Combined Arms Battalion	1st Brigade, 34th Infantry Division	1002 15th Avenue North Moorhead, MN 56560	(218) 236-2175 (615) 268-8502	LTC Greg Parks CSM Terry Koenig
Mississippi	1st Battalion, 198th Armor	155th Separate Armor Brigade	P.O. Box 158 Amory, MS 38821	(662) 256-3741 (662) 256-5066	LTC James Oliver CSM Ronald Coleman
Mississippi	2d Battalion, 198th Armor	155th Separate Armor Brigade	P.O. Box 278 Senatobia, MS 38668	(662) 562-4494 (662) 562-9470	LTC Jerry Butler CSM Glen Davis
Nebraska	1st Squadron, 167th Cavalry	35th Infantry Division	2400 NW 24th Street Lincoln, NE 68524	(402) 309-1750 (402) 309-1783	LTC Martin Apprich CSM Larry Hall
Nevada	1st Battalion, 221st Cavalry	11th Armored Cavalry Regiment	6400 N. Range Road Las Vegas, NV 89115	(702) 632-0506 (702) 632-0540	LTC Johnny Isaak CSM James Haynes
New Jersey	5th Squadron, 117th Cavalry	42d Infantry Division	2560 S. Delsea Drive Vineland, NJ 08360	(856) 696-6799 (856) 696-6798	LTC Kevin R. Austin CSM David P. Kenna
New Jersey	2d Battalion, 102d Armor	50th Brigade, 42d Infantry Division	550 Route 57 Port Murray, NJ 07865	(908) 689-1068 (908) 689-0403	LTC John M. Manfre CSM W. Kryscnski
New York	1st Squadron, 101st Cavalry	3d Brigade, 42d Infantry Division	321 Manor Road Staten Island, NY 10314	(718) 442-8728 (718) 442-8607	LTC Michael Mallin CSM Kenneth Church
New York	2d Squadron, 101st Cavalry	27th Brigade Combat Team	27 Masten Avenue Buffalo, NY 14204	(716) 888-5616 (716) 888-5668	LTC David Zysk CSM Hutley
North Carolina	1-120th Combined Arms Battalion	30th Brigade Combat Team	2412 Infantry Road New Hanover Co. Airport Wilmington, NC 28405	(910) 251-7102 (910) 251-7130	LTC Boyette CSM James Marley
North Carolina	1-252d Combined Arms Battalion	30th Brigade Combat Team	P.O. Box 64158 Fayetteville, NC 28306	(910) 484-1849 (910) 484-5132	MAJ (P) Lawrence Powell CSM D. Schwab
Ohio	1st Battalion, 107th Armor	2d Brigade, 28th Infantry Division	4630 Allen Road Stow, OH 44224	(614) 336-6778 (614) 336-3782	LTC Richard T. Curry CSM Whatmoughy
Ohio	2d Battalion, 107th Cavalry	38th Infantry Division	2555 Countyline Road Kettering, OH 45430	(614) 336-6694 (614) 336-6698	LTC Todd Mayer CSM William Belding
Oregon	3d Battalion, 116th Armor	116th Separate Armor Brigade	404 12th Street La Grande, OR 97850	(541) 963-4221 (541) 963-7865	LTC Clifford M. McCabe CSM J. Brooks
Pennsylvania	2d Squadron (RSTA), 104th Cavalry	56th Stryker Brigade Combat Team	2601 River Road Reading, PA 19605	(610) 929-8130 (610) 378-4515	LTC Walter Lord CSM Robert Heller
Pennsylvania	1st Squadron, 104th Cavalry	28th Infantry Division	5350 Ogontz Avenue Philadelphia, PA 19141	(215) 329-2622 (215) 967-5474	LTC Hugh Redditt CSM Timothy Zaengle
Pennsylvania	1st Battalion, 103d Armor	2d Brigade, 28th Infantry Division	565 Walters Avenue Johnstown, PA 15904	(814) 533-2443 (814) 533-2611	LTC Philip Logan CSM Anthony Iachini
Pennsylvania	2d Battalion, 103d Armor	55th Brigade, 28th Infantry Division	900 Adams Avenue Scranton, PA 18510	(570) 963-4644 (570) 963-3121	LTC George M. Schwartz CSM Russell Schimelfenig
Pennsylvania	3d Battalion, 103d Armor	55th Brigade, 28th Infantry Division	580 US Route 15S Lewisburg, PA 17837	(570) 523-3468 (570) 522-0560	LTC Jeffrey A. Smith CSM Michael Moretz
South Carolina	1st Battalion, 263d Armor	218th Separate Infantry Brigade	1018 Gilchrist Road Mullins, SC 29574	(803) 806-1073 (803) 806-1036	LTC Steve A. Wright CSM John E. Wiggins
Tennessee	1st Squadron, 278th ACR	278th Armored Cavalry Regiment	413 County Road 554 Athens, TN 37303	(423) 744-2807 (423) 744-8304	LTC Mark Hart CSM Ridgell
Tennessee	2d Squadron, 278th ACR	278th Armored Cavalry Regiment	4401 W. Stone Drive Kingsport, TN 37660	(423) 247-2278 (423) 247-2399	LTC Franklin McCauley Jr. CSM Peck
Tennessee	3d Squadron, 278th ACR	278th Armored Cavalry Regiment	505 Gould Avenue Cookeville, TN 38502	(931) 432-4117 (931) 432-6252	LTC Jeff Holmes CSM J. Kyle

Units by State (continued)

State	Unit	Parent Unit	Address	Phone/Fax	CDR / CSM/OPS SGM
Texas	1st Battalion, 112th Armor	71st Brigade, 36th Infantry Division	700 N. Spring Creek Parkway Wylie, TX 75098	(972) 442-4679 (972) 442-4858	LTC Woods CSM Smith
Texas	2d Battalion, 112th Armor	56th Brigade Combat Team, 36th Infantry Division	2101 Cobb Park Drive Fort Worth, TX 76105	(817) 531-8737 (817) 531-3463	LTC William A. Hall CSM William F. Brown
Texas	3d Battalion, 112th Armor	56th Brigade, 36th Infantry Division	5601 FM 45 South Brownwood, TX 76801	(325) 646-0159 (325) 646-0340	LTC Randolph F. Neal CSM Paul D. Callaway
Texas	4th Battalion, 112th Armor	72d Brigade, 36th Infantry Division	1700 E. 25th Street Bryan, TX 77802	(979) 822-9059 (979) 823-2995	LTC Chuck Aris CSM Brown
Texas	5th Battalion, 112th Armor	71st Brigade, 36th Infantry Division	2109 Warren Drive Marshall, TX 75672	(903) 938-4613 (903) 935-2428	LTC Robert Woodmansee CSM Jeffrey T. Merrill
Texas	1st Squadron, 124th Cavalry	36th Infantry Division	2120 N. New Road Waco, TX 76707	(254) 776-1402 (254) 776-5829	LTC Lee D. Schnell CSM Alfredo Cordova
Vermont	1st Battalion, 172d Armor	86th Brigade, 42d Infantry Division	18 Fairfield Street St. Albans, VT 05478	(802) 524-7903 (802) 524-7906	LTC Mark Lovejoy CSM M. Larose
Vermont	2d Battalion, 172d Armor	86th Brigade, 42d Infantry Division	15 West Street Rutland, VT 05701	(802) 786-8800 (802) 786-8017	LTC Thomas Williams CSM Jeffrey Goodrich
Washington	1-303d Armored Reconnaissance Squadron	81st Brigade Combat Team	24410 Military Road Kent, WA 98032	(253) 945-1831 (253) 945-1800	LTC Ted Arnold CSM Bruce Smith
Washington	1-161st Combined Arms Battalion	81st Brigade Combat Team	P.O. Box 19038 SIAP Spokane, WA 99219	(509) 458-5421 (509) 458-5489	LTC Greg Allen CSM David Windom
West Virginia	1-150th Armored Reconnaissance Squadron	30th Brigade Combat Team	2915 Old Bramwell Road Bluefield, WV 24701	(304) 589-3361 (304) 561-6143	LTC Larry Wheeler CSM Charles Mitchell

TASS Armor Battalions

Region	Unit	Address	Phone/Fax	CDR / CSM/OPS SGM
A	1st Armor Battalion, 254th Regiment	P.O. Box 277 Sea Girt, NJ 08750	(732) 974-5988 (732) 974-5975	LTC D. Mahon MSG M. Beierschmitt
B	1st Armor Battalion, 166th Regiment	Fort Indiantown Gap, Building 8-80 Annnville, PA 17003	(717) 491-2809 DSN 491-8401	MAJ J. Orr MSG S. Mosholder
C	1st Armor Battalion, 218th Regiment	5411 Leesburg Road Eastover, SC 29044	(803) 806-2401 DSN 583-2332	LTC D. West SFC W. Foster
D	2d Armor Battalion, 117th Regiment	Building 638, TN ARNG Smyrna, TN 37167	(615) 355-3794 DSN 683-3797	LTC J. Gentry SFC D. Knight
E	1st Armor Battalion, 145th Regiment	8208 S. Perimeter Road Columbus, OH 43217	(614) 336-6443 (614) 336-6447	MAJ J. Kane MSG Sharkey
F	1st Armor Battalion, 136th Regiment	P.O. Box 5218 Austin, TX 78763	(512) 782-5552 DSN 954-5980	LTC F. Rodriguez SFC J. Sullivan
G	1st Armor Battalion, 204th Regiment	Building 810, 5050 S. Junker Street Boise, ID 83705	(208) 422-4848 DSN 422-4863	LTC T. Kelly MSG J. Sexton

**Army Reserve Units
100th Division (Institutional Training)**

Unit	Parent Unit	Address	Phone	CDR / CSM
	1st Brigade	1051 Russell Cave Pike Lexington, KY 40505-3494	(859) 281-2208	COL J.G. Russell CSM R.M. Clark
2d Squadron, 397th Cavalry	1st Brigade	1051 Russell Cave Pike Lexington, KY 40505-3494	(859) 281-2211	LTC Brian Smith CSM J. Glover
3d Squadron, 397th Cavalry	1st Brigade	1840 Cumberlandfalls Highway Corbin, KY 40701-2729	(859) 528-5765	LTC M. Warren CSM C. Douglas
2d Battalion, 398th Armor	1st Brigade	1600 Woodson Drive Hopkinsville, KY 42241	(270) 885-5563	LTC J. Schultz CSM B. Carter
3d Battalion, 398th Armor	1st Brigade	2956 Park Avenue Paducah, KY 42001	(270) 442-8284	LTC D. Stenzel CSM J. McGuire

Blitzkrieg continued from Page 25

in the world within 72 hours. Their combat package will be tailored to meet unique situations facing them, and they will have semi-perfect intelligence to determine the decisive point to influence the battlefield quickly. The force will be comprised of infantry (dragoons), a decisive maneuver element (heavy cavalry), indirect fires (lancers), and aviation (lancers/light cavalry).

Modern theorists and doctrine development teams still use the basic tactics that Alexander used so successfully to describe the modern battlefield. Leaders from platoon to brigade combat team levels will determine where they will place assets to influence the enemy's center of gravity and destroy his ability to conduct operations. The modular brigade will use cavalry tactics with updated technology to accomplish their missions.

Blitzkrieg tactics appeared to be a revolution in warfare because the analysts and theorists outside of Germany had failed to do two things. First, in the celebration of victory and the relief from the horrible stalemate, there was no real analysis of history, even if only to the previous war. The victors assumed they had done it right just because they had won. It was further assumed that the massive bloodletting of World War I was necessary to win wars with modern weapons and that change was unnecessary. Second, the shock of German successes at

the beginning of World War II was more acceptably explained by giving credit to German creativity and revolutionary thought than by blaming the French and British military for resting on laurels won in the "war to end all wars" and failing to do their jobs. A flank envelopment by a heavy mounted force is still a flank envelopment — whether it is on a horse or on a tank is irrelevant.

The British cavalymen and indeed the British army paid the price of having hidebound, traditional, counter-revolutionary leaders who could not, or would not, imagine a battlefield without a horse. They were "out-generaled" by a group of German leaders who evolved a doctrine that coupled new technology with age-old tactics. Rather than admit this, the British and French apologists declared German tactics "revolutionary."

As we move into the new modalities required by new battlefields, we must always check ourselves against history and ask the question: "Does this require a revolution with its inherent chaos or are we using an evolutionary process that allows a more orderly, planned transition?"



Notes

¹John Mosier, *The Blitzkrieg Myth*, HarperCollins Publishers Inc., New York, NY, 2003, p. 16.

²Williamson Murray, "Armored Warfare: The British, French, and German Experiences," *Military Innovation in the Interwar Period*, Cambridge University Press, Cambridge, UK, 1996, p. 28.

³John Ellis, *Cavalry: The History of Mounted Warfare*, G.P. Putnam's Sons, New York, NY, 1978, p.176.

⁴Murray, pp. 34-35.

⁵Ibid., p. 38.

⁶Ibid., pp. 39-40.

⁷James Lawford, *The Cavalry*, Roxby Press Limited, London, UK, 1976, pp. 18-27.

⁸Brian Bond, "Battle of France," *H100, Transformation in the Shadow of Global Conflict*, U.S. Army Command and General Staff College, Fort Leavenworth, KS, April 2004, p. H108RC-211.

⁹Ibid., p. H108RC-214.

¹⁰Ellis, p. 11.

¹¹Stanley Sandler, *Ground Warfare: An International Encyclopedia, Volume One A-G*, ABC-CLIO, Inc., Santa Barbara, CA, 2002, p. 162.

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REVIEWS

No True Glory: A Frontline Account of the Battle for Fallujah by Bing West, Bantam Dell, New York, 2005, 380 pp., \$25.00

On the first page of the introduction of this book, author Bing West writes, "Fallujah provides a cautionary tale about mixing the combustible ingredients of battle and policy." It is strange that a man who served as an assistant secretary of defense and as a Marine in Vietnam would forget that war is always an extension of policy by other means, and the means in Fallujah were the soldiers, Marines, and sailors who fought there.

In this book, West tries to do many things: he offers some reasoned criticism and suggestions for improving decisionmaking at the end of the book; he provides a glimpse into the flawed decisionmaking process that confused the issues in Iraq from June 2003 to July 2004; and finally, he provides a narrative history of small unit actions. West's criticism is emotional and not well supported. His review of the decisionmaking processes that contributed to the confusion in Iraq, while likely accurate, is not well documented, and where it is documented, it relies mostly on newspaper accounts of others reporting. The strength of his book is in his recounting of the valor of line soldiers and Marines during the 20-month battle for Fallujah.

West writes: "The singular lesson from Fallujah is clear: when you send our soldiers into battle, let them finish the fight." This is a too simple conclusion, and I'm sure West knows it is. He also cites Lieutenant General Conway, who said, "Al Jazeera kicked our butts." A case could be made that information is now a domain of battle and during the Fallujah fight, we certainly did not engage in battle in the information domain; however, West does not make the case. West points out that the Coalition Provisional Authority, AMB Bremer, took the decision to disband the Iraqi army. He also points out that U.S. Central Command (CENTCOM) could have argued against this decision, but he fails to present evidence as to why the decision was taken or why CENTCOM did or did not argue the decision. While West develops this story from newspaper reports and accounts from published books, there is nothing new — he relies on the intuition of service experience.

It is difficult to track any supporting documentation for West's sources because there are no footnotes or notations. He does have a "Notes" chapter, but without using the common writing convention of footnotes, West leaves it to the reader to sort out which quotations belong to which notes. There is also a list thanking 526 civilian officials, academics, and soldiers and Marines in rank from lieutenant general to lance corporal, but there are no citations of personal interviews in the "Notes" chapter. West quotes General Abizaid or General Myers and the quotations are linked from newspapers or CNN. Where the quotations are based on conversations with other officers in council, there are no references, which is somewhat problematic. On the advance infor-

mation sheet that was received with the book, the *Washington Post* book world is cited as saying West's book "will certainly become one of the standard texts on the second Gulf War." Without properly outlined references and more primary source material, I seriously doubt this claim.

The undisputed power of this book is in the narrative history of the small unit actions — where the combat Marine West is at his best. More academically minded historians would disdain this narrative history, but West hears back to the ancient Greeks he cites in the opening quotation. West chronicles the stunning, humbling, and awe-inspiring courage that dominates this battle. It would be fair to say that courage was present on both sides of the battle.

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The words "corpsman up" will instantly bring to mind images for Marines, much like the cry "medic" will for soldiers. West tells many stories in his narrative, ranging from the story of a Navy corpsman who had to be physically restrained from going out to recover the body of a fallen Marine; the body was in the beaten zone and it would be certain death to anyone who even tried a recovery. The enemy, knowing we do not leave a fallen comrade, was using the body as bait. He also tells the story of Sergeant of Marines Rafael Peralta who, during the house-to-house fighting, was shot in the head and was dying. When an enemy threw a grenade into a room of Marines, Peralta pulled the grenade to him and smothered the blast with his body. These are powerful stories, well written.

West writes that every battle now has a global audience. He is correct in his observation. The requirements for commanders and staff officers preparing for battle now include engaging in the information domain. We will have to wrestle with classified information and technical abilities of unmanned aerial vehicles and other devices. We must show the world the accuracy of our weapons so the enemy cannot claim we are killing women and children. If we have the tapes of air strikes, then we must show the tapes. If we know the enemy is booby trapping bodies, we must show this because we live in a video age. Ernie Pyle is long gone and while the written word still carries power, the video image is the most powerful. The sooner we recognize this fact, the sooner we can continue effective engagements in the information domain. We must write about the courage of our soldiers, Marines, sailors, and

airmen. We counter the Abu Ghraib with the Sergeant Peraltas. In doing so, we do not cheapen the self-sacrifice of Sergeant Peralta; we value his self-sacrifice publicly so Americans know the valor of their young people facing fire.

West makes a contribution with this book through his stories of valor. He cites the ancient Greek belief that there was no true glory, unless they were remembered in song or a poem. West honors the soldiers, Marines, sailors, and airmen of Fallujah by recording their deeds of valor. The deeds and names will be remembered — the challenge for those of us who remain is to ensure the deeds of valor are not squandered.

KEVIN C.M. BENSON
COL, U.S. Army

The Pendulum of Battle, Operation Goodwood July 1944 by Christopher Dunphie, Pen and Sword Books, Barnsley, South Yorkshire, 2004, 202 pp., \$36.95 (hardback)

The 60th anniversary of the D-Day invasion of Normandy has triggered a large number of books dealing with that period, most of which contribute little or nothing to the knowledge of that campaign. Brigadier Dunphie's effort is different than most in several respects. First, it is one of few in-depth coverages of Operation Goodwood. It is not the most popular battle with the Americans, who did not participate, or the British, who did not win. The Germans, who won, have covered it in some detail. Hans von Luck provides a good view from the other side of the hill in his *Panzer Commander*. Von Luck is also an important contributor to Dunphie's explanation of what went wrong with one of the largest tank battles in North West Europe.

The Pendulum of Battle is not organized and structured as are most military history books, it reads more like a battlefield tour, and Annex C provides route directions for such a tour. In fact, the basis for this volume is a series of British Army Staff College Normandy battlefield tours from the end of World War II until 1979. Not only does this make for excellent coverage of small-unit actions, complete with maps and pictures of each of these actions, but many of the pictures are modern views of the same areas shown in the wartime views, making it easy to find the locations in the Normandy of today.

The commanders of the critical units, on both sides of the battle, were leaders of the original battlefield tours. Many of these commanders are included as sources by the author. Among these are Major General G.P.B. "Pip" Roberts, the 37-year-old commander of the 11th Armoured Division; Colonel H. von Luck, commander of the 125th Panzer Grenadier Regiment; Major Bill Close, commander of A Squadron, 3rd Royal Tanks; Captain P.C. Walter of C Squadron, 2nd Fife and Forfar Yeomanry; and Lieutenant (later Brigadier) David Stileman,

commander, G Company, 8th Rifle Brigade. This helps provide details of the small-unit tactical actions, which is seldom found in military histories.

Goodwood was a three-corps operation with the VIII British Corps' three armoured divisions conducting the main attack with its divisions in trail, while the II Canadian and I British Corps conducted attacks with five infantry divisions to protect the flanks of the primary thrust by VIII Corps. The initial mission of VIII Corps is best illustrated by an extract from the Second British Army's Plan for Goodwood, paragraph 5, "Initial Operations VIII Corps: *The three armoured divisions will be required to dominate the area Borguebus-Vimont-Bretteville, and to fight and destroy the enemy, but armored cars should push for the south towards Falaise, and spread alarm and despondency, and discover 'the form.'*" Unfortunately, even these limited and initial goals were not met.

After four days of intense combat, with the loss of more than 400 tanks, all that had been achieved was an advance of roughly eight miles from the Orne bridgehead to the Bourguebus Ridge. One small victory was the final capture of Caen, a D-Day objective, on 16 July. However, General (later Field Marshal) Montgomery indicated that he was pleased with the outcome of Goodwood since it had achieved its goal of drawing most of the German armor to the VIII Corps' front to facilitate Operation Cobra by the First U.S. Army.

Unfortunately, the author draws some odd conclusions while supporting Montgomery's view of the outcome, including the point that the tank losses were easily made up from the 500 spares already available in theater. While lend-lease Shermans were certainly available, it seems odd that more mention was not made of the tank crew casualties that the loss of over 400 tanks must have created. When 75 and 88mm solid-shot rounds killed a Sherman, they must certainly have had the effect of killing and wounding hundreds of crewmen. Little is said about the opportunities that the capture of Falaise might have afforded the allies by enabling the capture of significant German forces when the Third U.S. Army swept past that point later.

Goodwood then must stand as another of Montgomery's failures in northwest Europe. It should be ranked along with his failure to capture his D-Day objectives, open the port of Antwerp by early clearing of the Scheldt estuary in a timely manner, the failure of Market-Garden, his cautious handling of the north flank of the Ardennes, and his extremely cautious and overly expansive crossing of the Rhine.

Considering all the above, this is still an interesting book. The results of the largest British tank battle in Europe can be very instructive to armor leaders of today. What looks like good tank country can, in many cases, become good tank-killing country. Artillery, infantry, and tactical air generally worked well in Goodwood, when they were used. Unfortunately, these

critically needed forces were consistently underemployed.

DAVID L. FUNK

The Obligation of Empire: United States' Grand Strategy for a New Century, edited by James Hentz, The University Press of Kentucky, Lexington, KY, 2004, 206 pp., \$35.00 (hardback)

In an era when the actions of even junior military leaders can be fraught with strategic consequences, it has never been more important for the professional soldier to study grand strategy. James Hentz's anthology provides a useful collection of essays that can help both junior and senior officers think about and try to understand the strategic issues confronting our nation in a time of war.

The product of a two-day conference held at the Virginia Military Institute in April 2002, the work first presents a series of essays that define "four competing visions" of post-Cold War strategic policy, and then goes on to provide a series of regionally oriented essays that recommend specific policies for the areas they cover. The book concludes with an excellent and thoughtful piece by Retired Colonel Andrew Bacevich, cautioning us about the complexity and hazards that we currently face.

The four competing visions offer the reader a handy theoretical framework from which to think about the design and conduct of grand strategy. The first vision, "isolationism," proposes a dramatic post-Cold War reduction in American intervention abroad. The second, "selective engagement," looks at ways to engage in critical areas with realism, prudence, and moderation. "Cooperative security" posits that multilateral approaches are the best way to deal with international challenges. The final vision, "primacy," suggests that the United States should exploit its current hegemonic position to re-fashion international order. The book then applies these theoretical constructs to discuss strategies for Africa, Latin America, Central Asia, the Middle East, and Southeast Asia.

The reader may decide which visions and strategies are the most compelling; but perhaps surprisingly after 9/11, the essays focus on strategy with respect to state actors. They acknowledge the rise in non-state participants in the global "order," but offer little analysis and nothing truly prescriptive. In the age of al Qaeda, Wahabism, and Hamas, a major focus, if not *the* focus, of American grand strategy must be the Global War on Terror.

Writing just before the United States plunged into Iraq, Bacevich presciently ends this book quoting Reinhold Niebuhr, and warning us about hubris — that we need to take care not to overestimate our ability to understand and manage historical forces lest we court disaster. Iraq seems to have suggested that he may be at least partly right.

Hentz offers that the purpose of this work is not to provide definitive answers, but rather to

"offer a picture that reflects the complexity" of U.S. foreign policy. While I heartily recommend this book — if for the Bacevich essay alone — I left it wishing that a fuller discussion of terrorism was part of that picture.

WILLIAM R. BETSON
COL, U.S. Army Retired

Jayhawk: The VII Corps in the Persian Gulf War by Dr. Stephen A. Bourque, Department of the Army, Center of Military History, Washington, D.C., 2002, 514 pp., \$52.00

JAYHAWK is an in-depth look at Operations Desert Shield and Storm from the formation of modern maneuver strategy through deployment, campaign planning, and execution. *JAYHAWK* examines command and control of large unit organizations and the application of untested doctrine through exhaustive planning, training, and execution. Dr. Stephen Bourque recounts an honest and revealing portrayal of the challenges of modern war facing commanders, mixed with candid accounts of senior commanders, and provides his analysis of modern warfare. *JAYHAWK* chronicles the validation of the then-untested AirLand Battle Doctrine developed over the two decades since the failures of the Vietnam War. Moreover, Bourque establishes that the Persian Gulf War was a validation of the U.S. Army's training program.

Bourque takes readers deeper than they have ever gone inside major combat operations. He delivers the inside details of U.S. Army doctrine as it was being exercised, making readers feel they are learning as well as being entertained. Linking doctrine to application, *JAYHAWK* is a gem of clarity and coherence.

Bourque is a retired armor officer (a Desert Storm veteran of the 1st Infantry Division and U.S. VII Corps) and a history professor. He is the well-published author, chronicling armor operations in the Persian Gulf War with articles appearing in *ARMOR*, *Middle East Journal*, and the *Quarterly Journal of Military History*. A historian by trade, Bourque has done his research and has portrayed modern warfare with its constraints in geography, scope, weapons, and effects. His firsthand experiences as an armor officer form the valuable base for his writing.

JAYHAWK is a meticulous exercise in source documentation. Based on a wealth of primary and secondary sources, Bourque exhaustively uses briefings, plans and orders, staff journals and chronologies, situation reports, interviews, after-action reviews, training manuals, government and commercial books and manuscripts, and journal articles to tell the tale of the victorious exploits of the U.S. Army in the Persian Gulf. Despite its extensive documentation, *JAYHAWK* is a remarkable easy read.

JAYHAWK is not only a detailed record of major combat operations, but provides candid after-actions review, exposing the fissures of command and control during large-scale unit operations. To his credit, Bourque admits that

JAYHAWK, though extremely comprehensive, would not detail individual battles that ensued. Fortunately, this does not detract from his stated themes of complex operations, old-fashioned soldiering, initiative, and complex command and control.

JAYHAWK achieves its goals of expounding on the trials and successes of large-unit command and control. Bourque depicts the command and control procedures of each major command of VII Corps, ranging from the 1st Infantry Division Commander, Major General Thomas Rhame, commanding his division from the turret of a M1A1 Abrams, to VII Corps Commander, Lieutenant General Frederick Franks' regular command visits to his subordinate commanders in his Blackhawk helicopter. The time and space challenges of fast-moving armored warfare exposed fissures in command and control capabilities, but validated the principles of the orders process in clearly communicating a commander's intent and the importance of regular face-to-face communications between commanders.

Training programs at the National Training Center, Fort Irwin, California, and Reforger exercises in Europe enabled battalion and brigade commanders to be proficient at movement of their headquarters. However, few headquarters above the brigade level have conducted such large-scale maneuvers since the Korean War. *JAYHAWK* reminds us that when preparing for future operations, we should not focus on how we could do better what we have already tried to do.

Bourque's thorough writing is so strong that readers feel they are there. I personally began reading *JAYHAWK* during our deployment to Iraq for Operation Iraqi Freedom II. It was vividly striking how much of what Bourque details about the VII Corps' deployment to Operation Desert Shield mirrors my own experiences deploying the headquarters company of an armor task force as an executive officer. I recall reading the chapter on port operations and onward movement only *after* our own advance party and port debarkation operations in Kuwait. I had the utmost desire to kick myself in the "4th point of contact" for not studying VII Corps lessons learned beforehand.

JAYHAWK is essential reading for all who would understand the dramatic application of the then-untested AirLand Battle Doctrine and the trials and successes of large-unit command and control.

JOHN P.J. DEROSA

The U.S.-Japan Alliance: Preparing for Korean Reconciliation and Beyond by Charles M. Perry, Ph.D. and Toshi Yoshihara, Brassey's, Inc., Dulles, VA, 2003, 196 pp., \$18.00 (paperback)

Dr. Perry, vice president and director of studies for the Institute of Foreign Policy Analysis, and Mr. Yoshihara, a doctoral candidate at Tufts University and research fellow at the Institute of Foreign Policy Analysis, review the sometimes uneasy military alliance between

the United States and Japan through the lens of the divided peninsula of Korea. A sound overview of the existing alliance structure, the authors also examine several possibilities regarding the future shape of the alliance based on several possible future events.

After a review of the history of the alliance and a report on the current state of the alliance, the authors discuss the various prospects for reconciliation and reunification on the Korean Peninsula and their effect on U.S.-Japan relations through a variety of scenarios. After examining these various eventualities, Dr. Perry and Mr. Yoshihara then examine some of the possible effects of reconciliation on the Korean Peninsula for the other nations in the region, including the People's Republic of China and Taiwan.

Perry provides a useful overview of the past, present, and possible future of the U.S.-Japan alliance and the effect of the Republic of Korea on that dynamic, but has omitted substantively new information or conclusions. This text is best for those without a background in the area who are looking for a basic understanding of the existing dynamic.

MICHAEL A. ROSS
SGT, U.S. Marine Corps Reserve

Rommel as a Military Commander by Ronald Lewin, Pen and Sword Books Limited, London, 2004, 261 pp, \$10.99, (paperback)

First published in 1968, this provocative study by the late Ronald Lewin, distinguished British military historian, charts the course of Rommel's military career.

As the Germans stormed across Europe in the early 1940s, the war in North Africa seemed relatively insignificant, yet a series of surprising victories by the Afrika Korps forced Winston Churchill to refocus British attention. Out of the desert, one of World War I's most brilliant commanders was blooming, General Erwin Johannes Eugen Rommel, the "Desert Fox." Early in 1941, Hitler sent an expeditionary force, commanded by General Rommel, to North Africa to bolster the Italians. The war in the desert pitted the British Eighth Army against Rommel's German-Italian Panzer Army. The fall of Tobruk to Rommel in June 1942 was the heaviest blow struck against the British in the Middle East. Yet lapses in Rommel's judgment, combined with Churchill's heightened defenses and Hitler's neglect, led to a crushing defeat for the Afrika Korps at Alamein in 1942.

Although on the losing side in World War II, Rommel's victories in France, the havoc he later created on the British in North Africa, and the 1944 defensive warfare in Normandy elevated Rommel to a high-level of generalship. He devoted his life to the theory and practice of war. There was nothing in his family tradition to suggest he might emerge as one of the great military leaders. His roots were deep in German provincial middle class. Such a background offered no promise for a professional

soldier in Germany before World War I. It is important to note that Rommel neither had nor sought any affiliation with the closed order of the general staff and the Prussian aristocracy, which dominated the German army before and during World War I, in between wars, and even during World War II, kept a grasp on many of the main controls. During the 1930s, Rommel even turned down an opportunity of going to the staff college and thus being initiated into the magic circle. He stood aloof. Later, Hitler gave him an opening at a crucial point in his career; but otherwise, Rommel owed his promotions to nobody but himself.

The author argues that Rommel's allegiance was often misunderstood, and he is occasionally referred to as if he was a committed party man — he was not. In fact, he was a patriot — his country counted more than any individual creed. He was never a Nazi; indeed he increasingly deplored Nazism and its manifestations. The acid test in regard to Rommel and Nazism was his decision to join the organized plot in July 1944 against Hitler.

Although Rommel's fame derives from his achievements during World War II, he earned his spurs much earlier. During World War I, he was recommended for the Iron Cross Class II in 1914, awarded the Iron Cross Class I in 1915, and by 1918, had been decorated with the Pour le Mérite a medal, which is comparable to the British Victoria Cross. Rommel saw fighting in France in 1914 and Rumania and Italy in 1917. But he missed the Western front; and this is important, the author contends, in an interpretation of his personality and his method of command. Because his practical experience was gained in mobile operations with infantry, he found no difficulty in adjusting later to mobile operations with armor. In addition, because he escaped the trenches in the west, he was never affected by that "siege warfare" mentality, which consciously or unconsciously distracted commanders in World War II who had been junior officers in Flanders.

Rommel's personal leadership and ability to improve on the battlefield, up front with the troops and with minimal resources, were exemplary. His colleagues, when discussing him, described him as having *fingerspitzengefühl*, the natural ability to read the battlefield. He not only had exceptional skills, but possessed incredible integrity with which he carried himself. The admiration of his adversaries prompted British Commander Wavell to send a memo to his troops reminding them that Rommel was human, not omnipotent. He was so respected by his own people that he was buried in Germany with full military honors, despite his association with the plot against Hitler.

Many scholars have told Rommel's story in greater detail, but none have told it better than Lewin. There is nothing new in this current edition; however, any reader with interest in World War II should read this clearly written and solidly researched analysis of Rommel's military life and his intriguing personality. General Rommel personified integrity and devotion to duty.

DENVER FUGATE



Photo by Chun Hsu

Patton Museum's New Gallery to Open December '05

Although the Patton Museum was founded with collections of World War II enemy tanks and ordnance sent to Fort Knox from the battlefields of Europe by General George S. Patton, there is a lot more to it. This year, the museum is reworking its post-World War II gallery with new exhibits highlighting the tanks, armored personnel carriers, scout vehicles, and armor soldiers of the Korean War, Cold War, Vietnam War, Desert Storm, Bosnia-Kosovo, Somalia, and Operation Iraqi Freedom. The tanks have been pulled away from the walls to make room for photos and explanatory text to tell the story of the armor force in action. Video kiosks will bring to life each era with actual footage of our branch in action and each gallery will be backed with wall-sized murals. The museum's vast artifact collection was surveyed to bring out authentic uniforms of friend and foe from each era, which will be exhibited on mannequins throughout the gallery. The familiar M60A1 is making its first appearance inside the museum as the stalwart "cold warrior," as will the M1A1 Abrams in OIF colors. The new gallery will be finished by Christmas 2005, but the present gallery will remain open to visitors throughout the remodeling process.

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