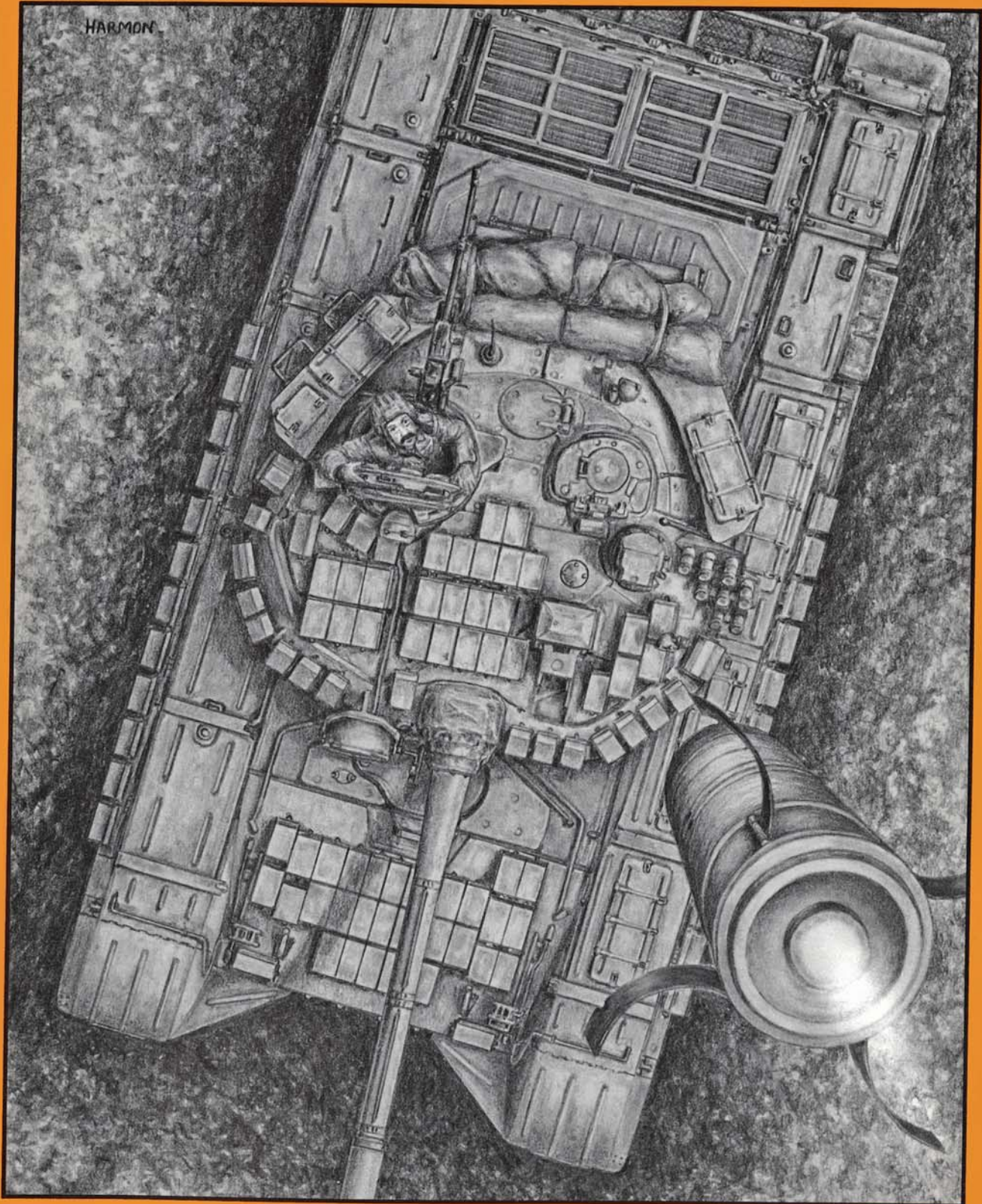


ARMOR



SMART TOP ATTACK WEAPONS - New Threat from Above



When we used to talk about efficiencies, we referred to those little, cheaply built and cheaply rented, bare-bones apartments that single soldiers and geographical bachelors could rent right outside the main gate of Fort Really Hot. They offered some semblance of civilization: a stove top, a closet, and a commode. They were austere places, but a smart guy with some imagination could get by if he cleverly used his limited space.

Nowadays, efficiencies have come to represent something a little bit different. They still demand that cleverness from the user, but now we are talking about resources when we hear the word. How can you leverage your allocations of whatever you've been given to accomplish the mission, or missions? Not enough people? Look for some efficiencies. Not enough equipment? Look for efficiencies. Not enough fuel or repair parts to support your OPTEMPO? Look for some efficiencies. Not enough training opportunities? Simulate. Then look for efficiencies.

Being the mission-type guys they are, tankers and cavalymen will always say, "We'll do our part." Their units might go without as many chemical lights as last year, or quite as many batteries, or fewer CL III POL package products to try and stretch the unit's money and resources to last the year. More than likely though, they will maintain a readiness level close to where they are supposed to be. Those new found efficiencies will probably get 'em through enough of the exercises they had planned to meet the quarterly, semi-annual, and annual training objectives.

Later, after the exercises and recovery operations are complete, these same guys catch up on their reading and see articles about multi-billion dollar acquisition programs and wonder what is going on (for some enlightenment, read about the machinations surrounding the F/A-18 and whether to upgrade or buy new). They look in their motorpools and sure don't see \$3,800 toilet seats. They might see a stray, solitary bolt, inexplicably shipped via FEDEX or Express Mail in packaging befit-

ting a critical component for the space shuttle, but they don't see a lot more ways to create efficiencies.

That our units are learning conservation is very good, for no one likes to see once-used but now contaminated tubes of grease thrown out, or see scrap metal bins with untagged and perfectly good parts destined for a smelter, rather than the turret. No one likes to see soldiers who are not training. Waste should make every one of us mad.

At some point we will have reached the limit of efficiencies and actually begun cutting into our muscle. I don't pretend to know where that point is, for each unit will be different. I do know that a number of guys feel they have streamlined their operations a lot already. Talk of cutting annual ammo allocations or reducing PLLs and ASLs should always send a shudder through the force. We are all concerned about the erosion of collective skills that can't be captured in simulations. Sure, you can keep the simulation running a little bit longer to give the logisticians — that is, all of us — time to police up the battlefield. But, a simulation just isn't going to replicate the effort needed to simultaneously recover two or three dozen armored vehicles and surge for the increased casualty flow. Doing it for the first time at a Combat Training Center certainly isn't our model now, nor what we want, although it may be the direction forced on us by efficiencies.

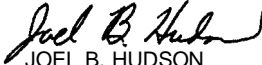
There is everything right about operating more efficiently; waste in any form is a bad thing. Soldiers not training is bad; money that is thrown away is bad; ordering repair parts then not using them is unconscionable; POL products used once, then contaminated, impoverish the unit, the Army, and ruin our environment. As budgets continue shrinking, it behooves us all to be creative, and to use our collective imaginations to efficiently operate within increasingly tight resource allocations. But, if you see muscle getting damaged, speak up.

— TAB

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LETTERS

Mortar Doctrine Writer Responds to Article

Dear Sir:

I'm sending you this message in response to an article in your May-June 1996 issue, "Tactical Employment of the Heavy Mortar Platoon," by CPT Matt Sebenoler. I've never written to you before, but because of my close, long-term association with the subject of CPT Sebenoler's article, I feel I must. You see, I have primary staff responsibility for mortar doctrinal issues at the Infantry School and wrote much of the existing literature on the tactical employment of mortar units.

In this article, CPT Sebenoler states that little of the doctrine that he found in *FM 7-90, Tactical Employment of Mortars*, actually works under combat conditions. Obviously, I disagree. I'd like to present you and your readers with another side of this argument.

The author makes several misstatements and misrepresentations of what is (and what isn't) the Infantry School's doctrinal position on certain mortar issues. The doctrinal manual that CPT Sebenoler had available to him in the desert was the first version of *FM 7-90*, dated 11 June 1985. We have revised it once since the Gulf War, printing the upgraded version in October 1992.

When it was published in 1985, *FM 7-90* provided, for the first time, detailed doctrinal guidance to the mortar platoon leader, as well as to company and battalion commanders and the battalion S3s and FSOs who had staff responsibility for integrating mortar fires into the commander's tactical plan. As part of a three-piece set of updated mortar-related manuals which included *FM 23-90, Mortars*, and *FM 23-91, Mortar Gunnery*, *FM 7-90* was a timely addition to the doctrinal kitbag the Infantry and Armor combined arms team had available to take to the Gulf War.

Now, let's address some of CPT Sebenoler's specific criticisms. First, he states

that doctrine calls for the heavy mortar platoon always to operate in split sections. This is not what the manual says.

On page 3-1, paragraph one says that the commander employs the mortar platoon based on his analysis of the factors of METT-T, and that there are three standard options: by platoon, section, or squad. This chapter then goes on to discuss when, and under what METT-T conditions, each of the three options would be most appropriate. Employment by split section is the second method discussed. At no place does *FM 7-90* state that operation by split section is the preferred method. Page 3-4 provides a chart that lists each employment option and then the advantages and disadvantages of each. As is the case in all American Army doctrine, the leader on the spot is required to make an informed analysis of the existing situation and then choose the most appropriate course of action.

The next supposed doctrinal weakness the author presents is that *FM 7-90* calls for three of the most important individuals in the platoon to ride in the same vehicle and that this makes them too vulnerable to loss from a single kill. Once again, he misstates. *FM 7-90* simply does not say that.

FM 7-90 makes no declaration as to who rides in which vehicle. The riding setup that CPT Sebenoler describes, with the three FDC personnel riding in the same M577, is probably the most common in training, but it isn't, even by the wildest stretch of the imagination, demanded by doctrine.

As he points out in his own article, the heavy mortar platoon has two identical FDC sections, each with its own vehicle. We fought hard for several years during the late 1980s to get the platoon's TO&E changed to authorize the extra vehicle, driver, and FDC personnel.

The justification we presented was twofold. It was to facilitate split section operations, and secondly, it was to increase redundancy of the FDC in case of just such a catastrophic kill. It was for the same reasons that we authorized the platoon sergeant's wheeled vehicle. It facilitated his control of a section during split section op-

eration and lessened the chances of both senior leaders becoming casualties from a single round or mine.

As you can see, doctrine had already driven TO&E changes that accomplished the same results the author was seeking, lessening the chances that any single vehicle kill would render the heavy mortar platoon combat ineffective by killing irreplaceable personnel. CPT Sebenoler reduced that risk even further by cross-loading key personnel within his platoon. Rather than violating doctrine, he was on firm doctrinal grounds when making that decision.

The next supposed doctrinal shortcoming concerned the actions he had to take to compensate for his battalion commander's decision to restrict wheeled vehicle use to the trains area only. That decision was well within doctrinal norms, being based as it was (I assume) on an evaluation of their vulnerability and a desire to maximize the cross-country movement speed of his unit once the ground combat phase of the war began.

However, every decision a commander makes has consequences and every benefit has an associated cost. The consequence of this decision was to somewhat reduce the flexibility of the heavy mortar platoon's command and control structure. The actions the author had to take to compensate for that reduction seem logical, but they were certainly not necessitated by any doctrinal shortfall within *FM 7-90*.

The next so-called shortcoming involved the platoon leader being forced to stop displacing his platoon by alternate or successive bounds and begin to displace as a complete platoon. He found that, despite his best efforts, the rest of the battalion was driving away from his mortar platoon as each section continually stopped, set up, waited for the other section to complete its move, broke down, and moved again.

Contrary to CPT Sebenoler's statement in his article, displacement by bounds is not the doctrinally required technique. In fact, in *FM 7-90* on page 3-6, there is a detailed discussion of the factors that affect the commander's choice of displacement techniques. Three displacement techniques are described in the 1985 *FM 7-90*, the first of which is displacement by platoon. The discussion of displacement by alternate and successive bounds even includes the cautionary note that they are slower than displacement by platoon.

What appears to have happened in the situation described by the author is that he and his battalion commander were basing their displacement techniques on two very different views of the existing tactical situation.

If the mortar platoon leader's evaluation was correct — that the battalion needed

Issues in ARMOR



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continuous and uninterrupted immediate mortar support — then the battalion commander should have been regulating the speed of the unit to remain within the umbrella of that support provided by the bounding sections.

However, if the battalion commander's evaluation of the existing METT-T conditions was correct (which appears to have been the case), then the mortar platoon was wasting its time bounding and was doing nothing but slowing the battalion down.

The issue seems to have been resolved in the battalion commander's favor, as they usually are! The author states that once he changed the displacement technique and began to travel as a platoon behind the maneuver companies, all was well.

Once again, none of this had anything to do with doctrinal shortcomings within *FM 7-90*. You could perhaps chalk it up to a lack of communication between the author and the battalion commander.

If I've come across as being harsh on CPT Sebenoler, I don't mean to. He sounds like a thoughtful and energetic young officer who successfully met the challenges that came his way in the Gulf. I congratulate him for achieving such a degree of proficiency within his platoon that it could complete preparation for a hip shoot in under two minutes. That's an impressive time, and it shows what a well-trained, well-led heavy mortar platoon is capable of doing. Some of the technology we are now integrating into the Mortar Fire Control System will allow us to shorten into-action times even more.

To sum up, let me say that the American Army's approach to tactical doctrine is almost unique in the world. Not only are our leaders authorized to modify the tactics and techniques they use at any particular time, basing that decision on their personal evaluation of the existing METT-T conditions and their commander's intent, but they are required to do so! We select, train, and promote leaders precisely on their demonstrated ability to make just these sorts of decisions and use just that sort of initiative. We do not often promote leaders that demonstrate they are incapable of such mental agility and must follow a rigid written doctrine as if it were dogma.

All of us would be better served, and would serve our soldiers better, if we understood that unique aspect of our doctrinal philosophy. We should all read carefully and study our existing tactical doctrine, rather than make unsubstantiated claims that it is inadequate, based on an incomplete understanding of its fundamentals.

ARTHUR A. DURANTE, JR.
Deputy Chief, Doctrine Division
Combined Arms and Tactics Directorate
U.S. Army Infantry School
Ft. Benning, Ga.

Javelin Opens Up Many New Possibilities

Dear Sir:

Major Morningstar's brilliant thinkpiece in the May-June 1996 *ARMOR*, "Javelins and Skirmishers on the Battlefield," should be required reading for force developers and doctrine writers around the world. This observant young officer, apparently floating around the Atlantic somewhere, has correctly identified the advent of a "new breed of smart weapons (that) are about to fundamentally change ground battle systems, organization, and tactics." On 27 June 1996, the Javelin antitank missile system was fielded to the 3d Battalion, 75th Rangers, marking the world's first deployment of precision strike, fire-and-forget technology to the individual soldier. In the coming years, AT sections in the U.S. Army, U.S. Marine Corps, and selected brigades of the National Guard will receive a revolutionary capability, comparable to the English long-bow at Crecy. The future is here: there now exists the ability for dismounted soldiers to kill modern tanks with a man-portable, top-attack weapon at tank ranges, with more accuracy than the tank.

As the author points out, Javelin systems properly employed have the potential to strip an advancing formation of its key tank assets, force deployment and delay, and greatly improve survivability in an NTC or Desert Shield scenario. Horizontally integrated in an organization conducting a force projection mission, Javelin's mobility and high stowed kill precision can be a critical element in protecting an area for follow-on heavy forces. One could envision a light cavalry regiment built around precision weaponry, airborne units that are much more than "speed bumps," airmobile tank raids, and a thousand other concepts yet to be created. The Chief of Armor has pointed the way: "to find ways to accommodate the change brought on by new weapons, new technology, new organizations, and new missions, within existing manpower and budget constraints ... to gird against defeat is not to change."

One hopes that we do not squander this technology, repeating our tank development experience of 1918-1940. The early signs are not good — it being so difficult to change in a period of relative peace, constrained resources, and the "lessons" of Desert Storm. The lessons of Waterloo on the superiority of bronze cannon come to mind. The prototype Force XXI Army Division is remarkable by its lack of change and reduces manpower by removing AT units from the organization, although many iterations remain. The Future Scout Vehicle, a potential skirmisher if ever there was one, is focused on medium caliber machine guns, of all things. The tankers continue to ignore missiles — perhaps still learning the

wrong lessons from the Sheridan, a vehicle before its time if ever there was one. The Armored Gun System has been canceled on the eve of its fielding, perhaps removing armor from the light forces for a generation.

Many opportunities are coming to shape the future, however. Javelin will participate in next year's Advanced Warfighting Experiment, although it probably will be analyzed only in comparison to the last generation Dragon it replaces. The U.S. Marine Corps has given a high priority to precision weapons and will conduct trade studies and prototype integration of Javelin on their Advanced Amphibious Assault Vehicle and to replace TOW on the AT versions of the Light Armor Vehicle. International interest is very high, particularly in countries facing a high tank threat, those needing the low training overhead of fire-and-forget simplicity, and those wanting to upgrade current platforms without expensive development costs.

The next few years will tell — those who see the possibilities will shape the future.

FRANK HARTLINE
COL, Armor (Ret.)
Allen, Texas

Javelin Missile May Be Capable, But Is Not a Panacea

Dear Sir:

As a Field Artilleryman, I feel compelled to correct a few misconceptions and mention a few additional points not covered by Major James K. Morningstar in "Javelins and Skirmishers on the Battlefield" (*ARMOR*, May-June 1996).

Overall, I think Major Morningstar makes an excellent case for the capabilities of the Javelin missile and a rebirth of the skirmisher concept. Moreover, I agree with his analysis of the tactical possibilities offered by this system. However, I disagree with his assertion that these tactics are not possible using existing systems.

The TOW II missile is far more capable than a SAGGER ever dreamed of being, and comparing the two is unjust. TOW IIs, when fired from ITVs which have been properly deployed, sighted, and supported, are capable of inflicting the type of damage that Major Morningstar describes. True, ITVs are not a "light" system, as Javelin skirmishers are, and the TOW II is not a fire-and-forget system. However, its longer range of 3750+ meters, small silhouette, and overhead armor protection do give it some capability in this area.

In addition, Major Morningstar gives the impression that the Javelin is a stand-alone weapon and that field artillery is not very effective against armored targets. Any weapon is only as effective as the sum of

its parts and its integration into the overall scheme of the operation. No one weapon is capable of winning the battle on its own, not the M1A2 tank, not the M109A6 howitzer and, most certainly, not the Javelin missile.

Fire support, like all the other BOSs, is not perfect, and is most effective when it is correctly integrated and synchronized into the *maneuver commander's* concept of the operation. Remember, the maneuver commander owns the fire support plan just as surely as he owns the maneuver plan and the logistic support plan. Furthermore:

- Field Artillery does have a precision guided munition available to attack point targets — the M712 Copperhead. Although we will never have as many Copperheads available as we might wish, and it is not a fire-and-forget system, it does have the capability to attack and destroy individual targets (especially when they are high payoff targets).

- The M109A6 Paladin does not simply reduce the time threshold for emplacing, executing a fire mission, and then displacing; it changes those thresholds completely. M109A6-equipped FA battalions do not operate from traditional static firing positions. Instead, the Paladin platoon (which consists of four M109A6 howitzers operating in two, two-howitzer pairs and one M577A2 command track) moves continually in its position area and only stops to execute fire missions. Since the M109A6 takes far less time to emplace/displace, and fire missions are received and executed digitally, responsiveness and timeliness are vastly increased. Additionally, survivability moves are not necessary as a separate act.

- The employment of the FA battalions in the examples Major Morningstar gives, while probably true, are misleading and definitely not in keeping with current U.S. Army maneuver and fire support doctrine. Any FA battalion that fires continually for six minutes at its max range deserves to be acquired and destroyed, especially if another battalion was available to reinforce its fires but did not because it was out of range.

What should have happened is that as the Forward Security Element (FSE) entered the constricting terrain (as predicted by the S2, who made this area a Targeted Area of Interest or TAI), it came under the observation of the Brigade's Combat Observation/Lasing Teams (COLTs). As the FSE reached the trigger point, the COLTs initiate a series of fire missions. Indirect fire lands on the FSE and an FA-delivered FASCAM minefield, which reinforces obstacles already emplaced by the engineers in the TAI, is emplaced. These serve to attrit, slow, and disorganize the FSE. As the FSE executes a hasty breach of this obstacle, intense indirect fire from both FA battalions (which were positioned so that the TAI was well within their 30,000 meter range) con-

tinues to hammer them in conjunction with direct fire from Javelin and M1A2-equipped skirmishers. The skirmishers, in conjunction with additional obstacles and continuing fires from the FA battalions and mortars, continue to attrit the FSE until it is destroyed. As the Advanced Guard Main Body enters the constricting terrain, it can look forward to the same treatment, augmented by attacks from fixed and rotary wing CAS.

I grant that the above actions are easy to talk about, but are very difficult to achieve. However, if we expect to fight and win on the battlefield of the future, we have to improve our ability to integrate and synchronize all available weapons, and BOSs. Javelin is a wonderful system, but it cannot win by itself.

JEFFREY A. CUSHING
MAJ, FA, CAARNG
Brigade FSO, 2nd Brigade 40 ID (M)

Too Much Digital Information Could Slow Operations, Not Help

Dear Sir:

It is great to see the "Issues in ARMOR" forum in place... and even better to see that the first issue is one near and dear to me. I was a platoon leader along with Bob Krenzle in A/3-8 Cav for the M1A2 IOTE. I am now a Military Intelligence officer who still keeps up with new developments in armor and maneuver doctrine.

One of the key issues that we will see come up with this new digital technology is that the dissemination of battlefield information and intelligence now has the ability to flow higher, lower, and to adjacent units with the push of a button. Imagery from a corps deep-look asset can be digitally sent to frontline battalions and soon, even platoons. Information from the critical battalion scout can be viewed by the division commander in near-real time. Information management needs to be practiced and rehearsed at all levels to keep only the necessary intelligence and information flowing. Commanders need to carefully develop Commander's Critical Information Requirements (CCIR) and staffs need to pick Priority Intelligence Requirements (PIR), Friendly Force Information Requirements (FFIR), and Essential Elements of Friendly Information (EEFI) that support those CCIRs. These requirements need to be understood at least two levels up and three levels down to assure that the vital information is pushed up... and down. Lower echelon units (battalions) need to understand higher level collection techniques so they know what information can be pulled down. Staffs need to keep the commander's IVIS screen updated with what he needs... not cluttered with nice-to-know information.

With digital information transfer in practice at section and platoon level, our ability, as an army, to force a murderous OPTEMPO on the enemy may be constrained by users plugging the pipes with nonvital information that will slow the decision-making cycle. Leaders at all levels must do their part in pulling and pushing the correct information up and down the digital pipes that feed our information-starved forces.

JAKE ROSE
CPT, MI

National Guard Needs M1A2s To Keep Up with Modernization

Dear Sir:

In reading everything I can get my hands on in reference to digitization, I am slapped in the face with the fact that the words "Army National Guard" cannot be found anywhere. It is true that *National Guard* magazine printed an article (Mar 96, "Louisiana Is Ready to Roll on the New M1A2") that suggested my battalion would be the first Guard unit to receive M1A2s. At the article's printing, a lobby effort was underway to convince Congress to include \$300 million in the FY97 budget for dedicated procurement of a battalion set of M1A2s for the Guard. Due to budget constraints and a desire by the HNSC to present a budget that they believed would fly — they were already \$10-\$12 billion over the White House proposal — the lobby effort has dropped to one dedicated company's worth of -A2s. (While this is quite disappointing, it might not be a bad thing as it would show the reserve components how we would have to radically alter the way we train.)

The FUTURE must include us in the mix. Over and over again, I must repeat former Chief of Armor General Brown's words that, "...We cannot do another Desert Storm without the Guard's armor battalions..." We must be able to interface with the active component if we are to fight alongside. While it would seem that a by-product of the lobby effort mentioned above is a realization in Congress that 1,079 may not be enough, I argue that some Guard unit, somewhere, must start now with the M1A2 in order to find its sea legs. What is taking a daily effort of trial, error, retrial, success, etc., by the EXFOR at Ft. Hood will take even longer for the Guard to realize. While nearly every Guard leader drills more than just two days a month, all of those days not in the turret do nothing to add to teaching, learning, doing, and/or assessing curves.

One day, the M1A2 will be in our armory motor pools and MATES sites. It is much better that we start the process now, how-

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MG Lon E. Maggart
Commanding General
U.S. Army Armor Center



Building Victory From the Ground Up

All great endeavors have one thing in common: they were all built from the ground up. Without firmly laid foundations, no accomplishment can stand the test of time. The United States Army is no different. It was built from a well-organized plan, led by dedicated leaders of uncommon vision, and its greatest strength comes from the ground up — well-trained and highly-motivated soldiers.

Our soldiers are the best in the world because our Army takes care of them from the ground up, with tough, realistic training, opportunities for advancement, skill and professional development, and quality support for them and their families. Make no mistake: Operation Desert Storm was not won by high technology or smart weapons. It was won by tough, smart soldiers, who knew their equipment and fought with skill and bravery, because they knew the Army would take care of them. Our soldiers are the bone, the muscle, and the lifeblood of our Army, and our country — and it will never be any other way.

Building from the ground up also describes how our Army, and specifically the Armor Force, must adapt to change. In the past, the Army was run from the “top down.”

Decisions were made at the top. Equipment was designed at the top. Organizations were developed at the top. All this has changed now. Our soldiers and civilian employees are the best quality we have ever had. We must use their input — from the ground up — to

keep the Armor Force leading change in the 21st Century.

In the past, new ideas often were developed separately from their intended users because the gap in experience and knowledge between users and designers was so great that it could not be easily bridged. But today’s information technology allows these two to work hand-in-hand. On the digitized battlefield, the increased access to information will not be used to concentrate control at the highest levels, but to empower initiative by everyone in the force to achieve decentralized execution.

Passing information — and the ability to use that information — down to the lowest levels, will help us win future battles. New combat vehicles, new information transfer structures, new organizations, and new doctrine cannot be created by bureaucracies isolated from the field. Instead, these things must be created out of the experiences and lessons learned by those who actually use them everyday. That is why the Army has invested in Advanced Warfighting Experiments and the EX-FOR.

As warfare and technology change, the Army must accommodate these changes in creative ways that meet the real needs of a changing world. The Armor Force understands this concept because it was born in response to advances in mechanization, firepower, and communication. As our yellow, blue, and red insignia suggests, the Armor Force was created from the combination of tanks, infantry, and artillery

used in overwhelming, violent, and decisive actions on the battlefield.

Among its most important missions, the Armor Center has the requirement to unlock and then organize the genius of our soldiers and junior leaders into something useful for the entire Army. For example, the Armor Center recently created Integrated Concept Teams (ICTs) to chart out the Future Combat System (Future Main Battle Tank), future scout cavalry system (FSCS), and improvements in tank armaments and ammunition, as well as upgrades to the Abrams fleet.

These ICTs pulled together participants from many different Army organizations and disciplines to ensure that the ideas and expertise of all concerned with the future of the mounted force were focused in a manner consistent with today’s realities. It also was a way to build the future from the ground up.

We will use these same techniques when developing new combat organizations, new doctrine, new training packages, and new technologies. All of these will ensure that the equipment we give our soldiers of the future will be the best in the world. Creativity and innovation are key ingredients to building the future. Creativity and innovation from the entire force — not just from those at the top. It is, therefore, incumbent on all of us to think about the future and to offer suggestions on how to improve the mounted force.

ON THE WAY!

Soldier Utilization: Mission and Men

by CSM Ronnie W. Davis, Command Sergeant Major, U.S. Army Armor Center

Since Fiscal Year 1990, we have seen a 32 percent drawdown in the Armor enlisted force, from 26,112 to 17,742. As we continue to downsize, the responsibility of leaders, to our missions and our soldiers, will require us to make sure we properly utilize the soldiers under our control.

The first leader involved in this area, the unit command sergeant major, must actively manage enlisted personnel assignments within his unit. By thoroughly screening records and being in tune with the needs and missions of the unit, he can place soldiers in the best positions, both for their careers and the good of the unit. However, the CSM is not alone in this assignment process.

Commanders and first sergeants must track their personnel by MOS, assigning them to the proper paragraph and line number within the unit. All members of the chain of command must inform their soldiers about staying on a good career track (See CMF 19 Career Development Model) and its impact on

a soldier's promotion possibilities. Good soldiers must be given the opportunity to compete for such prestigious awards as the Soldier of the Month/Year, Sergeant Morales and Audie Murphy Clubs, and the Excellence in Armor program (EIA). Encourage soldiers to take varied assignments, such as drill sergeant, recruiter, AC/RC duty, and instructor, just to name a few. Commanders must also be aware of the damage they can cause when they keep soldiers in key, non-leadership positions within their organization.

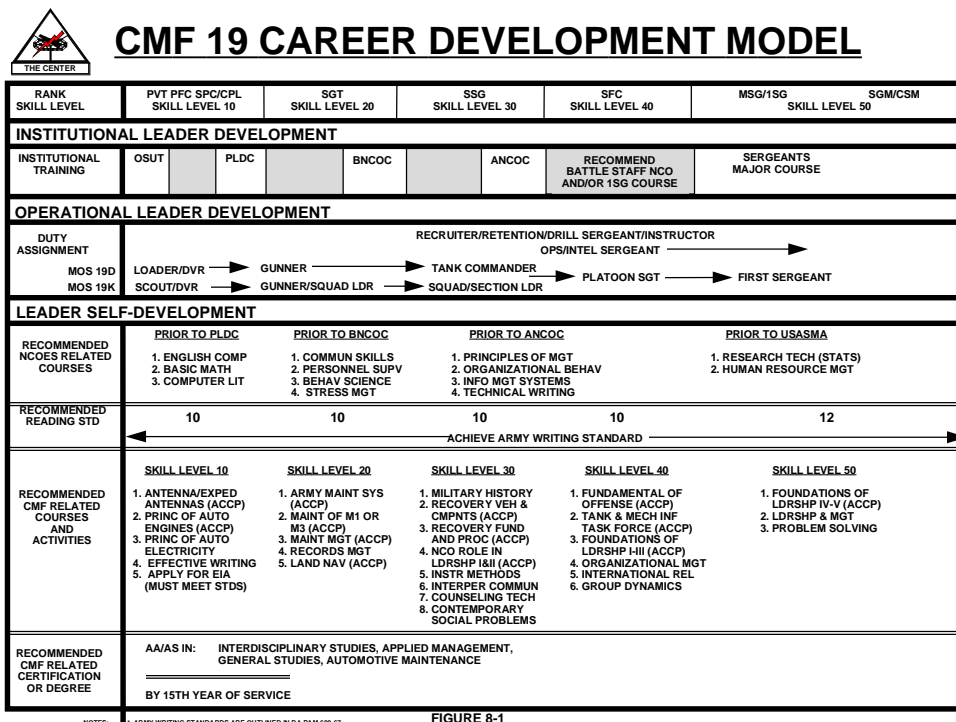
The master gunner position is a good example. This is a critical position that must be staffed by soldiers who are highly motivated, extremely competent, and show the potential for advancement; in short, a soldier who is a cut above the rest. But leaving a soldier in that position too long, and not giving him the chance to be a platoon sergeant, will not only stagnate the soldier, but also hinder his promotion possibilities.

Accomplish the mission, but not at the expense of a soldier's career.

The Armor Enlisted Professional Development Guide provides the commander with 12 rules for Armor NCO professional development. The first rule is "Work your soldiers in their Primary MOS." By keeping this rule in mind, we will properly utilize assigned soldiers.

The guide also tells the soldier what he must do to meet minimal standards of branch qualification in each grade, and how to become eligible for the next higher grade. The soldier must also play a key role in his own career development. If he is misassigned, he must inform the chain of command that the present assignment is not advantageous to his career. If he is in an unauthorized or invalid position, he must take the appropriate steps to be released and reassigned to a unit authorized his MOS and grade. The soldier must pay close attention to Item 35 on his DA Form 2-1 and the job title on the NCOER. Additionally, the job that he is doing must match with the paragraph and line number on the DA Form 2A. The bottom line: the soldier must seek out and excel in hard jobs to further his career.

Generally, the Armor community is doing a fine job utilizing Armor soldiers. As the Army continues to downsize, it is our responsibility as leaders to ensure our soldiers receive the training and leadership positions necessary for career advancement. We must continue to challenge our soldiers, properly utilize them within our units, and give them challenging and diversified assignments. The soldier too must be willing to seek hard jobs which hone his skills and prepare him to fight, if necessary, on any battlefield in the world. Doing these things will ensure a strong and viable Armor Force and prepare our soldiers for the XXIst Century.



STAWs: New Threat from Above

Smart Top Attack Weapons

by Lieutenant Colonel James H. Boschma, U.S. Army (Ret.)

New Smart Top Attack Weapons (STAWs) are rapidly emerging from the research world and entering the battlefield, exposing our soldiers to a new threat. We need to develop doctrine, tactics, and a training program to tell our soldiers how they can reduce their vulnerability to this new family of anti-tank weapons.

The performance of the first-generation STAWs is so impressive — and the advances in STAW supporting sensor and computational technology so rapid — that we must act *now* to develop a doctrine which addresses this threat. To delay would virtually ensure that American soldiers will face STAW systems without the training and knowledge necessary to operate effectively in the STAW environment.

Emerging STAWs are highly mobile, deployable from a variety of platforms, deadly when striking intended targets, and are in the hands of potential enemy forces today. They are almost always fired from extremely long ranges, or from sites which cannot be targeted with direct-fire weapons. They search for armored targets from an optimum vantage point high above the battlefield, capitalize upon a range of modern seeker types (visible, millimeter wave radar, infrared, acoustic, and laser) to find targets, and conduct autonomous maneuver to attack the relatively thin top armor surfaces of our vehicles, thus increasing their effectiveness.

It is in this environment of a rapidly emerging threat — probably more deadly than any of the antitank guided missile systems fielded in the past two decades — that triggers this call for another look at our doctrine, tactics, and training.

STAWs are attractive to Third World nations who do not have the financial resources or political advocacy to procure advanced armored systems. The STAW offers an effective defense against modern armor at a bargain price. Top attack sidesteps the protection value of the best modern armor, which is oriented toward defending the 60-degree frontal arc of the vehicle,

and the STAWs' down-looking seekers overcome attempts at camouflage. Because of the small, portable nature of many STAW systems, they can be employed relatively covertly, do not attract patrolling aircraft, and cannot be easily seen by long range electronic sensor systems. Thus, STAWs offer Third World nations a 21st century antitank system that is possibly more effective than the easily obtained, ex-Soviet main battle tanks in the antiarmor role.

Recent advances in the development of STAWs have resulted in their fielding to (at least) two foreign armies. More than 50 non-U.S. STAW systems are known to be under development. Additionally, several successful STAW systems, in manufacture by foreign-owned aerospace and defense firms, are "for sale" on the open arms market. One Asian country is in the process of producing a low-cost STAW weapon specifically developed for world-wide sales. One analyst stated that "...We should expect to see at least 20 STAW systems in the field within the next five years." So, it is virtually certain that U.S. and Allied forces will encounter STAW systems on the battlefield.

In the winter of 1993, a STAW Foreign Military Evaluation program was undertaken by the Foreign Intelligence, Science and Technology (FSTC) Laboratory, the Army Armament Research,

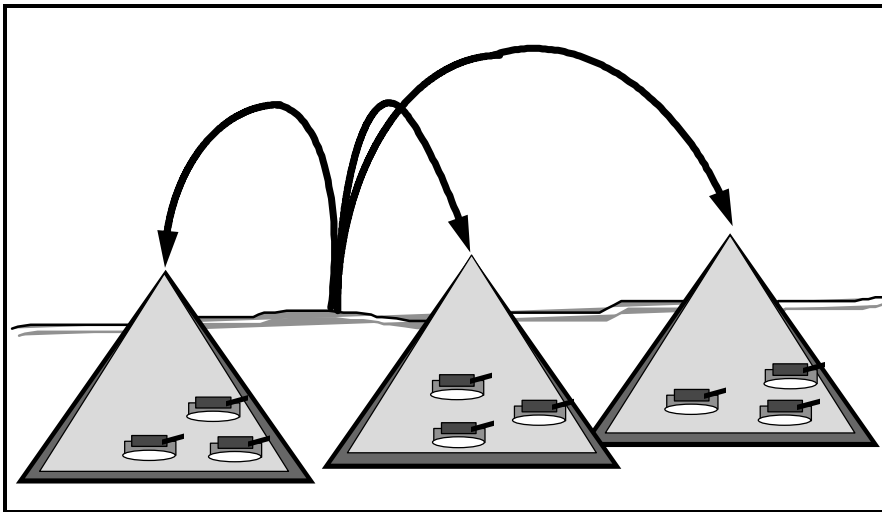


Development, and Engineering Center (ARDEC), and the Army Materiel Command, Smart Weapons Management Office (AMC-SWMO). Two weapons were purchased: the British-manufactured MERLIN millimeter wave-guided 81mm mortar, and the Swedish STRIX 120mm infrared-guided mortar. These two weapon systems were matched against M60 target tanks to examine their performance against moving and stationary armored vehicles. A total of nine STAWs were fired under a variety of environmental conditions. Of these, five found their intended targets and either damaged or destroyed them.

While both weapon types managed to hit targets, the infrared 120mm mortar was especially effective. Its thermal-en-



Typical IR signature of armor as seen from the STAW's vantage.



Typical STAW attack scenario.

hanced warhead easily penetrated the M60's topside armor. It then penetrated and exited through the floor of the tank. Its over-pressure and fragmentation performance inside the tank appeared lethal to the crew, and possibly the vehicle. It can be fired from reverse slope positions up to seven kilometers from its intended target, and its ability to detect and strike armor was clearly evident during the Eglin tests.

Of major concern is the combination of viewing geometry, and sensing spectrum (typically IR or MMW) that is achieved by STAW weapons. These two factors serve to negate, or at least substantially dilute, many years of research and lessons learned concerning the management of visible signatures of armored vehicles. Battlefield STAWs require new thinking about vehicle signatures and countermeasures against top attack targeting sensors.

The STAW realities require development of a strategy for operations in this new top attack environment. U.S. forces have never been subjected to STAW attack, and we have thus concentrated our doctrine and tactics development, as well as our countermeasure developments, upon threats previously encountered. Our general thought process has always been to concentrate upon the capabilities the enemy has widely deployed today, not upon those he may display tomorrow. History is replete with examples of military disaster facilitated by such thought, such as the fate of the Israeli 2nd Armored Brigade, which fell to Egyptian Sappers, or the "Fokker Scourge" of WWI, where German machine guns firing through propellers decimated Allied aviation for nearly a year. Today, the computer age is upon us, and technology is moving forward

at an unprecedented pace. The rate of technological development demands that we aggressively look forward at the emerging threat, and define a doctrine which addresses not only the last battle, but both the last *and* our vision of the next. These words are not meant to downplay the need for conventional defenses, but rather to emphasize the need for serious consideration of emerging threat technology as part of every design, tactic, training, and doctrinal development. The STAW is one threat that we cannot afford to relegate to the status of "insignificant." Wishing it away will not make it go away.

There is much to be done, and delay is not acceptable: delay may well be measured in American lives. We must develop a fuller understanding of what the STAW sees as it looks down upon our forces, and then develop tactics that we impart to our troops to reduce their vulnerability. Techniques and procedures to reduce STAW vulnerability can be developed at low cost, in conjunction with training and testing already underway. We have the tools to collect the information needed, and the expertise to convert observations to a list of actions that support our warfighters. TRADOC can then develop the doctrine, tactics, and training programs needed to impart this knowledge to individual soldiers and reduce the significance of the STAW threat.

Simultaneously, the Research and Development (R&D) community must continue to advance technologies which offer STAW countermeasures. Countermeasures may range from coatings to reduce our emitted and reflected signatures, to decoys which can draw the STAW's fire, to active countermeasure technologies which can impair or kill the STAWs before they hit our ve-

hicles. These approaches need to be found, nurtured and then fielded. Because the foreign STAWs are in the process of being fielded, we need to move forward very rapidly in these endeavors.

There must be a renewed level of interest in the emerging STAW threat, and rapid development, especially of doctrine and training programs, to reduce the effects of STAWs on the battlefield. I emphasize the first step (doctrine, tactics, and training) because these are areas that can be addressed now, versus the materiel development cycle, which usually takes many years to deliver countermeasures. Those of you at the service schools, battle labs, and within TRADOC must become active players in the early assessment of the STAW threat.

The development community needs to review the progress of foreign STAWs, and then establish priorities which will provide our forces with the best countermeasures technology can yield. Do it soon; otherwise, the requirement may be accentuated in American blood after the next battle.

If we, the soldiers, scientists, and Army managers, can agree on the STAW danger, prioritize its importance, and move together to develop doctrine, tactics, training, and technology, our forces can overcome this new threat. We can then advance into the new century with the knowledge that our front line troops have all the tools needed for survival and effectiveness in combat, and that our combat power is second to none.

Lieutenant Colonel (Ret.) James H. Boschma departed active duty with the U.S. Army in 1988. During his military career, he served as a cavalry troop commander with the 3rd Armored Cavalry, a staff officer on an armored brigade staff, two combat tours in Vietnam as an aviator, and then ten years in weapons R&D assignments. He is currently the technical director for BOSCH Aerospace, Inc., a defense research firm involved in weapons testing and the development of unmanned reconnaissance systems, located in Huntsville, Ala.

Learning From Their Mistakes:

Russia's Arena Active Protection System

by First Lieutenant Adam Geibel

As a result of the Russian Army's mauling at the hands of the Chechen rebels — particularly the disastrous assault on Grozny on 31 December 1994, the Kremlin made a shocking admission of shortcomings at a televised scientific-technical conference at Kubinka on 20 February 1995.

Defense Minister Pavel Grachev admitted that unnecessary casualties were sustained due to the T-80Y's vulnerabilities: short range, flammable fuel and ammunition stowage, thin upper surface armor.

Bitten by their own RPGs, the Russians have developed a defensive countermeasure that solves some of the technological problems addressed at Kubinka.

The *Arena* Active Protection System, developed at the Kolomna-based Engineering Design Bureau, is designed to provide protection from antitank grenades and ATGMs, including those with top-attack warheads. *Arena* is foreseen as useful, both on battlefields where the latest generation of 3-8 km ATGMs prevail and during peacekeeping operations and LICs, where the greatest threats are from light antitank weapons.

Arena includes three major subassemblies. Inside the turret, and taking up about 30m³, is the target detection and tracking equipment (computer, TC's control panel, command signals converter unit).

The radar itself is fitted to a 'Kladyvo'-style folding radar mast, mounted on the centerline at the rear of the turret roof. The octagonal radar panel assembly is fairly large, approximately 1.5m³.

Launchers, which the makers call 'silos,' are mounted around the turret,

reminiscent of the BDD 'Horse Shoe' armor. They provide a 110-degree arc of protection, centered on the gun tube (Russian reactive armor kits weigh the same as an active kit, but only cover a 35-40 degree arc). The system has 22 to 26 rounds, depending upon the type of tank, which are mounted so that they provide overlapping 'fields of fire.' Unlike reactive armor, an expended round will not leave a hole in the defensive curtain.

The silos are armored against splinters and bullets to prevent accidental detonation of the rounds. The whole 27 V system weighs 1,000-1,100 kg and consumes 1 kW of power.

The description of the system in use sounds fairly simple. Prior to entering a hostile area, the TC turns the system on. *Arena* automatically tracks incoming rounds, ignoring incoming rounds until they're within 50m, then engaging anything approaching at speeds of 70-700 m/s. False targets, such as outgoing rounds, near misses, birds, small projectiles (like bullets or splinters) would be ignored.

When fired, the round detonates the warhead at a stand-off distance of a few meters, so that the double-charge ATGM warheads designed to defeat reactive armor are rendered impotent. Time to detect and destroy a threat is .07 sec, with .2 to .4 sec for the system to reset. The danger zone for accompanying infantry is 20-30m.

If necessary, the TC can manually override and fire the system. The number of remaining rounds are displayed on the TC's control panel. The rounds are rectangular and reloadable by the crew.

The *Arena* system, which can be fitted to new production tanks as well as

existing ones scheduled for rebuilds, is expected to double the tanks' survivability during assaults and reduce losses from 1.5 to 1.7 times.

Arena-fitted tanks are not supposed to create electromagnetic interference while working with other tanks. The manufacturers also claim that the system is extremely immune to ECM.

Support for the system has also been addressed by the manufacturer. Subsystems are modular and can be pulled for fast replacement. Test and control equipment is mounted on a cross-country capable truck, for forward maintenance.

Like the T-90, this system may not be fielded in substantial numbers with Russian forces for some time, due to budgetary constraints.

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"ARENA: Active Protection System For Tanks," V. Kashin, *Military Parade*, May-June 1996, pp. 32-35.

First Lieutenant Adam Geibel is a tank platoon leader with 5/117th Cav, 42d ID, NJARNG. He is also the Assistant Editor of *Journal of Military Ordnance* and a journalism graduate student at Temple University. His last contribution to *ARMOR* was a chronicle of the Chechen Revolution (January-February 1995).

Cavalry In Force XXI

by Major General Lon E. Maggart



Photo by Greg Stewart

As the U.S. Army rapidly transforms itself into the decisive force of the 21st century, the requirement for specially organized, trained, and equipped cavalry forces must be re-evaluated and stated. While some suggest that cavalry forces are no longer needed in an era of electronic sensors and battlefield information technologies, our Force XXI developmental efforts to date indicate the opposite — a dedicated, specialized cavalry force, enabled by new systems, is paramount to fighting and operating within this new strategic environment. This article lays the foundation for the continued evolution of cavalry as the “eyes and ears” of the combined arms team.

A Fundamental Role

As a start point, the role of cavalry needs to be restated, given the new operational conditions within which we will fight in the 21st century. We believe that the importance of cavalry operations to provide security and conduct reconnaissance in Force XXI will dramatically increase. Cavalry is uniquely capable of providing the decisive force commander the *assured* means to gain information, secure the force, and control battlefield tempo necessary to concentrate overwhelming combat power against the enemy at decisive times and places.

As an enabling capability of the Army's new capstone doctrine on information operations (FM 100-6), cavalry forces will be tasked to significantly enhance the decisive force commander's ability to set conditions for success.

The ability for the combined arms force of Force XXI to achieve simulta-

neity and depth will be based on the success of cavalry operations. Cavalry provides a critical maneuver capability to larger forces conducting deep and simultaneous attacks. To rapidly defeat the enemy, commanders will employ cavalry to set favorable conditions for maneuver by gathering information and shaping the battle space. In this context, maneuver is used to attack the enemy's vulnerabilities, such as flanks, rear, lines of communication, logistics, and combat support capabilities. Tactical commanders in the future will need an unprecedented, high degree of situational awareness to protect their forces and successfully maneuver. This awareness is acquired by reducing uncertainties on the battlefield through aggressive security and reconnaissance operations by digitally equipped cavalry units.

Information Age Warfare: Key Assumptions

The Armor Center, in concert with our TRADOC partners and the Experimental Force (EXFOR), have performed extensive work to define future operating conditions and concepts for Force XXI and beyond. From this effort, key assumptions relevant to the role of Cavalry in Force XXI have emerged that shape our thinking:

- Reconnaissance and security tasks require specialized organizations, equipment, and training.
- Battlefield information collection and force protection are assured capabilities that tactical commanders must possess organic to their force.
- Tactical commanders require independent maneuver forces to shape

the battlespace and facilitate movement of the striking force.

- Tactical commanders will require accurate, manned, real-time information that can be gained in all weather, terrain, and varying degrees of enemy threat to supplement and verify information gained by other sources.
- Tactical units will be required to fight for information and expand the battlespace in space, time, and purpose *without* the expenditure of combat power from the decisive force.

Future Battlefield Requirements

Success in Force XXI operations will require unique capabilities which only cavalry units possess and can employ for the decisive force commander. With digital systems, cavalry units will provide information with unprecedented levels of timeliness, accuracy, and redundancy. Cavalry's ability to provide confirmation for other information sensors, as well as to provide security for the decisive force, allows cavalry forces to fulfill vital battlefield requirements for the commander.

Provide Time and Space to Regulate Tempo. Tactical commanders will think and plan in terms of battlespace. Cavalry units will operate to continually expand the battlespace, which in turn provides more time and space for the commander to assess the situation, determine courses of action, and take action. Security operations will delay enemy movements and deny or deceive force information to the enemy, ensuring reaction time for any necessary follow-up actions. Further, cavalry possesses the lethality to destroy enemy

reconnaissance and security elements, which is essential to setting the conditions to gain information dominance prior to engaging the enemy.

Obtain Current Information. In the future, tactical commanders will have a wide variety of digital information assets available. However, the ability to use these systems may decrease on contact with the enemy. As a result, the force commander relies primarily on his cavalry to provide him the information that he needs to fight current engagements. Information gathering can then be focused on collecting information the commander will need in subsequent actions, or in other physical areas of the battlefield. Technical and procedural connectivity between cavalry forces and other units employing joint and Army reconnaissance, surveillance, and target acquisition systems is imperative to the effective integration of all information functions supporting the commander. Thus, cavalry collects, confirms, and interprets real-time battlefield information, wholly dedicated to the tactical commander's needs, and fills gaps left by other intelligence assets.

Preserve Combat Power. Sustaining and preserving the combat power of a smaller force will be critical to winning in the future. Cavalry units possess sufficient combat power to serve in an economy-of-force role. Cavalry units, when performing security operations (screen, guard, cover), protect the decisive force from prematurely engaging the enemy, thus preserving combat power and retaining freedom of maneuver. Furthermore, cavalry units exponentially increase the effectiveness of their parent organizations. For example, in many instances, a divisional cavalry squadron is the equivalent of another maneuver brigade to the division commander because it frees a brigade for use in other places, or relieves it of duties it would otherwise have to perform.

Facilitate Movement. We posit the future battlefield to possess non-linear or non-contiguous relationships among friendly and enemy forces. This condition places a premium on the ability to command and control unit movements. Operating within such a fluid environment will demand rapid establishment

and security of lines of communications between widely dispersed units. Enabling the decisive force to execute continuous movement will require security and support of highly mobile cavalry forces.

Support Area Operations. The fluid nature of future combat also increases the criticality of locating and securing support areas. This requires allocating assets to establish and retain their use. Future adversaries may also be capable of attacking throughout the depth of the battlefield. Thus, support areas and our decisive force may be engaged simultaneously. While other capabilities exist to secure these areas, the versatile nature of cavalry units makes them suitable to perform critical reconnaissance and security tasks of support areas when required. These tasks may include several of the base reconnaissance missions (route, area, or zone), area damage control, restoring command and control, guiding movement of forces, and combat escort.

Cavalry and Force XXI: Patterns of Operations

The Force XXI operational concept centers around six patterns of operation that provide a conceptual framework that enable us to think about and develop future warfighting capabilities. We firmly believe that cavalry forces are fully suited to perform tasks and functions within all of these patterns. A brief description of the versatile nature of cavalry follows.

Project the Force. Cavalry is uniquely organized as a self-contained, combined arms force suitable for early entry into a theater of operation to expand lodgments, and set the stage for ease of entry of the decisive force. Cavalry can also conduct combat operations directly from the port of debarkation upon arrival, also setting favorable conditions for the arrival and employment of decisive forces.

Protect the Force. Cavalry will perform critical force protection activities for the decisive force. The performance of security and reconnaissance missions will be essential in providing early warning of enemy dispositions, capabilities, and activities. Moreover,

cavalry units will be capable of physically guarding friendly forces from enemy contact, as well as providing the real-time information needed to effectively employ passive security measures to further protect the force.

Gain Information Dominance. Gaining and denying information has been, and remains, cavalry's core capability. Cavalry forces are capable of employing active measures to gain information in all weather, terrain, and varying threat conditions. Whether through raids or active security measures, cavalry can seek out and destroy the enemy's capability to gain information. Cavalry is a dedicated force that augments, supplements, and verifies information collected throughout the information build-up period. It provides large-scale human intelligence that can only be gained through close contact with the enemy — validating the predictive analysis of threat intentions and capabilities. The performance of force-oriented reconnaissance will enable the decisive force commander to focus his cavalry on finding and staying with specific enemy forces, wherever they may maneuver on the battlefield. The cavalry force performing force-oriented reconnaissance will provide the updated information needed to set conditions and conduct decisive attacks upon the enemy from positions in depth. The dynamic and fluid nature of this type of operation will rely minimally on terrain-oriented control measures and maximize the use of situational awareness gained by digitization of the cavalry force.

Additionally, cavalry performs terrain reconnaissance and verifies mobility data bases prior to the commitment of the decisive force. This allows the commander to fill in the gaps in terrain data and to identify environmental changes due to natural and man-made factors over time.

Shape the Battlespace. The cavalry force will be operating to shape the commander's battlespace in order to set the conditions for decisive operations. Cavalry can perform a multitude of tasks to alter the tempo and dispositions of the enemy, such as forcing the enemy to expend resources by having to cope with multiple threats simultane-

"Clearly, for Cavalry to fulfill the roles and missions described in this operational concept will require change through modernization of current organizations and equipment."

ously. Cavalry can identify the enemy's capabilities and intentions in real-time by observing enemy reactions to friendly contact. Only an armed maneuver unit can delay a force and make it show intent. Cavalry will operate to deceive the enemy as to the decisive force's intentions.

Decisive Operations. Cavalry's main function is to support the maneuver of the decisive force. It accomplishes this by controlling the tempo of operations — by destroying enemy information or security forces and allowing the decisive force to attack the enemy unhindered. Cavalry is uniquely capable of performing real-time battle damage assessment that allows the decisive force commander to re-orient combat power to finish the fight or exploit battlefield opportunities. Cavalry must also locate and maintain contact with the enemy; as the decisive force attacks in depth simultaneously, enemy forces will relocate to meet friendly forces. Cavalry provides the commander with real-time information on changing enemy dispositions. Cavalry can also secure critical friendly assets, such as logistical units, command and control nodes, and intelligence facilities. Additionally, cavalry can operate independently of the decisive force to perform economy-of-force operations that allow the commander to allocate more relative combat power at critical and decisive points.

Sustain and Transition to Future Operations. Cavalry provides security so the decisive force can transition between missions and reorganize for future operations unhindered by enemy forces. It can survey and secure lines of communications and sustainment areas while the decisive force conducts resupply. During post-conflict operations, cavalry units are ideally suited to perform activities such as separating forces and controlling buffer zones immediately upon cessation of hostilities.

Organizing the Cavalry Force For Force XXI

Clearly, for Cavalry to fulfill the roles and missions described in this operational concept will require change through modernization of current organizations and equipment. To support our efforts, we have established some

broad precepts that guide our future organizational and materiel developments.

Cavalry or reconnaissance forces must be organic to all major warfighting echelons, from battalion to corps — and must be organized as combined arms teams. Cavalry units exponentially increase the effectiveness of their parent organization.

Further, they must maneuver faster than the decisive force they support. This mobility differential is gained by the synergistic effects of air and ground cavalry units working together.

Future cavalry units must also have greater operational endurance than the decisive force. Organized as self-contained units possessing organic combat support and logistics, cavalry units must be capable of operating for 72 to 96 hours without external support.

Lastly, cavalry units must be capable of performing multiple missions in a simultaneous fashion in order to set con-

ditions desired by the decisive force commander. These characteristics are some of the design principles for guiding the development of cavalry units for the future.

Conclusion

While much work remains to be performed, it is clear that cavalry is an essential warfighting capability for Force XXI. New operational conditions caused by non-contiguous operations, new warfighting doctrine, new technical capabilities, and diverse threats increase the value of cavalry. The soldiers and leaders of cavalry units will operate in the face of the enemy to gain information, shape the battlespace, secure friendly forces, and set conditions for decisive maneuver throughout the depth of the battlefield. Armed with the best equipment in the world, trained to fight, and led by aggressive, competent leaders, cavalry will continue its long tradition of leading America's Army into battle well into the 21st Century.

Fort Knox Cavalry Branch Will Host Reconnaissance Symposium in October

Fort Knox Directorate of Training and Doctrine Development (Cavalry Branch) is hosting a Reconnaissance Symposium from 28-31 October 1996. The focus of the symposium is on the planning and execution of reconnaissance operations at the tactical level. The purpose of the symposium is to assemble all organizations in one location and discuss issues pertinent to reconnaissance operations and to provide recommendations in accordance to those issues. The tentative schedule is as follows:

Day One - In Processing (Gaffey Hall) and No Host Social (Brick Mess)

Day Two - Large Group Seminar (Gaffey Hall)

Day Three - Small Group Discussion (Boudinot Hall)

Day Four - Small Group Presentations (Gaffey Hall)

All TRADOC installations will be invited to participate as well as representatives from active duty and reserve component divisions and regiments. Fort Knox needs participation from outstanding professionals from the field and various organizations in order to have a successful and productive symposium.

Information regarding the symposium can be obtained on the internet via the Cavalry Branch Web site at <http://www.awwg.org/~dave/cavdiv.htm>. The Fort Knox point of contact is CPT Vic Harris, DSN 464-3154/5576 or commercial (502) 624-3154/5576. PROFS: CAVBRANC@knox-emh1.army.mil.

The Indian Wars Staff Ride

by Lieutenant Colonel Edwin L. Kennedy, Jr.



The name “Custer” usually brings to mind a variety of images, ranging from the brave commander surrounded on a hill in southern Montana, fighting off hordes of Indians, to an egotistical martinet leading his troops to disaster. Many people view Custer on the basis of Hollywood impressions. Unfortunately, this narrow perspective of the entire Indian Wars experience, and that of the U.S. Army in the West, is based upon the Little Bighorn battle fought on 25 June 1876.

There is much more to the Plains Indians Wars than the short battle that took place over the span of a couple of hours on the Little Bighorn at Last Stand Hill. Numerous parallels exist in the small, regular Army of the Indian Wars period to the “downsized” Army of today as it searches for new roles in a post-Cold War environment. This makes the staff ride not only interesting, but applicable in a number of respects to situations currently facing the Army.

The Combat Studies Institute of the U.S. Army’s Command and General Staff College frequently conducts staff rides to Wyoming and Montana to put Custer and tactical actions at the Little Bighorn into their proper context. Originally developed by Dr. Glenn Robertson and the Staff Ride Committee, the Indian Wars staff ride covers several significant events leading to the Little Bighorn battle. Additionally, Dr. Jerold Brown of the Combat Studies Institute teaches the elective, “Irregular Warfare” which uses the Indian Wars staff ride as the basis of study. Dr. Brown has conducted about 20 Indian Wars staff rides.

In terms of complexity, the Indian Wars staff ride has been one of the most difficult to develop, due to the time-distance factors and the coordina-



Students ride horses during parts of the three-day staff ride.

tion necessary with numerous agencies and individuals to gain access to the lands over which the school conducts the staff ride. Unlike some of its Civil War counterpart rides, the Indian Wars staff ride covers an area encompassing a couple of hundred square miles. Whereas the Civil War staff rides are normally conducted on one major national or state park and adjoining land accessible to the public, the Indian Wars staff ride covers locations that include private and corporate lands, as well as state and national parks. The amount of coordination involved requires good relations between the landowners and the staff ride committee in order to maintain access.

The purpose of the staff ride is not to conduct battlefield tours, but to link “...a historical event, systematic preliminary study, and actual terrain to produce battle analysis in three dimensions.”¹ In this regard, staff ride participants are prepared for the exercise by self study, classes, and briefings.

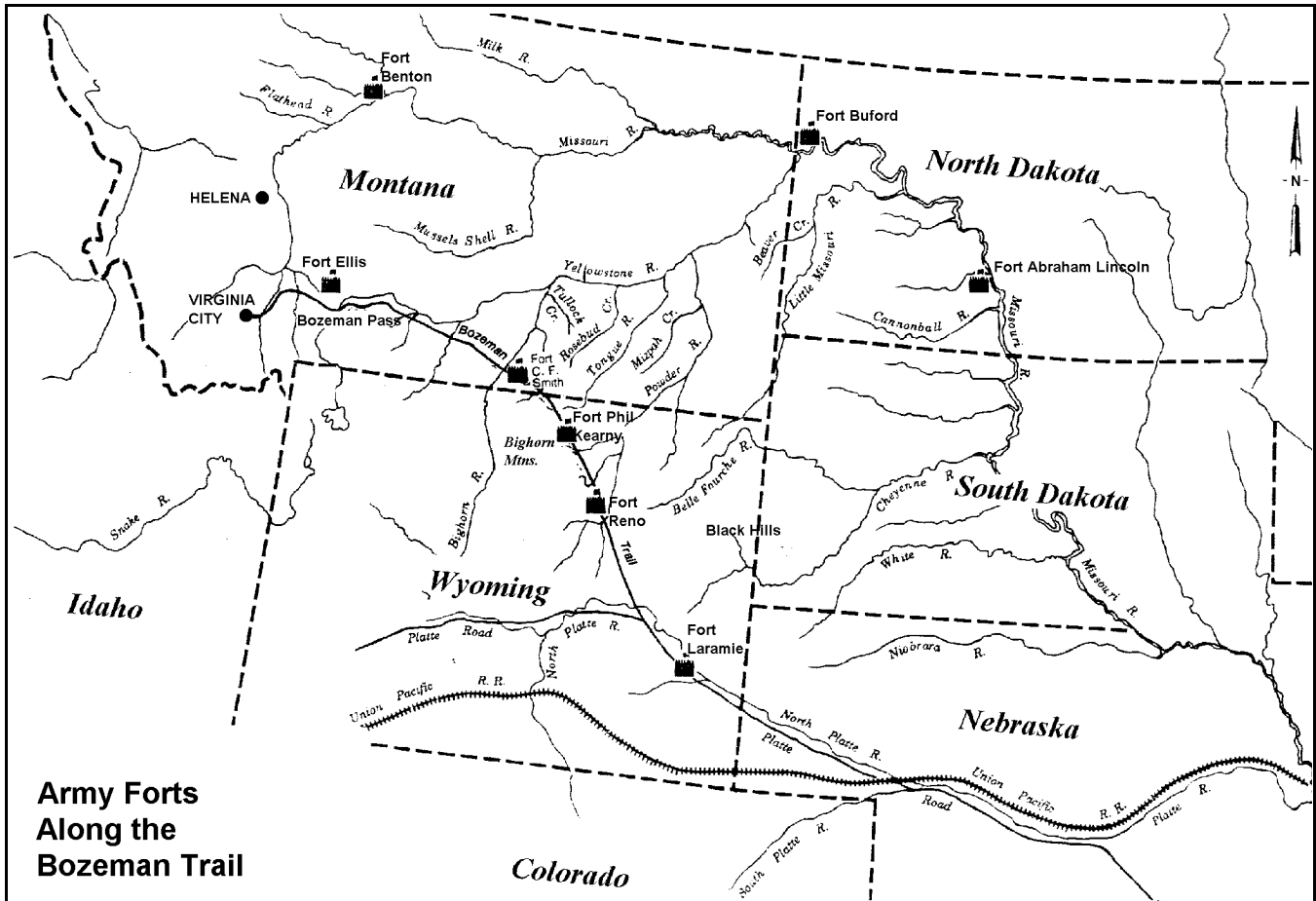
The overall importance of the exercise is the integration of the lessons learned to current doctrine and operations. Significantly, there are many lessons involving the human dimensions of war and the dynamics of battle which are timeless and can relate to conflicts today. In today’s strategic situation, reduced force structure and non-conventional missions pose issues that are analogous to those the U.S. Army faced on the western frontier from

1866-1890. These are just a few of the reasons for conducting the staff ride.

The Indians Wars staff ride is normally conducted over a three-day period. It begins in Wyoming, along the old Bozeman Trail which runs from Wyoming into Montana. The Bozeman Trail was developed during the Civil War, and by 1865, there were enough settlers and miners using the trail to warrant Army protection, even though the trail cut through designated Indian hunting lands confirmed by treaty. Fort Phil Kearny was one of three forts built along the Bozeman Trail to protect settlers and miners attempting to shortcut the route to the western Montana gold fields.

During the immediate post-Civil War period, the large number of settlers moving westward increasingly clashed with the Indians. The U.S. Army was caught in a dilemma of enforcing treaty land provisions granted to the Indians and protecting the settlers who often violated the treaty provisions.

Complicating the situation was the issue of the Indians, who also violated the treaty land provisions to hunt or raid outside artificial geographic boundaries they did not always recognize. Additionally, the Indians were not a monolithic entity with a centralized government. Even different clans within tribes did not feel compelled to obey treaties signed by fellow chiefs. This fact continuously caused consternation and confusion with Army com-



manders, who were used to fighting a conventional enemy with defined lines of authority and chains of command.

This was the situation brevet Major General and regular Army Lieutenant Colonel George A. Custer and his newly formed 7th Cavalry found themselves in. Over a period of ten years, from 1866-76, the 7th Cavalry was spread across the United States and Indian territories trying to perform a variety of missions, to include occupation duty in the South, as well as garrison duties in the West. Within a short three-day period, the staff ride draws together the issues facing the Army in its conflict with the Plains Indians, showing how it adapted from conventional warfare to fighting irregular warfare with varying results.

Beginning with the post-Civil War Army of 1866, the staff ride concentrates on the background and events which eventually led to the destruction of five companies of the Seventh Cavalry under Custer's command ten years later. Critical to the analysis of what happened to Custer is the historical context of the campaign of 1876. Understanding the cause and effect relationships is key to proper critical analysis of the conduct of the Indian Wars

by the U.S. Army, especially battles such as the Little Bighorn. Most important is an understanding of the individual battles taken in respect to the entire conflict in an operational and strategic context, not in isolation.

Staff Ride Day 1

21 December 1866/2 August 1867

The first stop on the staff ride is Fort Phil Kearny, now a state park. In 1866, Colonel Henry Carrington and the 18th Infantry Regiment were ordered to garrison posts along the Bozeman Trail, running northwest from central Wyoming along the base of the Bighorn Mountains into Montana. During the summer of 1866, Carrington moved his regiment into Indian territory and built three posts running in a string north from Fort Laramie to a point west of present day Billings, Montana.

Fort Reno (no relation to Major Marcus Reno, 7th Cavalry) was garrisoned with companies of the 18th Infantry, while the balance of the regiment moved on to establish Fort Phil Kearny just south of present day Sheridan, Wyoming. Carrington chose Fort Phil Kearny for his regimental headquarters and sent another couple of companies

further north to establish Fort C.F. Smith.

The importance of Fort Phil Kearny is evident in the events that occurred along the Bozeman Trail in 1866 and 1867. The staff ride uses these events to put into context further study of the Plains Indian conflicts for the next ten years, leading to the battle at the Little Bighorn. The significant actions which took place in conjunction with Fort Phil Kearny include the Fetterman "Massacre" on 21 December 1866 and the Wagon Box Fight which took place on 2 August 1867. The first was a disaster for the Army and the second a victory.²

After studying the establishment of the fort and its activities during the latter part of 1866, the staff ride participants move to a point along the Bozeman Trail about three miles north of the fort. It was here that Captain James Fetterman and his 80-man command, consisting primarily of elements of Companies A, C, and H, 18th Infantry, and Company C, 2nd Cavalry, were annihilated by a force of about 1,200 Cheyenne and Sioux Indians gathered by Chief Red Cloud.²

Some of the issues examined include troop training, leadership, the effects of



The Fetterman Monument, near Fort Phil Kearny, Wyoming.

technology, the effects of terrain, the Indians and their tactics, and the problems with the tactical deployment of the force under Fetterman. Understanding these factors helps understand why Fetterman's force was wiped out. The staff riders then transition to the survivors of the disaster and their actions seven months later.

The staff riders move to the location of the "Pinery," where trees were harvested for use at the fort. Only a couple of miles west of the Fetterman engagement site, and situated on the lower slopes of the Bighorn Mountains, the Pinery was the site of an engagement immortalized on one of the "Army in Action" series prints commonly seen in many barracks. In this action, Captain James Powell, with many of the same soldiers remaining at Fort Phil Kearny after the Fetterman engagement, defeated a greatly superior force of Indians.

During the interim between the Fetterman engagement and the Wagon Box Fight, the 18th Infantry units at Fort Phil Kearny were reflagged and rearmed.³ Now the 27th Infantry, Powell commanded a company armed with newly issued Allin conversion, breech-loading rifles. Unlike Fetterman's infantrymen, who were fighting with muzzleloading Civil War leftovers, Powell's soldiers were armed with rifles converted to fire metallic cartridges.

The contrast between the two engagements is an outstanding lesson in how technology, organization, and the tactical situation can radically alter battlefield outcomes in a very short period of time. Both units were severely outnumbered. The Fetterman fight was characterized, however, by an ad hoc unit caught in the open with out-of-date weapons, and destroyed in detail. Powell's fight was characterized by a relatively cohesive unit, armed with breech-loading weapons and fighting from a protected defensive position.

The visit to the Wagon Box Fight site concludes the field portion of the first day of the staff ride. During dinner, the staff riders normally conduct preparations for the next day. This includes briefings and discussions to transition the group to the 1876 campaign. The briefings cover the intervening years between 1866 and 1876 and the concept of the campaign plan envisioned by General Philip H. Sheridan.

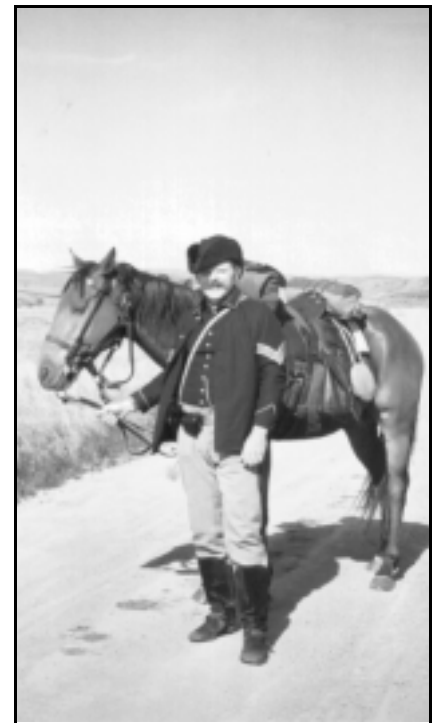
The second day of the staff ride is conducted in Montana, at the Rosebud battlefield. This battle, which took place a week prior to the Little Bighorn, is put into its proper perspective by describing the forces involved, the command and control structure, and the concept of the operations from General George Crook's view. Because the Rosebud battlefield is fairly compact and relatively accessible, units conducting the staff ride may elect to be mounted on horseback. Local cavalry reenactors lease horses equipped with McClellan saddles, which give an added air of authenticity to what was largely a cavalry and mounted infantry battle.

Units under the command of General Crook, the renowned Indian fighter, moved as one of three columns ordered by Sheridan to converge on the Indians in the Unceded Territories in order to force them back onto the reservations in accordance with treaty provisions. Crook's column was the southernmost, originating from Fort Fetterman in the spring of 1876. Two other columns, one under Colonel John Gibbon in the northwest, and one under General Alfred H. Terry, in the east, were to operate in cooperation with each other in order to corner and subdue the hostile tribes.

Custer and the 7th Cavalry were the major subordinate combat component of General Terry's column, and therefore only one portion of a number of units participating in the campaign. Under Sheridan's proposed concept, the

three major columns would converge somewhere in the area between their garrisons in the Unceded Territories to cause the Indians to face one of the largest Army forces fielded on the western plains to that date. The desired result would be the defeat of the hostile tribes and their return to the reservations. The overwhelming Army forces would assure compliance.

The Rosebud battle offers excellent lessons on synchronization, command and control, reconnaissance, intelligence, and security. The battlefield ride covers about 5.5 to 6 miles of the terrain and begins and ends near General Crook's first CP. Crook's column con-



Retired Major Rod Cooley, dressed as a 1876-era bugler, adds authenticity to the Rosebud Battlefield visit. He is a member of the U.S. Horse Cavalry Association.

sisted of companies of the 2nd and 3rd Cavalry and 4th and 9th Infantry Regiments.⁴ In terms of the number of participants, this battle was not very significant. For those veterans of the Civil War, the battle would have been classified as a minor engagement. To put it into perspective, the battlefield covers approximately the same area as the battle of Chickamauga. But at Chickamauga, each side fielded more than 60,000 men each. At the battle at the Rosebud, each side numbered only about 1,000 men and lasted only about six hours, as opposed to several days.

The battle, which took place on June 17, 1876, progressed in a northerly direction uphill from the Rosebud valley where Crook's command had halted for a rest. Surprised in a position which could best be described as an administrative halt, Crook had to deploy quickly and attempt to regain the initiative. The infantry began to fight dismounted under their commander, Major Alexander Chambers, having been mounted on mules the day before in order to increase their mobility. The cavalry was ordered to resaddle, form, and take the high ground.

Terrain played an important role in the disposition of forces, and as Crook's elements advanced, they followed the natural lines of the ridges and hills leading out of the valley. By mid-morning, subordinate elements of the command had become separated. Lieutenant Colonel William Royall, Crook's second-in-command, was separated from the main body by a large valley for a distance of about a mile as he pursued warriors to the northwest. In danger of being defeated in detail, Crook attempted to consolidate his forces.

Misreading the Indian's intentions, suffering from a lack of tactical information, and focusing on an Indian village thought to be in proximity to the battlefield, Crook sent part of the cavalry to threaten the lodges. Continued hostile pressure forced the dispatched column to be recalled. Crook hoped that he could envelop the Indians facing him at the Rosebud. After several hours of tough skirmishing, Crook's force held the field, the Indians left, and the village was not found by Crook's column.

Riding over the battlefield on horseback allows the staff riders to get a sense of the time-distance factors, the difficulties in controlling mounted units, and, for non-riders, a feel of how the mounted infantry must have felt after riding mules for the first time over 35 miles to get to the battlefield the day prior to the battle. An appreciation for the terrain and the effects of cross-compartmentalized country on intervisibility is gained by traveling the width and breadth of the battlefield.

Finally, students absorb the human dimension of battle by traveling along the steep slopes of the ridgelines, negotiating the hills, and viewing the same areas which the soldiers and Indians would have seen. Unlike many eastern battlefields of the Civil War, the Rosebud is in much the same state it was in 1876. Very few trees obscure vision,

and the fields of fire are as they were at the time the battle occurred. Even so, it is almost incomprehensible that the soldiers in Crook's column expended about 25,000 rounds and killed only about 36 warriors.⁵ Naturally, these numbers indicate that marksmanship, or lack thereof, was a consideration which still impacts soldiers' training today.

The second day's staff ride is concluded with a brief integration period. Riding or walking all day in a warm sun helps the staff riders appreciate how the weather and physical exertion may have affected the participants of the battle, who were clothed in wool uniforms. Most riders are glad to get back to the vehicles for a cold drink and the drive back to Sheridan to prepare for the third day of the ride.

Staff Ride Day 3

24/25 June 1876

Day three of the ride begins along the route Custer followed the evening before he rode to the Little Bighorn, near current day Busby, Montana. Using four-wheel drive vehicles, the staff ride follows the approximate route that the 7th Cavalry covered during its move to the Little Bighorn. The most significant part of the entire staff ride takes place this last day for a number of reasons, to include the synthesis of the background materials presented on the first two days.

Important to the understanding of the events at the battle are the backgrounds of the commanders making the decisions and the "doctrine" (if it can be called that) under which the Army operated at the time. The analysis of the final events in the battle are driven by a number of decision points along the line of march from the camp of the 7th Cavalry on 24 June 1876 to the Little Bighorn. Several times along the route, the group halts where the 7th Cavalry did, and the situation to that point is reviewed. Each stop is important due to the presentation of new information made available to Custer as he progressed toward the Little Bighorn. Staff riders are reminded not to make judgments or assessments, despite their knowing the final outcome of the battle.

The first halt is used to orient the staff riders to the ground and present the written order given to Custer by General Terry on 21 June. The order, much debated during the years follow-

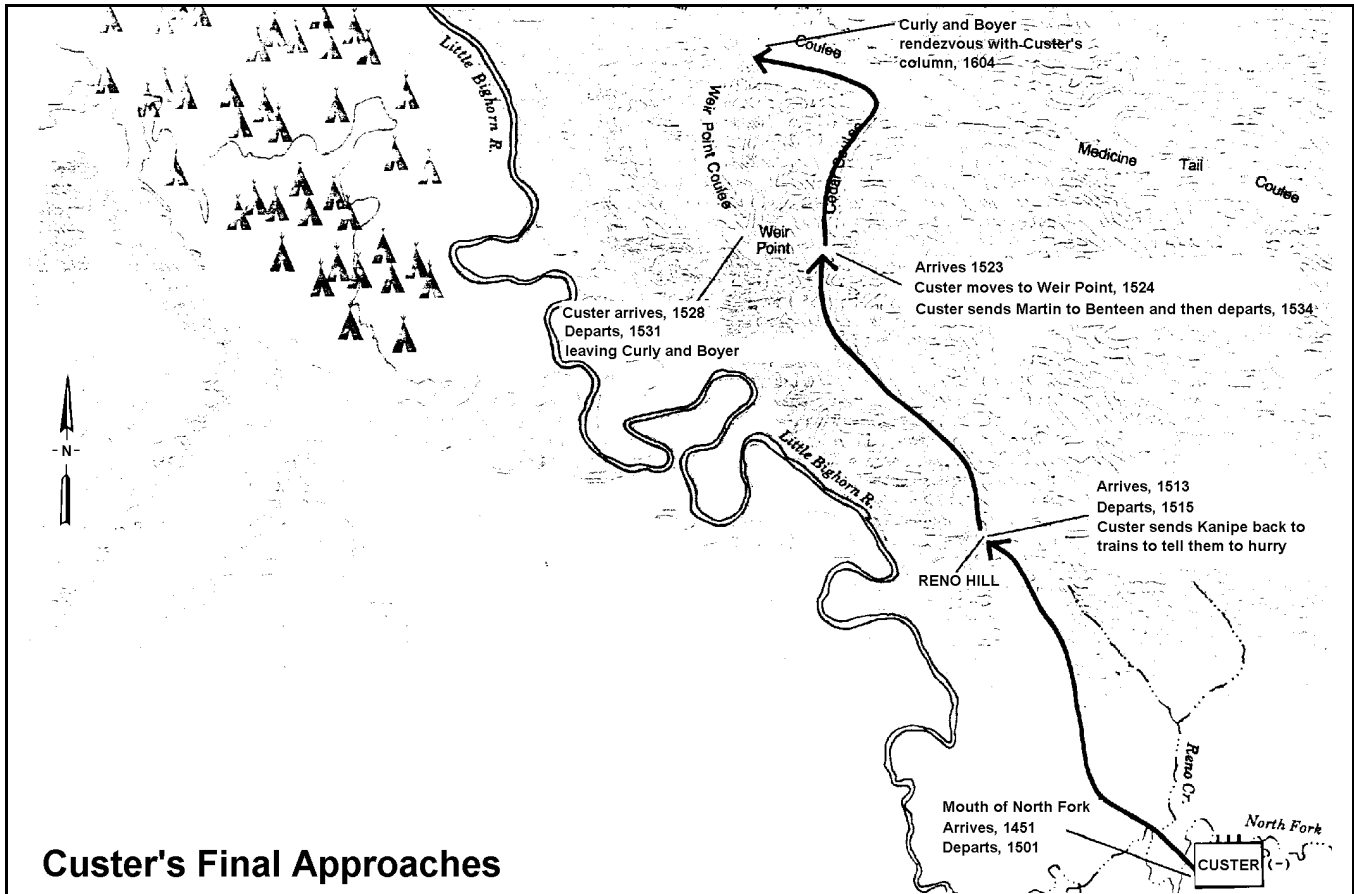
ing the battle, is a relevant point of departure for all following discussions. Ironically, the ride on the third day follows the timeline of the 7th Cavalry fairly closely as the routes converge on Davis Creek, thereby allowing for consideration of visibility due to sunlight.

The ride participants then follow the route parallel to Davis Creek to the west out of the Rosebud valley, moving towards the "Divide." The second halt occurs at the early morning rest stop astride Davis Creek, where Custer then rode to the observation point on top of a high hill known as the "Crow's Nest." Custer's initial plan, his past experiences combating the Indians, and his orders from General Terry are topics normally debated.

The third halt is atop the Crow's Nest. This is where the scouts, under Lieutenant Charles Varnum, first claimed to have seen the signs of the camp on the Little Bighorn 15 miles in the distance. Staff ride participants must dismount and walk up the hill due to the steep slope. Custer ascended the hill but did not see the Indians' camp. Returning to the regimental march column, Custer received new information regarding the Indians, which seemed to irrevocably change his concept for attacking the village. Key to the changes in the initial decision — to wait overnight, rest the regiment, and attack in the morning — was the perception that the 7th Cavalry had been discovered. Based on the soldiers' previous experiences, and the actions of the Indians when their camps were discovered, Custer's decisions are analyzed within the context of the specific situation which faced him.

Custer felt pressured to move quickly in order to maintain operational security and establish contact with the Indian village. The regiment was ordered to attack, rather than rest, and wait for further reconnaissance of the objective. Custer's dilemma was whether to allow the Indians to follow the pattern normally established when they felt their camps were threatened; that is, disperse and run. Failing to hit the Indians in their camp would have been tantamount to failure since tracking the small bands would have been very difficult and resource-intensive.

The fourth halt is conducted on the "Divide," the geographic division between the drainage to the Rosebud in the east and the Little Bighorn in the west. It is here that Custer task-organized the regiment into four separate elements. Custer's experience at the



Washita battle in December 1868 provides an excellent background to understand why he formed a strong guard to accompany the trains and split the regiment into two wings to envelop the Indian camp.

A discussion of personalities, and the part they played in the organization of the force, makes for interesting speculation. It is just past the "Divide" that Captain Frederick Benteen was sent with one of the ad hoc battalions to sweep the adjoining ridgelines on the left flank and prevent the escape of the Indians to the south, thus saving him from the fate awaiting the main body. By now the staff riders have begun to form their opinions of whether or not Custer was acting within the parameters of his orders, and whether or not his decisions were logical given the circumstances.

The ride then follows what is now known as Reno Creek. This creek flowed westerly from the "Divide" to the Little Bighorn and provided a natural feature on which to orient the column. The fifth stop is made at a place known as the "morass," a place where the packs and Benteen's battalion stop enroute to water their horses. Time-distance and movement rate considerations are normally discussed, along with human and animal fitness dimensions. Of significance is the distance

traveled by both the animals and men during the previous four days, the lack of water, and the time since eating their last full meal. These factors may have impacted on the unit's performance as it neared the objective. Sleep deprivation is also considered in relation to the leaders' performance.

The sixth stop is made at the site known as the "Lone Teepee." The teepee held the body of a warrior slain the week before during the fight with Crook's column. Unbeknownst to Custer, the Indians he attacked were largely the very same ones that fought Crook to a standstill on the Rosebud. At this point in the ride, Custer begins to appear to be more harried. He has now been awake for over 30 hours and riding hard. This point provides an excellent discussion of a problem which faces the Army today when considering "continuous operations." Staff ride participants are asked to analyze Custer's actions and determine whether or not they are logical, given the circumstances.

The final stop before reaching the battlefield sites is at the Reno Creek fork, where Custer orders Reno's battalion into the attack. Using the post-battle inquiry results, the discussion focuses on whether or not Benteen's battalion could have joined the main body.

Many of the discussion points are taken from Gray's book, *Custer's Last Campaign*, which presents an excellent timeline analysis of the actions during the 25th of June. Reno's orders always bring up interesting arguments as to the meaning and intent Custer wished to convey.

Crossing the Little Bighorn begins the final phase of the staff ride. From an observation point on the western side of the valley, the staff riders are oriented to the advance by Reno's battalion towards the Indian camp. Reno's deployment into line, his charge, and subsequent skirmish lines are from a vantage point which allows the observer to determine how the action progressed. Reno's fighting withdrawal, back over the river and up the bluffs to his final defensive positions, can be easily viewed.

The final move to the battlefield is made by driving the length of the former Indian camp, now dissected by Interstate Highway 90 and a frontage road. Because the actions of the separate battalions were occurring concurrently, this portion of the staff ride sometimes becomes more difficult to comprehend for those unfamiliar with the details of the actions. The staff ride moves to the Reno-Benteen defense site on the far end of the ridgeline to

begin discussions about actions on the objective. Reno was joined in his defense by Benteen's battalion and the packs in the middle of the afternoon. By this time, Reno's battalion had suffered a significant setback, being chased back up the bluffs by overwhelming Indian forces. A walk along the perimeter of the defensive site provides an excellent understanding of the problems facing the surrounded survivors in the seven remaining companies of the 7th Cavalry. Much like the Wagon Box Fight, the discussion focuses on the ability of the Army units to defend from prepared positions, as opposed to being caught in the open, moving.

Concentrating on the actions of the battalion led by Custer, the staff riders move parallel to Custer's route north approximately four miles. Poignantly located along the route of march are markers indicating where troopers were cut down individually, or in small groups. A short stop is made at Weir Point, enroute to Last Stand Hill for an excellent view of the hill, about three miles in the distance. Four major events are discussed at Weir Point, the dispatch of Trumpeter Martini to Benteen, Custer's view of the entire Indian camp, Custer's further division of his five companies into two battalions, and the move by Captain Weir out of the Reno-Benteen defense to join Custer.

The staff ride progresses to the next-to-last site, Calhoun Hill, to discuss the possible scenario confronting the companies of James Calhoun's and George Yates' battalions. Enroute to Calhoun Hill, the staff riders pass through the confluence of Medicine Tail Coulee and Deep Coulee. Also located there is Miniconjou Ford, the site at which Yates' provisional battalion was repulsed and forced back up the ridgeline.

From Calhoun Hill to Last Stand Hill, the fight is pure speculation based on Trumpeter Martini's account, Indian scout Curley's account, and extensive archeological findings. Martini was the last surviving soldier to have contact with Custer, and Curley was the last surviving Indian scout to speak to Custer. Marker stones along the ridgeline from Calhoun Hill to Last Stand Hill indicate that the fight was probably disjointed and conducted in a highly mobile fashion. A number of theories have been posited, but no one will ever be sure, nor is it central to the understanding of the staff ride how the fight actually went. What is fact is that every

soldier accompanying Custer from Companies C, E, F, I, and L were lost to a man.

The final stop is on Last Stand Hill at the 7th Cavalry monument. The battle is normally summarized and everyone is allowed to leave with their own mental picture of the final minutes of the fight as the soldiers were overwhelmed in hand-to-hand combat. Gibbon's column's actions are reviewed and the post-battle affairs on the battlefield are discussed. Prior to leaving the National Park, the most important phase of the staff ride is conducted, the integration phase.

The integration phase results in the synthesis of all the materials studied and observed during the entire three days.⁶ It provides the unit commander a chance to tie all the issues covered into lessons that he desires subordinates to take away from the ride. Most notably, the human dimension factors and dynamics of battle offer many examples of timeless lessons which are useful for study on the modern battlefield. In the era of "military operations other than war" (MOOTW), many applicable lessons can be applied from the frontier Army's conflict with the tribes of the plains. Important lessons are derived in the Army's dealings with the many different Indian tribes in a low-intensity warfare setting. While a direct analogy to the current situation the Army now faces would be stretching the comparisons, there are too many similarities to be overlooked.

Leaders who conduct the Indian Wars staff ride usually come away with a different appreciation for how the frontier Army was able to deal with situations which were not prescribed in any formal doctrine. Whether a Custer fan or not, most participants change their perceptions of what happened on that hot afternoon of 25 June 1876 at the Little Bighorn. If they do change their perceptions, then the staff ride has accomplished part of its purpose of making them think critically about how the 7th Cavalry got to the Little Bighorn and why five of the twelve companies were destroyed. At the end of the three-day staff ride, most participants agree that the real Custer probably lies somewhere between the hero and the villain.

NOTE: Indian Wars staff rides may be arranged by contacting the Combat Studies Institute, USACGSC, Fort Leavenworth, Kansas. Telephone DSN 552-3904, commercial (913) 684-3904.

Notes

¹Dr. William G. Robertson, "The Staff Ride," Center of Military History, United States Army Washington, D.C., 1987, p. 5.

²"Massacre" is the description that is normally associated to the fight conducted by Fetterman's command by historians. The word "massacre" however, generally connotes the lack of resistance. A number of Indians were killed by Fetterman's soldiers, indicating that there was an attempt to resist. The number of Indians killed by the members of Fetterman's organization, which included civilians armed with modern Henry rifles, will never be known exactly. However, the pools of blood surrounding the soldier's position, and Indian accounts combine to indicate that about thirty warriors were probably killed and a number wounded.

³John K. Mahon and Romana Danysh, *Infantry, Part I: Regular Army*, Center of Military History, United States Army, Washington, D.C., 1972, p. 31. The increase in the size of the Regular Army in 1866 included reorganization of the 19 established regiments. The second battalions of the 11th through the 19th Infantry formed the basis for the new 20th through 28th Infantry Regiments. As part of this planned reorganization, the 2nd Battalion, 18th Infantry, located at Fort Phil Kearny, was redesignated as the new 1st Battalion, 27th Infantry.

⁴Dr. William G. Robertson, Dr. Jerold E. Brown, Major William M. Campsey, and Major Scott R. McMeen, ed., *Atlas of the Sioux Wars*, Combat Studies Institute, USACGSC, Fort Leavenworth, Kan., 1993, Maps 4-5.

⁵Douglas C. McChristian, *An Army of Marksmen*, The Old Army Press, Ft. Collins, Colo., 1981, p. 32.

⁶Robertson, pp. 17-18.

Lieutenant Colonel Edwin L. Kennedy has served as commander, C Company, 1-18 Infantry (Mech), 1st ID; G3 operations officer, 3AD; S3, 1-36 Infantry (M2 Bradley), 3AD; a tactics instructor, CGSC; in the Tactics/Doctrine Department, U.S. Army Infantry School; and as XO, Battlefield Coordination Element, CFC, Korea. He attended the Israeli Armored Corps Commanders Course while assigned to the Infantry School in 1981. He is currently assigned to the Combat Studies Institute as an instructor at the CGSC. LTC Kennedy has had articles published by *ARMOR*, *Army*, The Australian Lighthouse Association journal *SPUR*, and *Infantry* magazines.

TASK FORCE BAUM and the HAMMELBURG RAID

*Reliving the Incredible Adventure
of a Young Captain
Ordered to Rescue
General Patton's Son-in-Law*

by Richard Whitaker



Major Abraham Baum, at left, in April 1945, shortly after the ill-fated raid on a German prisoner-of-war camp 40 miles behind enemy lines. Above, Baum with the author in October 1995.

Several years ago, I read with great enthusiasm *RAID*, a book by Richard Baron, Abraham Baum, and Richard Goldhurst. It is a true story about a WWII U.S. Army raid 40-plus miles behind German lines, covering the distance from Aschaffenburg to Hammelburg. This raid was conceived and ordered by GEN George S. Patton Jr., then commanding the U.S. 3rd Army.

Although the reason for this raid was concealed from the task force and its commander until H-hour, it was an attempt to liberate some 1,200 U.S. Army POWs, one of whom was LTC John Waters, General Patton's son-in-law.

When the raid failed, speculation about LTC Waters' relationship to the army commander entered into criticisms that the operation was ill-timed, poorly planned, undermanned, and doomed to failure from the beginning.

It was not until the operation by "Task Force Baum" had begun, that CPT Abraham Baum, leading the raid, learned from MAJ Stiller, GEN Patton's aide, that LTC Waters was believed to be in the camp and that he was GEN Patton's son-in-law. At this point, CPT Baum wondered if his mission had any chance of success.

The task force included 300 men and 53 vehicles, including tanks, tank destroyers, and halftracks.

I thought that it would be good to commemorate the 50th anniversary of this famous 4th Armored Division raid,

and proceeded to call the authors and some of the key participants regarding a 50th reunion in Hammelburg, Germany. In a later telephone call, MAJ Abe Baum, the leader of the raid, was delighted to hear that he had not been forgotten and wished he had been notified earlier so he could have planned to attend. There were no funds provided by the military for this purpose.

MAJ Baum sent me a list of 29 officers and men who received the Silver Star for this action, and I would guess that there were five times as many Bronze Stars awarded, in addition to probably 150-200 Purple Hearts to those wounded and killed in action. Baum got three.

Baum also was personally awarded the Distinguished Service Cross by GEN Patton himself. His certification reads: "For the brilliant leadership he displayed while in command of Task Force Baum. The mission of this task force had led them far behind enemy lines with only a small force. The daring of this movement threw the enemy into a panic, believing that all this territory was being overrun by our troops. Communications were disrupted and large enemy forces were needlessly shifted from more important strong-points, facilitating a later drive by another combat command of this division through Hanau and to Hernfeld."

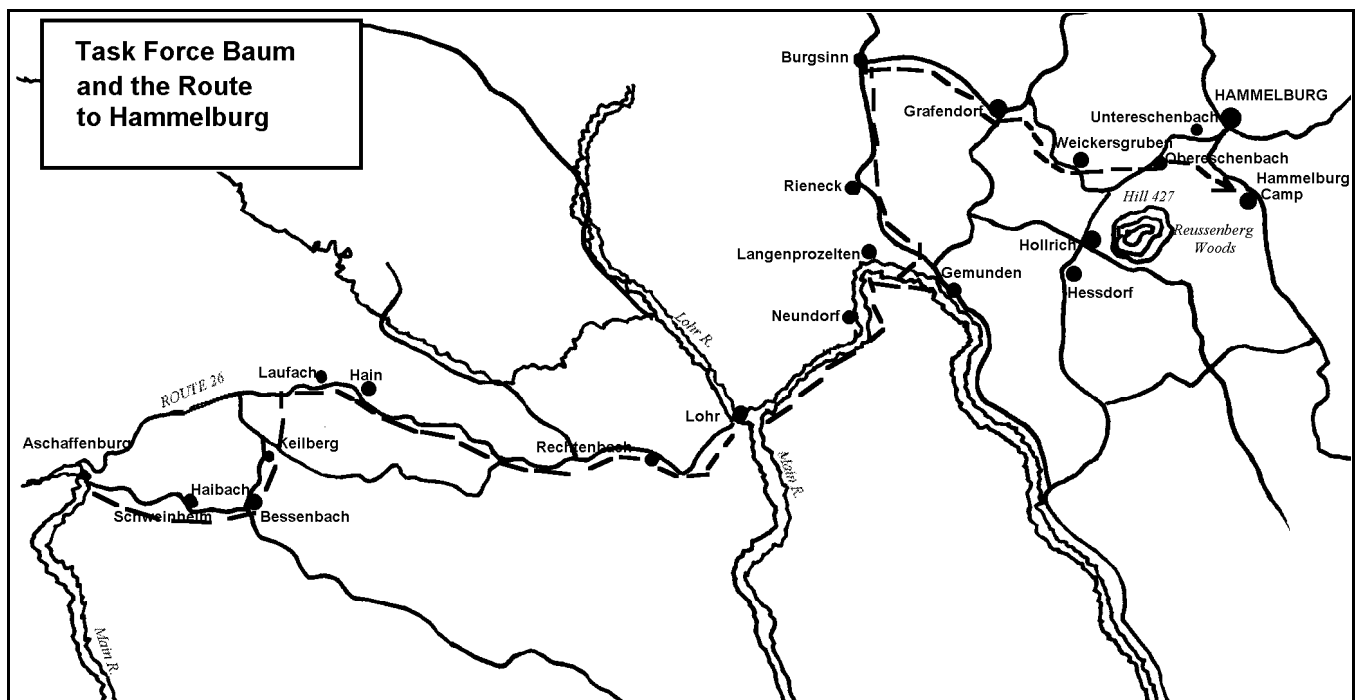
I spoke with the book's co-author, MAJ Richard Baron, via telephone, and he informed me that as far as he knew there would be no reunion, as it

was too late to plan one. It seemed ironic since the original mission was planned in less than 24 hours! Baron was awarded the Bronze Star for his efforts during the escape.

T/SGT Charles O. Graham, who led the antitank platoon, also did not wish to participate, even if there was a reunion. He was awarded five Silver Stars and two Bronze Stars during his Army career. LT Nutto, who commanded a platoon of tanks, also elected not to participate.

By March 26, 1945, units of Patton's 3rd Army, in particular the 4th Armored Division, arrived near Schweinheim after four days of hard fighting inside Nazi Germany. They paused in the hills overlooking the German-held towns of Aschaffenberg and Schweinheim. This was to be the opening scene of Patton's biggest military blunder.

Patton ordered the raid after having been ordered to the north by GEN Omar Bradley. He knew that his son-in-law, LTC John Waters, was being held approximately 70 kilometers to the east, in Oflag XIII B, a prisoner of war camp for officers overlooking the old Frankish town of Hammelburg. LTC Waters had been captured by elements of GEN Erwin Rommel's Afrika Korps during the battle for the Kasserine Pass two years earlier. Military intelligence had been tracking his internment and had informed Patton that he was in the Hammelburg lager, a few miles east of Frankfurt.



This proved to be too tempting for GEN Patton, and he immediately issued verbal orders for the now-infamous raid, despite the fact that he had been ordered to turn 3rd Army north and vacate his former positions to GEN Patch, whose 7th Army was to the south, on Patton's right. GEN Patton claims he received verbal permission from GEN Omar Bradley prior to ordering the mission, but in Bradley's book, *A Soldier's Story*, he does not remember it that way.

The raid took place in spite of immediate protests by two of Patton's subordinates, MG William M. Hoge, commanding 4th Armored Division, and General Manton Eddy, both of whom thought this mission was ill-timed, poorly conceived, and undermanned — ill-timed in that it came following several days of hard fighting by the same group of men who had just been given the orders to liberate the camp. These men had crossed the Rhine River on March 24th, and had just arrived at the Main River on the 26th after continuous fighting and going without sleep for days.

The men selected for the mission were from units of the famed 4th Armored Division, Patton's favorite, one of only two divisions in Europe in WWII to have been awarded a Presidential Unit Citation by President Franklin Roosevelt. The man selected to plan and choose the units sent on the raid was LTC Creighton Abrams, then thirty years old and in command of Combat Command B. LTC Abrams se-

lected his old friend, LTC Harold Cohen, a battle-hardened veteran commanding the 10th Armored Infantry Battalion, to lead the raid, and ordered him to hand-pick his own men. However, Cohen was to be medically excused from the mission.

(Apparently, LTC Cohen had a severe case of hemorrhoids. He was removed from the assignment by GEN Patton himself who, after personally inspecting the inflamed area, remarked, "That is some sorry ass!"¹)

Cohen then immediately selected his own replacement with Abrams' approval.

He was 24-year-old CPT Abraham "Abe" Baum. At this point, Patton motioned for the young captain to step aside and stated to him, "Listen, Abe, you pull this off and I'll see to it that you get the Congressional Medal of Honor!"¹ CPT Baum was a tough, scrappy, hands-on officer from New York City with questionable qualifications to be heading a raid this far behind enemy lines. For one thing, he was Jewish, and capture meant uncertainty when the letter 'H,' signifying Hebrew, was discovered on a soldier's dogtags. He had been a patternmaker by trade and, because of this, had been assigned to the Army engineers upon his enlistment. Army enlistment personnel apparently did not know he was a patternmaker of clothing; he was assigned to the engineers because they thought he was a metal patternmaker. This stroke of luck eventually got him

assigned to the Army's Officer Candidate School at Fort Benning, Georgia.

CPT Baum was far from being underqualified, however. At this point in the war, he had been one of the first to arrive at Bastogne. Baum had earned two Bronze and two Silver Stars.

The units assigned to accompany him on the mission were C Company of the 37th Tank Battalion, commanded by 2LT William J. Nutto, consisting of 10 Sherman tanks, and a platoon of five light tanks from D Company, commanded by 2LT William Weaver. There was also a platoon of three self-propelled assault guns, under the command of T/SGT Charles O. Graham. These were Shermans adapted to carry a 105-mm gun that could be used as an antitank weapon or as an artillery piece. The balance of "Task Force Baum, as it later became known, consisted of 27 halftracks carrying Company A of the 10th Armored Infantry, under the command of CPT Robert Lange, together with a recon platoon of nine men and three jeeps, and medical and maintenance personnel with an interpreter, PFC Irving Solotoff. Also assigned to the column was an additional jeep carrying MAJ Alexander Stiller, one of Patton's most trusted aides, who had served with Patton as a tanker in WWI.

Back in the hills overlooking Schweinheim, an artillery barrage ended at 2100 hours, and the platoon selected by Cohen to lead the breakout through the main street of town began moving. Af-

ter proceeding only 200 yards, they came under fire, and a Panzerfaust (bazooka) stopped the lead Sherman in its tracks and blocked the street. CPL Lester Powell drove his jeep forward, entered the burning tank, and drove it out of the way, also rescuing the surviving tankers. During this action, he was hit by enemy fire, and when he awakened in a hospital in England, he was told he had been awarded the Silver Star for his bravery and a Purple Heart for his wounds.

At 2300, the situation grew worse. Another tank was hit and abandoned, causing further delay. At this point MAJ Stiller joined CPT Baum and said, "We're late."

Baum replied, "I might not be able to reach Hammelburg before dawn... We need the cover of darkness."

"Is there another way to Hammelburg?" Stiller asked. Baum shook his head no, and stared at the major, still wondering why he was included in the mission.¹ Abrams and Cohen had been told the reason, but they had not passed it on to Baum. Both had thought the mission very risky and foolish.

The assignment of MAJ Stiller had caused CPT Baum to question who was actually in command, and to wonder what the aide to a famous general was doing on a combat mission about to proceed over 40 miles behind enemy lines. The answer to Baum's question caused him to turn cold. "It's important to General Patton," said Stiller, who explained that LTC Waters was in the camp.

"Who's Colonel Waters?" asked Baum.

"He's Patton's son-in-law. Didn't you know that?"

After hearing this, and knowing that 300 men were about to risk their lives for one man, he considered pulling the plug and aborting the mission. However, after collecting himself, Baum hoped that the rest of the men would see it as he did, a job to be done. At this point, he ordered his men to proceed through the town of Schweinheim without pausing. Thus began one of the most daring sagas in U.S. military history.

After clearing the town, the column stretched out over a mile. Baum's next task was to find the main east-west highway, Route 26. After passing through the small villages of Haibach-



LTC John K. Waters, seen at left in 1961 as a LTG, was in the Hammelburg prisoner-of-war camp in March 1945. Captured at Kasserine Pass in North Africa two years earlier, he was the son-in-law of General George S. Patton, Jr., then commanding the U.S. 3rd Army. Patton's troops were approaching within 40 miles of the camp when Patton ordered CPT Abraham Baum to lead a raid on the camp.

Grünmorsbach, they soon passed through Bessenbach, and then Keilberg. After reviewing the order of march as the column passed by, Baum then sped ahead, and after several turns on the narrow, winding road out of Keilberg, came to his first objective, the main road to Hammelburg.

It was now 0230 hours. Now on Route 26, Baum had just accomplished a very difficult leadership test. Leading an armored column in daylight is difficult enough; leading one at night in unfamiliar territory, over a complicated route, is even more challenging. As they proceeded to their next objective, the town of Laufach, Baum ordered the tanks to run over several telephone poles along the highway. He also ordered some lines cut by hand for added protection. Then one of his men noticed that, in several of the towns along the route, white sheets were hanging from the windows as a sign that they had surrendered. At this point, the task force leaders realized that the lines had not been cut soon enough.

As they sped on in the early dawn hours outside of Laufach, the road passed by a military parade ground. A large contingent of German troops were taking morning exercise. After spraying these troops with a hail of machine gun fire, it again became apparent that the mission was no longer a secret and worse yet, their exact position was now known to the enemy survivors. They next came upon a detachment of troops marching along the road who immediately surrendered to the lead tank unit, headed by LT Weaver. They were ordered to throw down their

weapons so that the tanks could drive over them, rendering them useless. This scene was repeated again a short distance further along and the Germans were told to march toward the approaching American Army in the west.

Baum's task force raced through Hain and Rechtenbach, then approached Lohr, the largest town since leaving Schweinheim, and also the mid-way point on the route. Baum decided to move Nutto's Shermans, with their 75mm guns, to the front of the column in case the city had been warned and fortified. This proved a prescient decision. As the column approached the outskirts in the early morning light, they spotted an overturned heavy truck with telephone poles piled around it, blocking the main road ahead. At this roadblock, another Panzerfaust struck the lead tank and disabled it, but the crew escaped and scrambled to the rear. A second Sherman then used its main gun and machine guns against the roadblock, scattering the soldiers manning it. The Shermans proceeded into the roadblock, clearing a path for the task force and scattering the defenders after bulldozing the truck aside. After continuing a short distance and scanning the town with his binoculars, Baum decided to try to bypass the city, thus avoiding further resistance. After doing this, he ran head-on into a truck convoy coming from the opposite direction and hauling 88mm antiaircraft guns. With LT Weaver back on point, he ordered his crew to "let them have it!" As Weaver swept by in his tank, "Conquering Hero," he was shocked to see that the 88s were manned by young

girls. They had been trained for this duty because all the available men were at the various fronts.¹

On March 26th, 1995, as I approach the town of Lohr down the scenic road which slopes rather steeply into this "Hansel and Gretel" town, I can envision the roadblock and am surprised to find yet another roadblock of a different sort. It is a full-blown street fair, and it turns out to be a nice treat as the old strasse through the village is filled with the bright colors of spring and the wonderful odor of many locally produced cheeses and smoked meats. It is here that I mail my first postcard to myself. It will bear the postmark of Lohr and a 50th Anniversary date of the day when Task Force Baum was here. The route Baum selected around the town was located just above the town, and was just visible from below. It was in Lohr that General Hans von Obstfelder, responsible for all German ground forces in the southern region, was summoned from his office by an aide who said the Americans were on the upper road. Seeing that they were bypassing Lohr and heading toward Gemünden, he immediately called for reconnaissance planes to follow the column and instructed his troops in Gemünden to prepare to dynamite a bridge to block the route.

As LT Weaver was leaving the Lohr area, he began to overtake a German train on his left. The train consisted of both freight and passenger cars. Some soldiers were waving at him! They stopped waving as the 75mm guns and machine guns of "Conquering Hero" began to point toward them. At this moment, the doors to the boxcars slid back to reveal small antiaircraft guns aimed at the tanks. Luck again was on the American side as the road dropped suddenly below the railroad bed. The tanks were now able to fire on the train, but the reverse was not possible. The fire from the task force struck a freight car loaded with ammunition, which blew up, and after firing additional rounds into the engine, two engineers jumped out, leaving the damaged train to its own demise.

A short while later, a train approaching from Gemünden appeared to have a chance to cross the tracks in front of the column and block the task force, but another Sherman fired two 75mm rounds into the engine and derailed the train just short of the crossing.

As Weaver and the column neared Gemünden, another juicy target appeared. This time it was a tugboat hauling five barges through the locks on the river Main. After firing high explosive and incendiary rounds into them, the barges exploded. Continuing further, another vital target appeared alongside the road, the huge railroad marshalling yards on the outskirts of Gemünden. Baum ordered all of his tanks to fire on this bonus target. They destroyed two more trains, unknowingly disrupting the unloading of the German 7th Division, who were trying to get to the front. In addition, they destroyed several more locomotives and then followed up by ordering a nearby

American spotter plane to call in an air strike on this valuable target.

Approaching Gemünden, Baum again halted to survey the bridge across the river and into town. He sent the recon platoon down the hill to verify that the bridge was intact. As LT Hofner approached the old bridge, he spotted a



Above right, the Roman bridge at Gemünden, and the castle where the Germans had sited their 75mm antitank guns.

LT Nutto, who commanded Baum's medium tanks.



pile of dozens of land mines which the Germans had just started to bury in the road. After throwing out smoke grenades, Hofner and his men began tossing the stacked mines off the road and began firing across the bridge into targets in the town. For this effort, Hofner earned a Silver Star.

As soon as the road was cleared, Baum put Nutto's medium tanks in the lead, and they started across with LT Hofner's platoon of infantry. From his turret, Nutto heard the fire from the first Panzerfaust, then another and another. There was also 75mm antitank fire coming from an old castle over the river and above the town. At this point, the lead tank was hit and rolled to a stop just five yards from the bridge, blocking the column. Nutto watched as the stunned platoon leader, LT Raymond Keil, helped his badly burned crew out of the tank. At this point, panic ensued and the lead tank's sergeant broke and ran for the rear, yelling, "I've had it, I've had it!"

At this point, Baum ran up as Nutto heard another "whoomp" from a panzerfaust. Looking up he saw it wobble and strike the asphalt in front of them before exploding and showering

them with steel fragments and searing phosphorus. He also felt the fragments pierce his body, and then watched as Baum went down. Baum struggled to stand up while bleeding from his right knee and hand. As the two men moved back to receive first aid, Baum watched as Elmer Sutton, leading the infantry platoon, made it across the bridge with two more men running after him. Suddenly, the Germans blew the bridge and the two men vanished forever.

It is March 26th, 1995. While standing above the roadside overlooking the bridge, which has long since been rebuilt, it is starting to rain and again I am reminded of what must have been going through the minds of the men who watched as their comrades died. The bridge still has the original foundation erected by the Roman army almost 2000 years ago. The bombed-out castle also survived and is still standing in the mist above the city.

The town is strangely quiet, with no one in sight on this lazy Sunday afternoon. Then a policeman drives up to see why we are stopped here. Reality returns, and we press on along Baum's path.

On March 27th, 1945, at 1100 hours, Baum is also backing out of the town. He has sent a recon probe to look for another road out of the village. After Baum consulted his map, Stiller asked him if he wanted to go back.

"We don't quit," Baum said, adding that the enemy had no idea of where his unit was heading.

After turning north on a back road, Baum sent his second message back to 10th Armored: "Two tanks lost, two officers and eighteen men wounded or killed. Proceeding."¹

A short while later, at a fork in the road, another tank was lost after throwing a track. At this point, the wounded were lifted out of the halftracks and placed on the side of the road, where they would be found and given medical aid. They were in no condition to continue.

The unit had moved ahead only a short distance when a lost American jeep from the 7th Division, carrying a combat propaganda team with a loudspeaker, wandered across Baum's path. The team had seen the smoke from the battle in Gemünden and, upon discov-



The narrow city gate of Burgsinn, the only route through the town, remains much like Baum's task force found it in 1945.

ering the tank tracks leading out of the city, proceeded to catch up with the column, thinking it to be one of their own. They then began broadcasting in German, directing the message into the woods towards some enemy soldiers who had outrun the column from Gemünden. The broadcast message was simple: it would be better to surrender to the 7th U.S. Army than to the Russians, who were coming from the east. About 100 of them walked out of the woods and began laying down their weapons. Then one of Baum's men informed the team that the task force was not part of 7th Army. The propaganda team immediately left to find their own troops.

With Baum leaving in the opposite direction, the abandoned Germans must have thought the American rules for fighting a war a bit odd.

Moving to the north, the column captured a lone paratrooper who was absent without leave from his unit and heading for home. After finding out that he was originally from Hammelburg, Baum and the interpreter, Private Solotoff, convinced him to lead them to a bridge in Burgsinn. The paratrooper proved to be a valuable asset. Several times along the route he convinced other smaller groups of German soldiers to surrender and walk towards the oncoming U.S. Army. The last group to follow his instructions were manning two camouflaged antitank guns. Further along the road to

Burgsinn, the task force chanced upon a staff car containing a high-ranking German general, Oriel Lotz. After forcing him to mount the front of one of the lead tanks to quell possible hostile fire, they proceeded through Reineck and then across the narrow but intact Burgsinn bridge.

The town of Burgsinn is an older walled city and, had they been forewarned of Baum's arrival, they could have easily blocked the main gate into town, forcing another costly delay. Even after passing through the main gate, the streets are so narrow that any stalled vehicle would have created additional problems and further delay. Upon leaving Burgsinn, there is a rather steep incline to negotiate on the road to Gräfendorf. Somewhere in the wooded region between the two villages, another unexpected event occurred. The task force encountered several hundred conscripted Russians who were working on the construction of an autobahn bridge, guarded by a group of German soldiers. Again, the captured paratrooper ordered them to throw down their arms. Upon seeing this, the Russians mobbed Baum's jeep, shouting, "Amerikanski, Amerikanski." The Russians wanted to do something further to help their liberators, and having armed themselves with the German rifles, they wanted to take the town. Baum approved of this, but on one condition — they were to wait until after the task force had passed through. In addition, the Russians wanted the general. Baum again complied.¹

On March 27th, 1995, driving out of the woods, which were spectacular to see, the road again turns steeply downhill and offers a splendid view of the town of Gräfendorf. As the main street wound through the town, I was amazed to see how narrow the roadway was, and how easily it could have been blocked. About halfway through the village, we spotted a cafe and stopped for coffee and cake. Since the owner of the cafe was in his late fifties, I asked him if he remembered the panzer raid of Task Force Baum. He became excited, and immediately produced his copy of the *RAID*, the book by Baron, Baum, and Goldhurst. He told me that he was a small boy, hiding in the basement below where we were standing, when the American tanks came rumbling through. He watched them from the basement window, and it was a sight he will never forget. Another man

who had been sitting nearby got up to tell me that he had also been a young man in the town of Burgsinn when the column passed by, and he recalled similar memories. After saying good-bye and thanking them for their time, I then asked them if they would send me a postcard from their towns with a short story of what they had seen, and they both have complied. (I sent them each a 4th Armored shoulder patch and a thank you card.)

Outside, as we were getting into our car, the cafe owner pointed to some second floor windows above the shop next door, and explained that his neigh-



bors had draped a white sheet over the window sill in order to keep the Americans from firing on them. This worked fine until some SS troops came through the village later and, upon seeing the white sheets of surrender, proceeded to shoot the townspeople who had hung them up! This proved to be a very sobering experience, and at this point I wished I had not eaten such a large piece of cake.

After we crossed yet another tiny bridge in the middle of town, the valley narrowed as the road followed the railroad and the river up out of town toward Weickersgrüben. This was the site of another crucial incident for Task Force Baum.

As the task force left Gräfendorf, a single-engine German spotter aircraft flew up the valley behind them. After the column had fired several hundred rounds at the aircraft, unsuccessfully, the pilot managed to fly out of range,

tipping his wings in defiance. As it turned out, the small plane had positively identified and counted the remaining vehicles — 13 tanks, three assault guns, and 27 halftracks. Meanwhile and unknown to Baum, General Lotz had gotten free of the Russians and phoned Gräfendorf, passing on the information that the Americans had talked about nothing but Hammelburg. Among those forewarned of the column's destination was the camp commandant at Oflag XIIIB, General Von Goeckel, and other commanders in the area, including Oberst (Colonel) Cord Van Hoepple, area commander, and General Bernhard Weisenberger at



At left, the bridge at the village of Gräfendorf, where SS men shot civilians who displayed white flags. Above, the author with Frau Stürzenberger, widow of Karl, and their son Edgar.

Schweinfurt, positioned just east of Hammelburg.

At 1200 hours on March 27th, the column had just passed through Michelau and then over another small bridge across the Saale River and north of Weickersgrüben, their next destination. At this point, the guide, who was unfamiliar with this region, became useless, and after turning the column up a dead-end road, needed to be replaced. Baum's next move was to send his driver, with Solotoff the translator, back to Weickersgrüben with instructions to find somebody who could get them to Hammelburg. After speeding back into the town, they arrived at an inn.

Solotoff found the owner, Karl Stürzenberger. After telling Solotoff that his wife was due to give birth this very night and he was the only one to help her, he asked to be excused from acting as a guide. This request fell on deaf

ears. The situation was now desperate and the task force was stalled and way behind schedule.

After leading the column back up the correct road to Highway 27, and after arriving at the intersection to Hammelburg, the innkeeper again asked to be excused to return to his wife, and this time he was allowed to go home. After seeing the entire column pass by, he realized the consequences he faced if the SS found out about his involvement with the Americans. So, after returning and aiding in the birth of a new son, he went into the woods, where he remained until the end of the war.

It was raining again as we passed by a covered bus stop in Weickersgrüben, where my friend John Dirks noticed three men standing and smoking, seeking shelter from the rain. We wondered if they knew of the raid and Herr Stürzenberger? The answer was an excited yes! One of the men was among the Russians freed by CPT Baum and his men. He had elected to remain in the area after the war. He said we were only 50 meters from the home of Herr Stürzenberger. A few minutes later, ringing the innkeeper's doorbell, I felt much the same anticipation as Solotoff must have felt. A member of the family answered; not Karl, but his grandson, who invited us in to meet the family — Karl's sons, Herbert and Edgar. After explaining the reason for my previously unannounced visit, (Abe Baum had told me to look up his friend Karl when I passed through), we were immediately escorted into the family room where we were given a glass of local wine and treated like royalty.

It was at this point that we learned of Karl's passing. We were saddened, but also delighted to meet Klara, his widow and the mother of Herbert, Edgar, and Walter, the son who was born on this day 50 years earlier. Karl had died in 1991. The family told me that Walter would be coming later if we wanted to stay and meet him, but our schedule depended on available light for additional photographs, so we thanked them for their hospitality and, after presenting them with 4th Armored patches, moved on towards Hammelburg.

Task Force Baum is now in the hills overlooking Hammelburg and at the intersection of a road that led south over the Reussenberg hills and toward the lager. It was not far from this point that

Hauptmann Richard Koehl, leading a company of eight panzerjaegers (tank hunters), had positioned himself. He had been alerted by one of the phone calls that General Lotz had placed after escaping from the Russians. He set up his guns near the railroad station, about 1,000 yards from the road that CPT Baum would have to pass on his way into the camp. He seemed to be in an ideal location for an ambush, but the task force was traveling at high speed when it reached this point, and all the rounds fired by Koehl's 75mm guns missed their targets.

Baum sent T/SGT Graham's assault guns 500 yards up the hill to fire on Koehl and protect the rear of the column. Unfortunately, this section of the road turned up rather steeply toward a saddle at the top on the ridge, and before all of the column had passed by, they took casualties from Koehl's anti-tank guns. Slowed by the incline, two more tanks were knocked out and the halftrack carrying CPT Lange was hit. He was seriously wounded. Three of his men placed him on another vehicle and headed up over the ridge to safety.

While Koehl was firing on the column, Baum was racing up and down the road in his jeep, trying to get stalled vehicles off the road and trying to restore order. Now Graham's guns were in position on the ridge and started to return fire. Capable of firing 8-10 rounds per minute, Graham's guns scored three knockouts on Koehl's panzerjaegers and also wiped out a fuel and ammunition column of six trucks moving toward Koehl. Unfortunately, Baum's unit had been shot up badly, losing two mediums and one light tank, five halftracks, and two jeeps. Now out of range and over the hill's crest, the task force regrouped at the sight of a large French memorial cross, erected by the French government after WWI to commemorate the French soldiers who had perished in Hammelburg. Baum now had his first view of Oflag XIII B. It lay on the reverse slope about 1,700 yards away.

As remaining light was growing short, Baum left Graham's assault guns and a rifle platoon behind to protect the rear and to provide covering fire from above and into the German positions outside the camp. He arranged the remaining 11 tanks into a "desert formation" (spread out side by side), with the



infantry following close behind. With the final goal in sight, they headed downhill towards the camp. When they were about 200 yards from the wire fence, the Germans began firing.

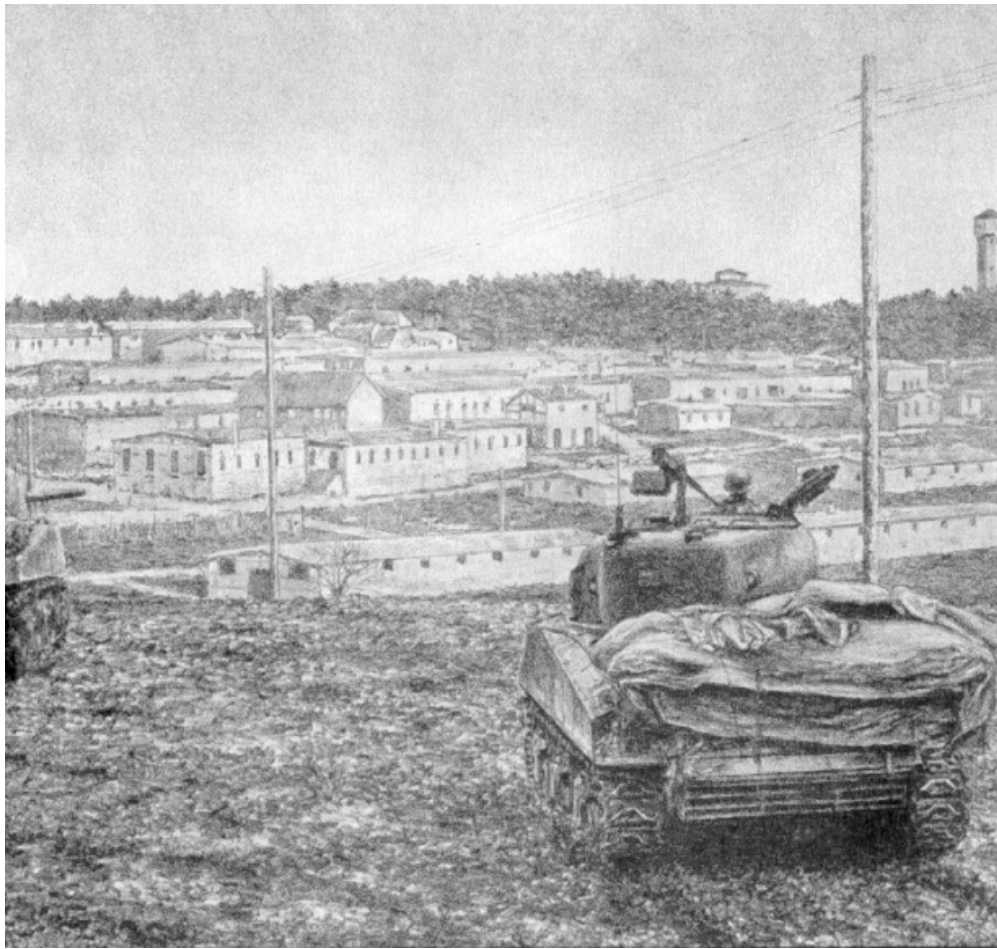
We were met at the Schloss Hotel Saalach by Herr Oberstleutnant (LTC) Taube of the Hammelburg Infantry Training School, and drove to his office. The Infantry Training School was celebrating its 100th year in Hammelburg. In Colonel Taube's office, we had coffee and were introduced to LTC Bradford, the U.S. Army liaison officer assigned to the school; Hans Schnebel, the school's librarian and historian; and Peter Martin, a history instructor, who acted as our translator and guide. A short time later, we found ourselves at the saddle, standing in the road next to the French cross monument where we had our first view into the compound from the point at which CPT Baum and his men first saw it.

Standing at the location of Graham's support position near the cross, we looked back down the panzerstrasse

(tank road) and saw an overview of the steep winding route the task force took coming up from the base of the mountain.

We returned to our van and proceeded to the first camp buildings that Baum's men approached. They are still in use as Infantry School support and supply buildings. During the time of the raid, these buildings were administrative buildings, located just inside the compound fence.

Baum's unit responded to the enemy fire which commenced about 200 yards out from the wire fence. Then the tanks broke through the wire. General Von Goeckel, the officer in charge, surrendered his entire command to a surprised POW, Colonel Paul R. Goode. During the initial melee, LTC Waters, the primary objective of the raid, was severely wounded by a German soldier, carried back into the compound, and hidden by a Serbian medical officer. He later learned that the bullet had missed his lower spine by a fraction of an inch. During all the confusion that



began with the American entrance into the compound, MAJ Stiller had been running from building to building, searching for LTC Waters. When he found him, he was already in the operating room, fighting for his life, and in no shape to travel. After speaking with him, and verifying his condition, he left in search of Baum.

The camp was in pandemonium, with prisoners running around everywhere. They were jumping on all the vehicles and some were kissing Baum's men. Others were asking for cigarettes, still not realizing that they were over 40 miles from the American front lines!

Meanwhile, Baum was making a few discoveries of his own. First, there were far more men here than he had planned on rescuing, and he was now severely short of transport vehicles. Even if his original column had survived the 16 hours of fighting and travel it had taken to get there, they would have still been far short of transportation vehicles. There were more than 1,500 prisoners, and he would

only be able to accommodate and rescue 200 or less. Far worse was the fact that no one seemed to be in charge of this unruly bunch! It was like Times Square on New Year's Eve, Baum recalled later.

LT Richard Baron, one of the prisoners and a co-author of *RAID*, came out of the compound and realized that Baum had only a small task force. Since it was not supported by any additional American forces, they would have to fight their way out and back to the west. Baron had been captured in Alsace-Lorraine while fighting with his machine gun platoon, a part of the 45th Division. While he realized the dilemma the task force faced, he decided that leaving was still a better option than remaining at Hammelburg.

At about that time, Baum and Goode found each other and were discussing whose duty it was to inform the men that only 200 or so would be able to go out with the column. Baum mounted the hood of one of the vehicles and began to shout for quiet. This was as dif-

ficult a task as he had faced up to this point, and it was only with extreme difficulty that he was able to explain to the excited crowd that only a few hundred of them could leave with him. At this point, many of the stunned and confused men stood paralyzed in front of him. Slowly they began to move in two directions, most back into the camp from which they had just come, and several hundred onto the tanks and into the halftracks. Among these was LT Baron, who was one of the men searching for a spot on one of the tanks.

As it was now dark, Baum thought perhaps this would provide cover for his exit from the compound. He sent LT Nutto out with three tanks and three halftracks to probe the roads for an escape route. After Nutto left, Baum reorganized the remaining task force with five light tanks in the front, then five halftracks, and the assault guns with the recon jeep and the remaining halftracks in the rear. This was accomplished just prior to moving to another assembly area to await the results of Nutto's probes.

Upon finishing the latest order of battle and just prior to moving out, disaster struck again. An explosion occurred in the last tank in the column and blew it up. The tank had been struck by a panzerfaust fired by an infiltrating German combat engineer who had gotten close under cover of darkness.

In the time it took for Baum to reach the new assembly area, the Germans were also moving quickly. The officers and senior enlisted men quickly dispatched soldiers and cadets to the various exit roads. They immediately sent men to the south, to the small villages of "Hundsfeld" and "Bonnland." These small villages had been appropriated by the German government to be used in house-to-house infantry training. The villages had been vacant of civilians since 1895, but to Nutto they looked just like any other sleeping German village. After passing "Hundsfeld," the first small village on his right on the route south, he soon spotted a roadblock of felled trees across the road, difficult to bypass in the darkness. Shortly after Baum arrived to survey the situation, he ordered Nutto back to the intersection in "Hundsfeld" and then out toward the



The old cobblestone road that Baum's task force took, looking back toward Hammelburg.

Reussenberg Woods, which were above the small valley they were in.

By now, the Germans were reacting. They had spotted Nutto's change in direction, and a team of combat engineers was sent ahead, to the area known as Hill 340, near the Reussenberg, to intercept them. As soon as these engineers began firing on Nutto's unit, Baum heard them and raced to the trouble spot in his jeep. It was another roadblock with supporting fire coming from the woods above. This forced yet another change in direction for the probe, this time to the west toward the main road at "Hollrich."

This route passed Hill 427 on their right flank and continued about four miles into town. After passing through the town and with the main highway in sight, Nutto radioed Baum with the news. He was elated, replying, "We are moving up... We should be there in twenty minutes."¹

LT Baron, who was riding on one of the probe tanks, recalls what happened next. With Nutto back in his tank and on the main road just out of town, two panzerfausts lit up the night, revealing German tanks, in addition to infantry!

One of the German rounds slammed into Nutto's tank and knocked him semiconscious. Then the second tank was also hit. After waking up, Nutto found himself on the road and a prisoner of war.

The remaining halftracks and the surviving tanks made their way back toward the task force. This was a serious blow to Baum, as he had just lost the irreplaceable Nutto and two more much-needed tanks.

At 0030 hours, Baum's jeep approached the town, where he ran into

the survivors coming back. He immediately sent two tanks about a mile to probe the next town of "Hessdorf," which was also situated along the main road, Highway 27. At this point, he ordered the remaining former POWs off and told them to wait with the halftracks. In addition, he ordered the main column to continue on the route he had just traveled and to wait for further instructions at a road crossing about midway between him and the latest probe. Some of the POWs had considered returning to the safety of the lager and were discussing this option among themselves.

At 0230 hours, as Baum and the two probe tanks were approaching the town of Hessdorf, he glanced at the odometer in his jeep. It revealed that with all of the diversions, he had already traveled 52 miles since leaving Schweinheim, and had been without sleep for over 100 hours. Then, suddenly, from out of the darkness, a panzerfaust took out another of his tanks. The surviving men scrambled up on the remaining tank and headed for the intersection below the Reussenberg Woods.

After joining up with the main body once more, Baum decided to retire until daylight when they would be able to force their way out across country and around any roadblocks. It would be futile to attempt any more this night; the losses had already been too high. He then ordered his men up to Hill 427 and onto a semi-flat area adjacent to the woods. Using the woods as cover to the rear, he fanned the assault guns and the remaining tanks out toward the valley below and toward the lager. Next, he ordered the men to refuel prior to dawn and prepare to destroy the remaining empty and damaged vehicles.

While his men were following Baum's latest orders, he summoned Moses, Graham, Weaver, and Stiller to a final pre-breakout conference and was informed by Stiller that more of the POWs wanted to return to the lager. About this time, a group gathered around Colonel Goode as he stood on one of the tanks. In short order, he explained that, due to the additional vehicle losses, there were still too many of them and they would be a burden to the remaining task force trying to breakout and fight their way back to the U.S. lines. After this sober news, about 70 of them elected to return with Colonel Goode and left at 0500 hours. This left only a dozen of the original POWs, including Richard Baron and a few of the officers of the 45th that Baum then assigned to replace the vacant slots among his own remaining infantry.

Colonel Bradford unlocks the gate at the intersection where Baum lead the task force up the road to Hill 427. The gate is locked because this is a live firing day and an artillery training exercise is scheduled to begin in an hour. I am feeling a bit uneasy now, as I have been in this kind of situation early in my Marine Corps training at Camp Pendleton and have heard of the accidents that can occur due to short or long rounds. It is also raining, and a cold winter wind is blowing up the hillside towards the Reussenberg Woods. We saw the exact spot where the task force was deployed and the approximate position of the panzerjagers waiting hidden about 1,500 yards down the hillside. About 100 yards away, there was a burned-out personnel carrier and additional target vehicles for the artillery training school.

The panorama of the battlefield from the plateau is breathtaking. The scene is also quite sobering, and I feel a sudden sense of awareness toward the men of Task Force Baum.

It is almost as if I have stepped back in time 50 years and the drama is about to reach its final climax.

At 0500 hours on March 28th, 1945, the column of men returning to the lager is barely half a mile from the task force when they hear a familiar sound. It is the sound of tanks and men digging in and preparing for battle. Unfortunately, the sounds are not coming from the task force, but from Koehl's panzerjager platoon! After waiting 10

hours for fuel and ammunition, they are now maneuvering into position, waiting for daylight. Ironically, none of Colonel Goode's men returning to the safety of the lager thought to send a runner back to warn CPT Baum of their discovery. Could they have all been so dispirited and exhausted from the last 12 hours of emotional ups and downs that they overlooked this critical point? In the meantime, even more activity was occurring in the German ranks. A team of 20 officers and cadets were quietly positioning themselves in the woods just above the plateau and to the rear of where Baum's men were making final preparations for the breakout. These men had followed the task force during the confusion and were armed with panzerfausts. Just prior to daybreak, they were in the Reussenberg Woods and were wide awake with anticipation of the coming dawn. In the task force, however, some of the men had finally fallen asleep after days of having none. Their sleep would be short-lived.

The seriously wounded men who were still with Baum, and who were in no condition to endure the journey back to the front lines, were taken on stretchers to a nearby barn and made as comfortable as possible with extra blankets. A large cloth red cross was then fashioned on the roof, visible in daylight. Baum gave the order to mount up at about 0800 hours.

In the German headquarters, Oberst Hoeppe's aide awakened him at 0730 hours and told him that the American tanks were visible on the hillside just above Koehl's position and below the Reussenberg Woods. At this point, Hoeppe radioed coordinated instructions to the various units surrounding the task force. No one was to fire until Koehl's antitank guns opened up, and then everyone was to fire at will!

At 0810 hours, CPT Baum was still issuing the final commands to his men before the breakout. His radioman was transmitting a situation report to the American lines and advising them they might require air support later. As the tanks roared to life and began moving towards their preassigned positions, and with many of the men still on foot and hurrying to mount vehicles, it happened! "A sheet of Hell engulfed the clearing... The ground shook with concussion after concussion... Geysers of dirt and steel were thrown up... Trees



The Hammelburg camp's hospital, where Waters, and later Baum, were treated after the failure of the raid and capture of members of Baum's force.

were falling over, and branches were flying through the air and floating to the earth... To Baum it seemed as though a single enemy salvo had utterly destroyed his task force... Tanks were ablaze... Halftracks stopped suddenly... and men were spilled out over the ground. From his jeep and using his field glasses, he saw Koehl's five antitank guns moving up the hillside toward him and firing faster than he had ever seen them fire before. They were, he thought, firing like semi-automatic rifles... Scanning across the slope in another direction, he saw five tanks firing their main guns as well as their machine guns. All of the units were supported by infantry, also firing and moving up rapidly. The fire was so intense that Baum never had a chance to deal with the panzerfaust fire coming from his rear. The one bright spot occurred when he saw many of his tankers returning fire... The attack was so overwhelming... and unremitting... and uncommonly accurate.¹

Within three minutes of Baum's order to move, "the entire clearing seemed to be one single sheet of flame, every vehicle was hit... It was then he knew he had lost his task force."¹

Sidles was still on the radio, tapping out the final message from Task Force Baum in Morse code: "Task Force Baum surrounded. Under heavy fire. Request air support." Sadly, several rounds struck the barn sheltering the wounded and the stone walls supporting it collapsed in on the men. It was doubtful that any had survived.

"Every man for himself," Baum shouted as he leapt from his jeep and headed into the woods. He soon found cover with Sidles and Stiller. He

guessed that fewer than a hundred men had made it to the woods. The last order shouted to his men was, "Fan out...make your way west in groups of twos and threes, and go your own way so you won't be visible. Get as much distance between you and them before they get here. Get going!"¹

With these last hurried orders, Task Force Baum had effectively disintegrated. It was a great effort, and not without many successes. Although the primary mission failed, the havoc created this far behind enemy lines had occupied the Germans for the better part of two days as they ran around in circles trying to figure out what was going on. Meanwhile, the U.S. Army's 3rd and 7th Armies were making rapid progress.

In addition, there were so many acts of bravery and heroism that everyone should have gotten a medal. As it turned out, I am not sure that they did not. I know of at least fifty Silver Stars, one Distinguished Service Cross (Baum's), and more than one hundred Purple Hearts, (Baum got three), as well as Bronze Stars for everyone. (Baum got one also.)

As I walk into the dense woods behind the plateau, I envision the mayhem that had taken place here that fateful morning. Men running in all directions, trying to remain alive and also attempting to escape. T/SGT Graham was one of a few who accomplished this feat. He eventually made it back to the 7th U.S. Army sector after several days of close encounters with the enemy. CPT Baum and LT Baron were not as fortunate, however, and ended up back in the lager, thrown together by fate and still 25 years away from

telling the world in writing of this adventure.

As I take one last look around the floor of the woods for a souvenir of this moment in history, I remember that CPT Baum was still thinking clearly enough at this stage to throw his dog tags into the forest as he ran. He did this because they were imprinted with the letter 'H,' for Hebrew, and he was well aware of the many atrocity stories that had been told about Jews in Nazi captivity. As it turned out later, he was never identified nor discovered by the Germans in the lager as the leader of the mission. It was not conceivable to them that all this havoc had been created by a 24-year-old captain; they had been searching for a much higher-ranking officer. It is unclear what happened to Stiller after his capture and he is not mentioned again in any of the manuscripts at my disposal.

About one hundred yards from the edge of the woods, I began to look in earnest for the dogtags which Abe Baum discarded 50 years ago in hopes of the ultimate treasure find, but it was not to be. As I walked out of the woods, the others were waiting, and a glance at my watch told me that we had only 15 minutes until the live-firing began. Not wishing to relive Baum's encounter to the fullest, I hasten my pace. As we are driving out of the area, we are aware of German soldiers in "camo" cover with radios and, yes, Panzerfausts too! The soldiers are part of the training cadre and are waiting in foxholes for the artillery fire to begin. Again, I am reminded of the task force and how real this 50th Anniversary tour had become.

Shortly after closing and locking the gate behind us, I hear the sounds of the guns firing in the distance, but my mission has been completed.

In trying to establish a complete picture of what happened, the following comments are of note:

Patton died denying publicly any knowledge of his son-in-law being in Hammelburg when he ordered the mission. But on March 23rd, shortly before ordering the raid, Patton had written a letter to his wife Beatrice: "We are headed straight for John's place and may get there before he is moved." Patton stated in his journal, published after his death, "I can say this — that throughout the campaign in Europe, I

know of no error I made except that of failing to send a combat command to Hammelburg." Additionally, in his book, *War As I Knew It*, after realizing that the raid had failed, Patton states, "I made arrangements to reconstitute the two companies of the 4th Armored Division, which we now knew was definitely captured. After forcing a crossing over the Main east of Frankfurt, in which the captain in command was slightly wounded, they continued the attack and reached the outskirts of Hammelburg (interesting that he refers to it as an attack). Here they ran into elements of three German divisions which, as we had hoped, had been drawn by their attack. (At this point, I think the general was "stretching it" somewhat.) While some of the tanks... and armored infantry engaged these divisions, other tanks went to the prison camp, some six miles to the north, and released the prisoners. [Again, Patton does not mention Colonel Waters.] These tanks, accompanied by some 1200 prisoners, rejoined the rest of the force in the vicinity of Hammelburg and started back over the road they had taken. The following report was made by my aide, MAJ Stiller, who was with them but not in command [again no mention of Waters.] He suggested that instead of returning over the road already used, the column strike north. The officer in charge declined that advice and the column stopped to refuel. While engaged in this refueling, they were attacked by three regiments of German infantry from three different directions and scattered. When the confusion had cleared, MAJ Stiller, the captain in command of the force, and five enlisted men continued to fight until they had used up all their ammunition and had their vehicles destroyed, when they surrendered."

This is the only mention of the raid that the general saw fit to include in his only book on the war.

Because the mission was labeled Top Secret (GEN Patton's influence continued until 24 years after his death in 1946), it was 25 years before MAJ Baum and MAJ Baron told their stories in book form.

I am indebted to both of them for their help and information. Without them I could never have made this journey back in time. I also believe that, although many of the men of 4th Armored died and suffered in vain, the

story of the individual heroism and courage of these men remains as one of the great military feats of all time.

Endnotes

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⁶Personal interview, Abe Baum, February 1995.

⁷*War As I Knew It*, George S. Patton, Jr., Houghton Mifflin, 1947, pp. 280-281.

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¹⁰*The Mighty Endeavor*, Charles MacDonald, Oxford University Press, 1969, pp. 460-461.

¹¹*48 Hours to Hammelburg*, Charles Whiting, Ballantine Books, 1970.

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¹³Telephone interview and materials sent by COL James Leach, DSC, 4th Armored Historian.

¹⁴Telephone interview and materials sent by SGT Sam Schenker, Secretary, 4th Armored Division Association.

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Leadership... And Command and Control

by Lieutenant Colonel Kevin C.M. Benson

“It’s against anyone’s nature to rush headlong into gunfire. But, for the commander, it’s pride that pushes him. And for his men, it’s the sight of the commander in front of them. At such moments you cannot hesitate.”

(CPT Francois Lecointre, French Army in NYT Times Fax, p. 2, June 6, 1995)

The history of the profession of arms is filled with the exploits of leaders who led from the front. Young Lieutenant Rommel led the bulk of the Württemberg Mountain Battalion in the seizure of Mount Matajur during the Italian campaigns of World War I. He wrote of these feats of arms in *Infantry Attacks*. He inspired his soldiers by placing himself at the decisive point of action and led from the front. Guderian, when serving as a corps commander in the Battle for France in 1940, led his corps from the front. When Guderian’s lead infantry regiments were crossing the Meuse under French fire, he was at this decisive point to better direct the actions of all other arms and fires in support of the crossing effort. Lieutenant Colonel Creighton Abrams led his battalion from the front throughout World War II. General Patton led from the front as a brigade commander in World War I and as an army commander in World War II. He directed efforts on the beachhead at Gela, Sicily, during Operation Husky, and was present when the Hermann Goering division counter-attacked the beachhead.

The trait these great leaders shared was leading from the front, as a visible example to the soldiers they led into battle.

The Armor School, during the Armor Officer Basic Course (in 1977), taught three means of reinforcing the main ef-

fort. These were: priority of fires, placement of the reserve, and the **presence of the commander**. The advance of technology has made this practice less and less likely, the higher in the chain of command an officer goes. Conceivably, we will end up like the platoon leader in the movie *Aliens*, where the lieutenant stayed in the landing craft to be in a position to over-watch his platoon’s monitors.

Rapidly advancing command and control technology is forcing commanders at nearly every level to remain in the command post to be near the monitors that give them the situational awareness to “see” the entire battle and remain in contact with higher headquarters. Indeed, we have found a Napoleonic “hill” from which to see the entire field. Yet this capability removes a key morale factor from the fight, the presence of the commander.

The recent experience of 3d Squadron, 2d Armored Cavalry Regiment in Haiti is a prime example. During its deployment, the squadron was outfitted with cameras that mounted on the barrels of the scouts’ rifles. These cameras connected to the squadron tactical operations center through the radio, thence to the Pentagon. The Army Staff can now watch squad fights from the ultimate in foxholes. This experiment in technology raises the specter of Moltke the Elder, sitting in his railroad car, sending telegraph messages to his far-flung armies during the battle of Koeniggratz. Moltke never saw the battlefield, rather remaining aloof from the fight and sending and receiving reports. What is wrong with this picture?

John Keegan wrote of “post-heroic” leadership in his work, *The Mask of Command*. His conclusion: that in the

nuclear age a leader should not, indeed could not, be heroic — especially at the national level. This was unquestionably true when the threat of mutually assured destruction hung over the planet. But the extension of this conclusion into the tactical and operational realm is incorrect. Keegan also points out the imperatives of command that defined leadership in the past: kinship with common soldiers, sanction of rewards and punishments according to common values, leadership by example, prescription of risk-taking to subordinates, and direct action in putting these principles into effect (p. 343ff, *The Mask of Command*). These imperatives still have a place in the military art, and we cannot let technology eliminate these imperatives of command.

Keegan also briefly touched on the velocity of events, both in their reporting and response. We have seen many examples of this in the past five years, from Kuwait to Haiti. The need for information is such that, for example, everywhere the XVIII Airborne Corps main headquarters goes, CNN follows, both within the headquarters as a means of receiving information, and outside as reporters. The world of operations other than war (OOTW) places the rings of strategic, operational, and tactical arenas within each other, as opposed to the traditional concept of merely overlapping. The pace of events demands that a leader remain abreast of events on the world stage.

There are times when the proper place for the commander IS in the headquarters. Here, he can detach himself from the mundane and think. There are also times, even in the world of operations other than war, when the place for the commander is at the decisive point or the point of danger. The com-

“The world of operations other than war (OOTW) places the rings of strategic, operational, and tactical arenas within each other, as opposed to the traditional concept of merely overlapping. The pace of events demands that a leader remain abreast of events on the world stage....”

mander and his staff must retain the bond with the soldiers who daily take the risk of executing the orders of the higher commander. Kinship is still a valid imperative. As Keegan wrote, “Those who impose risk must be seen to share it...” (p. 329, *The Mask of Command*). Our technology for command and control increasingly puts the means of control in the headquarters.

Consider the following hypothetical scenario: An Army corps is selected as the nucleus for a JTF, which will plan and lead a forcible entry of an island nation. When the corps commander takes the first briefing on the operation, his planners recommend that he command from the *USS Mount Whitney*, where he'll be able to control the entire JTF fight, while maintaining contact with the regional commander-in-chief (CINC). Stating that a visit to the front is worth one thousand reports, the corps commander states he will take a small assault headquarters in with the later assault echelons of the forcible entry. When this intention becomes known, the CINC worries that he will not be able to talk to the corps/JTF commander while in transit. As the planning proceeds, it becomes apparent that the commander of the JTF needs to be in a position to respond to the CINC and national leaders, the media, and the requirements of the battlefield, simultaneously and in real time. The *USS Mount Whitney* provides such a medium, allowing the commander access to the electronic high ground and the ability to visit the front.

The command ship provides security and no drain on shore facilities, which are at a premium during the initial phases of the operation. The availability of a U.S. Navy helicopter allows the CJTF to quickly speed to the decisive point when necessary. Indeed, the helicopter in this operation becomes the commander's “horse” carrying him to and from the place on the field requiring his presence. The technology to ensure instant voice and video communication contact is currently available at

higher headquarters and on specific platforms such as the *USS Mount Whitney*. While this appears to be a reasonable compromise, it does remove an option from the commander's range of decisions. The commander CANNOT decide that he will accompany the initial assault, even if that is the right decision. This concentration of technology makes the apparent risk of the commander at the decisive point greater; he may not be in communication with the command and control means necessary to direct a far-flung task force. This is a mistake.

We must give the commander the freedom to go to the point of action, while retaining contact with the means of control and the situational awareness afforded by the electronic “high ground.” Doctrine remains the engine of change. FM 100-5, *Operations*, retains the essence of military leadership by stressing the art of command and the science of control. Commanders command, staffs control. The thrust of our drive for technology, especially in the area of information management, must afford us this means. Technology must allow the JTF commander the capability to lead at the decisive point — whether the mission is a parachute assault, amphibious raid, or maritime interdiction operation — while simultaneously controlling the entire JTF fight.

The emerging new world order (or disorder, as it appears) brings with it new missions for the armed forces. The missions themselves are strange, and some are even distasteful. The requirements range from winning a “Desert Storm” type war to UN operations in Haiti and Macedonia. The definition of the vital national interest of the United States will undoubtedly change as the new powers within the world jockey for position. We may even face the demise of the influence of the nation-state, as Martin van Creveld spoke of in *The Transformation of War*. Nevertheless, the requirements of the commander will remain the same: lead by example, share danger, and take deci-

sions based upon the best information available. Call it *coup d'oeil*, *finger-spitzengefuehl*, or situational awareness, but the commander requires technology that gives him the freedom to go to the decisive point and retain the advantages of the technological “Napoleonic hill.”

The changing world is unpredictable. The changes in vital national interests, as well as the increasing frequency of OOTW-type operations, will increase the demands on our entire force. The nature of the combined arms team will change, although the concept remains the same: the effects of all arms under the command of one commander, supported by one staff.

The constant in this changing world, even in the era of “post-heroic” warfare, is the commander. As General Patton said, “Staff systems and mechanical communications are valuable, but above and beyond them must be the commander; not as a disembodied brain linked to his men by lines of wire and waves of ether, but as a living presence, an all-pervading, visible personality. The unleavened bread of knowledge will sustain life, but it is dull fare unless seasoned by the yeast of personality” (p. 56, *Leadership*, Cavalry & Armor Heritage series).

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Honorary Colonels Can Re-energize Your Unit

by Captain Dave Clark

History, heraldry, and heroes. The Armor and Cavalry Regimental System keeps all three of these alive in our mounted force. Every battalion or squadron carries before it the colors of a particular regiment. Emblazoned on those colors are the crest and motto of the regiment, framed in the campaign streamers of past battles which adorn its staff — battles which made our forefathers and their comrades heroes. They fought, bled, and often made the ultimate sacrifice for their brothers-in-arms, unit, and country.

The regiment and its traditions provide a vital link to that past and an important tool in building unit cohesion, pride, and esprit de corps.

Most soldiers affiliate with regiments for a variety of reasons: it was their first active duty assignment; they assumed command within that regiment; they have combat experience with the unit, or they want an assignment to a post that is home to a battalion of that regiment. Whatever the reason, it is usually with some amount of pride that a soldier wears his chosen regiment's crest on his uniform and barks the unit's motto when challenged.

The Armor and Cavalry force is currently finishing a massive series of redesignations as a result of the draw-down and restructuring of Army forces worldwide. The dizzying rearrangement of unit designations in the last 12 months has caused a degree of consternation among the mounted force — new patches to sew on, crests to buy, and new mottoes, songs, and histories to learn. What was once a dependable element in the unit has now departed, like so many soldiers who PCS. With the new set of colors comes a couple of dedicated spokesmen and champions of

the regiment: the Honorary Colonel and Honorary Sergeant Major.

An example of such a champion is MG(R) Ronald Fairfield, Jr., Honorary Colonel of the 69th Armored Regiment. A combat veteran of three wars and former battalion commander of 1-69 Armor, MG Fairfield was appointed the Honorary Colonel of the 69th Armor Regiment by the Secretary of the Army in 1987. During his tours as HCOR, he was the guest of honor at 10 of 11 battalion changes of command with the two battalions of the 69th stationed in CONUS — 2-69 and 3-69 respectively. He also conducted annual professional development seminars for both officers and NCOs, and wrote an average of 25 flag letters a month recognizing achievements by soldiers of the battalions. MG(R) Fairfield encourages units to, "Invite their Honorary Colonels for a visit so they can contact and get to know the soldiers." The most important thing the Honorary Colonel can contribute to the members of his regiment, according to MG(R) Fairfield, is heritage. "They can combine that past with the heritage they are making today, every day, and carry both with them into the future. Heritage is what the regiment is all about, the heritage that was, is today, and will be tomorrow."

As the Army force structure stabilizes and we become a CONUS-based contingency force, the esprit, teamwork, and sense of belonging afforded by the Regimental System takes on even greater importance. The best tool in a commander's bag for energizing pride in his battalion or squadron's regiment is the Honorary Program of Colonels and Sergeants Major of the Regiment. The purpose of the honorary program is to provide a link with history through the Honorary Colonel of the Regiment (HCOR) and the Honorary Sergeant Major of the Regiment (HSGMOR). The primary mission of the soldiers holding these honorary positions is to perpetuate the history and traditions of the regiment, thereby enhancing unit morale and esprit. This, in turn, helps the commander develop loyalty and commitment in his troops, fosters a sense of belonging, and institutionalizes the warfighting ethos. The HCOR and HSGMOR are credible sources who have lived through our Army's brilliant history and can relay their feelings and experiences about

their respective regiments in times of peace and conflict.

All Honorary Colonels are retired commissioned officers in the rank of colonel or above with former service in the regiment. The Honorary Colonel's duties include: service as a liaison between the regiment and regimental associations, attending regimental functions and command ceremonies, participating in award ceremonies, speaking on the regiment's history and traditions at dining-ins and similar functions, assisting in historical professional development programs for officers and NCOs, and presiding over regimental committees. The Honorary Sergeant Major is a retired NCO in the rank of sergeant first class or above who has former service with the regiment. The HSGMOR's duties are to assist the HCOR in perpetuating the history and lineage of the regiment and assist in maintaining an honorary program and its many aspects as listed for the HCOR.

Incorporating these helpful and important members into a unit's activities is a matter of commitment on the part of battalion and brigade commanders. Nothing is free in the military and this unfortunately applies to the Honorary Colonels and Sergeants Major program. Travel to both OCONUS/CONUS regimental functions is done by invitational travel orders funded by the installation or activity requesting the HCOR's or HSGMOR's presence. Reimbursement of incidental costs is not authorized, but regimental associations may be established to support honorary positions.

The Honorary Colonel and Sergeant Major can be a tremendous addition to a unit's regimental association, providing valuable role models for both officers and NCOs. A list containing names, locations, and biographies of the current HCORs and HSGMORs is maintained by the Armor Proponency Division of the Office, Chief of Armor (OCA). The OCA pamphlet, *Armor Regimental System, 1996* contains complete information on the Armor Regimental System, including current active regiments and HCORs/HSGMORs. This Fort Knox publication can be obtained by calling OCA directly at DSN 464-3188/1368, Commercial (502) 624-3188/1368, or by calling Armor Wide Training Support (AWTS) at DSN 464-2987, 24-Hr FAX 464-7554.

Operation Just Cause: The Armor-Infantry Team In the Close Fight

by Major Frank Sherman

Based on my experiences in Panama as the commander of Company C, 3rd Battalion (Airborne), 73rd Armored Regiment, I would like to highlight the versatility of the M551A1 Sheridan light tank. Its 152mm main gun, and its .50 caliber and coax machine guns, coupled with the modified M60A3 tank thermal sight (TTS) — arguably the best tank-mounted thermal sight in the force — produce an awesome amount of firepower, while its armor affords the crew a moderate level of protection. Because of the vehicle's compact design, light weight, parachute deployability, and modest support requirements, Sheridans deploy and maneuver where other heavier vehicles would bog down or be restricted. In short, the Sheridan remains the only armored, direct-fire weapon that can accompany the Airborne Infantry, beginning on the drop zone at P-hour.

Strategic Forcible Entry

On two separate occasions during the Panama operation, the Sheridan demonstrated its ability to strategically deploy. The first involved secretly air-landing one platoon of four Sheridans, two pallets of ammunition, two HMMWVs, a trailer, and 25 personnel on a single C5 Galaxy transport into Howard AFB, Panama. Once on the ground, four HETs quickly moved to the rear of the aircraft, and the Sheridans were off-loaded, covered, and moving out the front gate, on their way to their hide position — all before daylight. The second and larger deployment of ten Sheridans attached to 1st Brigade, 82d Airborne Division conducted history's first combat heavy drop of armored vehicles from six C-141 aircraft, into enemy territory, with

eight surviving the drop. As the Sheridans were readied for combat and crewed, they formed the nucleus of the brigade's firepower. Initial missions were to deter counterattack and support the infantry's simultaneous assault on four D-day objectives.

Striking the D-day Targets Forcing Roadblocks

Our first encounter with the Panamanian Defense Force (PDF) occurred as the infantrymen of 1st Battalion, 504 Parachute Infantry Regiment, were establishing a supply route from Tocumen International Airport to their initial objective of Tinajitas. The convoy had only moved a few kilometers when it stopped to clear a roadblock located on a bridge. As the Sheridans moved to the edge of the highway to support the infantry, SSG Troxell, the lead tank commander, called me on the radio and stated, "This is a hell of a place for an obstacle, buildings all around and no cover. It looks like swamps on both sides of the road." As the infantry dismounted and began to execute their obstacle drill, they began receiving automatic weapons fire from the buildings no more than 50 meters away. The lead tank commander opened up with .50 caliber fire as the wing tank commander screamed to his gunner to identify the threat. A moment later, SFC Freeman, 1st Platoon sergeant, yelled, "I got 'em, concrete building, second floor, fourth window from the right." He fired a 152mm heat round at the target, ripping through the room, collapsing the right side of the building. The enemy fire stopped and the infantry finished clearing the roadblock.

Later that day, along the same route, we encountered another roadblock.



This barrier was well made, with cars wired together and what appeared to be propane tanks inside. Quickly analyzing the situation, we decided against the normal obstacle drill and opted to clear the roadblock with a 152mm heat round instead. The TC identified the middle red car, and the gunner engaged the target. We had to wait a few minutes for the fire to subside, and smoke to clear, then a Sheridan moved forward, pushing its way through the wreckage. There was no enemy response to our obstacle reduction, even though we were exposed for over five minutes. Maybe they had heard about their buddies guarding the other roadblock?

Urban Fighting at the Comandancia

At about the same time, fighting in and around La Comandancia was heating up. The remaining PDF defenders were going to stay and fight, so U.S. forces were preparing to go in after them. The 3rd Platoon leader, LT Kozar, knew from the radio traffic that fighting on the south wall of the Comandancia was intense. He was not surprised to be ordered to move there with a tank section and assist in the evacuation of wounded personnel. What did surprise him when he turned the corner was to see a burning M113 and PDF soldiers using the Comandancia's 10-foot-high wall as cover, shooting in all directions. LT Kozar ordered his gunner to, "take the wall out," and with one round make a hole large enough to drive his tank into the building's courtyard. As the Sheridan climbed what was left of the wall and began to enter, a bus attempting to block its advance was halted by the 152mm battlecarry HEAT round. With



Above, a 152-mm HEAT round from a Sheridan impacts on the Comandancia, military headquarters of the Panamanian defense forces.

Above left, the concrete wall surrounding the Comandancia after being penetrated by a 152-mm HEAT round.

At left, the remains of the bus that attempted to block LT Kozar's move into the Comandancia.

enemy fire subdued, LT Kozar backed his tank out, and the wounded were evacuated without incident.

APERS Engagements

The next day, LT Jennings, 2d Platoon leader, and his wingman moved slowly through the jungle and over a light bridge guided by an infantry squad from 4th Battalion, 325 Airborne Infantry Regiment. The battalion was preparing to assault the PDF's Ranger, Airborne, and Air Assault training base. LT Jennings was tasked to support by fire.

When the order was given to assault, the infantry commander used the Sheridan's rear deck telephone to lift and shift the tank's fire, helping to prevent fratricide. The wingman overwatched a road that was obscured by dense forest, which the AC-130 (SPECTRE) could not cover. During this assault, enemy personnel were identified moving along this road, and the Sheridan responded by firing a flechette round.

No enemy personnel attempted to counterattack down that route.

The rules of engagement specified that we identify a PDF soldier with a weapon or a combatant about to commit a hostile act before we could engage; hence, most of our engagements were directed at stationary targets at a range of 50-400 meters. Only once did we engage a moving target which occurred immediately after shooting two

"During this assault, enemy personnel were identified moving along this road, and the Sheridan responded by firing a flechette round.

No enemy personnel attempted to counterattack down that route."

rounds into a building and the infantry moved forward to sort out the EPWs. The tanks were in the process of repositioning when, from around the building, came a yellow Toyota Corolla carrying PDF members attempting to escape. SGT Pennington, the tank's gunner, identified, fired, and hit the car before it could enter the highway...at a range of 100 meters.

Uniquely Suited to Armor-Infantry Close Battles

While the M551A1 General Sheridan has served the Army longer than any mount since the horse, it remains a lethal and versatile weapon system. Despite its age, Sheridan OR rates remain in the high 90s. Its unique ability to be delivered by parachute during the crucial airborne assault phase of a forced entry operation provides planners enormous flexibility — and the commander on the ground an enormous advantage. In contingency operations where METT-T often will not require a system capable of defeating massed formations of state-of-the-art main battle tanks, where airframes are always scarce, and where the in-country road net frequently limits the utility of our near 70-ton MBT, the M551A1 Sheridans of the Army's parachute tank battalion continue to offer the commander the decisive edge.

Major Frank Sherman is the operations officer of 3/73 Armor, Fort Bragg, N.C.

BALKAN REPORT III

The Six-Bradley Scout Platoon In Bosnia

by First Lieutenant Frank Lozano

This article is the third to appear in the last three issues discussing mobility in Bosnia. - Ed.



Bradleys at a Bosnia checkpoint.

The three-Bradley scout section moves through the narrow back roads connecting the many Bosnian villages that line the Zone of Separation (ZOS). It is mid-afternoon, and the mounted patrol is about to link up with the Serbian engineers who will provide security and ensure the destruction of the Serb bunkers along the confrontation line. The morning had been spent with elements of the Bosnian Army as they removed mines and marked minefields. The section would return to "Ft. Apache" (Lodgment Area Walker) around 1700, with enough time to grab chow, ensure the other section's readiness for its night patrol, and prepare for the nightly mission brief.

The evening would be spent executing the necessary troop leading procedures and pre-combat inspections, ensuring their readiness for the next day's mission. Once that was complete, then would come the showers, a little AFN, maybe a movie, exercise, and the other amenities provided by the 1st Armored Division.

Scout Platoon

The many differing missions of Operation Joint Endeavor make a six-Bradley scout platoon a valuable asset. There has been much discussion on which vehicle is the best for use in a peacekeeping environment. [See *ARMOR*, July/August 96 for one such discussion. - Ed.] In making this decision, we must take into account the task organization of the vehicles. This issue can be examined by focusing on the three main missions that ground forces execute in the other than war environment in which we are currently deployed. They are mounted patrols,

lodgment area security, and checkpoint operations.

Mounted Patrols

The peacekeepers conduct daily day and night patrols in and around the ZOS. The M3A2 is well suited for this mission for a number of different reasons, but one of the most important is its maneuverability. The narrow roads of Bosnia act as very restrictive terrain. The width of the M3A2 CFV (3.61 meters) allows it to move through the country much more easily than an M1A1 (3.65 meters width). When compared to the M113 series, the CFV's ability to pivot steer makes it more agile in areas where it is important to stay on the cleared route. Another formidable obstacle is the country's great number of reckless drivers. The M3A2 is narrow enough to allow traffic to move in both directions and safely pass. This aids the M3A2 in performing its neighborhood patrols while displaying a large, visible deterrent.

The M3A2, more so than a HMMWV or an M113, is a very imposing fighting machine. In an environment where only force is respected, the M3A2 easily fits the role. One of the factors that makes the CFV such an intimidating vehicle is visibility of its three turret-mounted weapons systems. The easily seen 25mm, TOW launcher, and coax provide a much more visible deterrent than the single crew-served weapons mounted on both the HMMWV and M113.

The size of the unit also makes the scout platoon a valuable asset. Since physical work is often done with the factional elements, dismounted security is vital. This characteristic makes the

scout platoon more able to conduct these missions, unlike the tank platoon, which is unable to provide both sufficient dismounted security and the ability to fight their vehicles at the same time. Also, one cannot overlook the survivability advantage, both for the crew and the vehicle. The amount of armor protection provided by the M3A2 provides enhanced crew protection, and acts as a visible deterrent, especially to those who are quicker to throw rocks at HMMWVs than Bradleys when denied candy or an MRE.

A good example of the CFV's durability was shown when the platoon leader's Bradley in 3/B/1-1 Cavalry ran over an AP mine. The mine, which would have ruined the mobility of a HMMWV, inflicted no damage to the Bradley.

Lodgment Area Security

The size of the unit, in both soldiers and vehicles, allows the six-Bradley scout platoon to execute a number of different missions at once. For example, the platoon is able to run an efficient guard roster while conducting intensive vehicle maintenance. The platoon is also able to make good use of the time back at the lodgment area by maximizing personnel recovery while conducting concurrent training.

The lodgment areas in theater are small and restrictive in regard to motor pool space. This requires a vehicle that not only can move quickly, but one narrow enough to maneuver through the lodgment areas. This gives the commander the flexibility to either move one or all of his Bradleys to cover any disturbance. The biggest advantage of having an M3A2 comes in

"Since most checkpoints are set up in the center of the ZOS, it is important that they portray a formidable, as well as intimidating, presence. The M3A2 is again preferable in this role than either the HMMWV or M113."

the form of available weapons systems. Since most lodgment areas are in built-up areas, there are a number of different threats. The M240 coax machine gun is excellent for taking care of any close dismounted or POV-mounted threat, while the 25mm HE or AP deals with any medium range threat. The 25mm chain gun is an outstanding weapon for built-up areas. It is both accurate and destructive. The ability to minimize collateral damage is a key factor in peacekeeping operations. The TOW, able to make the long range kill, is great for covering the many roads that are near the lodgment areas. Used properly, the M3A2 becomes an effectively lethal weapon for lodgment area security.

Checkpoint Operations

Here again, the number of people and vehicles available in the six-Bradley platoon aid in the efficient manning of checkpoints. There are enough people to conduct vehicle and weapons maintenance, concurrent training, and checkpoint improvement, as well as allowing for a quick reaction force. The preferred approach is to occupy a checkpoint with an entire platoon, but that is not always possible. With the six-Bradley scout platoon, the commander has the flexibility to man two checkpoints at the same time.

The M3A2 proves its worth during checkpoint operations by superbly fulfilling all of the necessary requirements. The restrictive terrain, coupled with the small areas of land that are cleared of mines, creates cramped checkpoints with little room to maneuver vehicles. The CFV is narrow and quick enough to react to any disturbance. Since most checkpoints are set up in the center of the ZOS, it is important that they portray a formidable, as well as intimidating, presence. The M3A2 is again preferable in this role to either the HMMWV or M113. As noted previously, the weapons systems and armor protection play a large factor as a visible deterrent.

Along with these characteristics, another important factor is the optics of the M3A2. On a checkpoint where 24-hour observation is key, good optics are vital. Since checkpoints are generally

set up in open areas, with good observation and fields of fire, the platoon's ability to defend itself is important. The optics of the M3A2 allow for continual observation of the surrounding dominating terrain and built-up areas. Although HMMWVs and M113-series vehicles can be outfitted with good optical systems, they are not standard on these vehicles.

There are many characteristics of the M3A2 CFV that make it well-suited for peacekeeping operations. There is no vehicle that is completely suited for all aspects of peacekeeping, and it does, of course, take the proper integration of all available assets to successfully accomplish the many missions of Operation Joint Endeavor. I do not doubt that even though the M3A2 alone is an intimidating factor in the ZOS, the local factions as well as the lurking troublemakers are also well aware of the M1A1 QRF platoon positioned a few miles down the road. They are also aware of the artillery battery prepositioned a few more miles away. It is my opinion that the M3A2's ability to integrate maneuverability and survivability, its visible array of lethal weapons, and its superior optics make it a superb vehicle for peacekeeping operations. When the Bradley is organized into a six-vehicle scout platoon configuration, it becomes a very valuable asset to the commander who must execute a variety of peacekeeping missions. It has proven its worth traveling thousands of patrol miles over the narrow roads of Bosnia-Herzegovina and will continue to do so for the duration of our mission.

First Lieutenant Frank Lozano was commissioned in Armor in 1993 as a Distinguished Military Graduate from Texas A&M University. A graduate of AOBC and SPLC, he has served as a tank platoon leader and scout platoon leader. He is currently executive officer of Troop A, 1-1 Cavalry, at Lodgment Area Walker, Sebrenik, Bosnia-Herzegovina.



The M-18 "Hellcat" Tank Destroyer.

Kentucky Windage

Dear Sirs:

Reading in the May-June issue about the increased "lethality and fightability" of the enhanced M1A2, with its extensive use of digital electronics for target acquisition and target tracking, made me wonder if any younger readers knew how target acquisition and target tracking was done fifty-odd years ago. I would like to quote a paragraph from the combat history of the 704th Tank Destroyer Battalion, Fourth Armored Division, of General Patton's Third Army.

The time was September, 1944, the weapon was the 76mm, high-velocity antitank rifle that armed the M-18 "Hellcat." The gunner was SSG Phillip Hosey. I quote from Phil Hosey.

"Near Nancy, France, between Luneville and Arracourt, we faced a group of German tanks that had taken a position one mile away, across a shallow open valley. Our M-18s were in defilade, facing out over a small hill. Infantry led the way across the valley with three M-4s intermingled. The Krauts let them get halfway across, then opened up with anti-tank fire from woods on the right. They immediately KO'd two M-4s and drove the infantry to the ground. Two Panthers, a Mark IV, and an assault gun came out of the woods and moved across our line of fire at the distance of about a mile. In his position in our open turret, the tank commander, SSG Hicklin, watched their progression through his glasses and called out the range: "Two thousand yards, moving at about ten mph." Our rifle, with AP, had a muzzle velocity of 2,700 fps, so it would take two seconds to arrive on target. The Krauts were moving at fifteen feet per second, which let them travel thirty feet in two seconds. Their lead tank was twenty feet long (from the book), so we led him a good length for a center shot. We laid on and fired. Voila, a hit! It struck two feet in front of his rear drive idler. We then picked the last tank and scored — he began to burn. The two intervening tanks were destroyed by two fast AP shots. So we got two Panthers, a Mark 4, and an assault gun. Our 76mm rifle packed a good punch, even at two thousand yards. We felt that we had the best self-propelled antitank gun in the ETO."

In spite of his Purple Hearts and continued combat-related disabilities, Phil Hosey has provided many important first-hand accounts of his experiences for our combat history of the 704th Tank Destroyer Battalion.

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Tank Combat Training: Tactical Tank Table VIII

by Captain Pat White and Lieutenant Colonel Karl Gunzelman

Standing around the “deadpool” waiting for the platoon observer/controller to start his after-action review, the commander of A-11 looks around at the blinking yellow lights. He finds it hard to believe that the entire platoon was destroyed by one T-80 tank. After all, his platoon averaged 921 on Tank Table VIII. His was the low score, and he still ended with 897 points. At the time, he was a little disappointed that he didn’t get a distinguished score, but a superior score is pretty good, isn’t it? After all, the crew qualification table is challenging, if not stressful and, according to FM 17-12-1-2, the table should be realistic within the safety and resource constraints of live fire tank ranges.

After thinking some more, maybe he should have ‘performed reconnaissance by fire’ on the woodline. Maybe that would have drawn the T-80 out. And, what about “Actions on Contact”? After initial contact, the platoon didn’t respond. Nobody returned fire, and he didn’t receive a contact report in time to develop the situation. At least this was just a training experience, one he wouldn’t forget, and one he was sure the platoon observer/controller wouldn’t let him forget.

The training program hadn’t been a complete waste of time. At least gunnery went well.

Comparing tank gunnery scores with results at the Combat Training Centers, a clear-cut problem surfaces; platoon leaders need a combined leader and tactical training program. The Armor force does not offer platoon leaders an adequate chance to transition from precision gunnery to combat training. Moreover, our tank combat training program does not accurately depict what platoon leaders might encounter at a CTC or in combat. If the platoon fails, the company fails, and so, shouldn’t we at least consider changing a training program developed some 30-odd years ago?

The reason to change is to focus tank platoon proficiency on warfighting skills and platoon leader proficiency in fighting a platoon. Changes in environ-

ment no longer allow gunnery to be a crew-focused event, and as a platoon-focused event, the focus must be on the platoon leader. Current tank and tactical tables fail to provide a realistic challenge to Force XXI tankers. The training of the tank platoon via qualification of Tank Table XII, and achieving the optimum training experience offered at the CTCs, should become the focal point in development of a Tactical Tank Table VIII which fully integrates the platoon leader, thus optimizing the training of the platoon. As TT VIII currently stands, the platoon leader participates only as a tank commander. The platoon leader is not involved in tactical decisions, or much in the development of his crews. Consider the two primary training events in the development of a tank platoon leader: semi-annual gunnery and a CTC rotation. How does TT VIII help in preparing the platoon leader for TT XII? More importantly, how, in the overall readiness and training of a platoon, does TT VIII prepare a platoon leader for combat? Truthfully, TT VIII doesn’t; in essence, the Armor Corps is missing an excellent opportunity to train the platoon leader, who is quite often one of the youngest, most inexperienced members of the platoon. Yet the platoon leader is responsible for the safety, welfare, and training of the platoon.

Gunnery tables should support maneuver through more tactically sound execution with direct involvement of the platoon leader, especially given the conditions our gunnery manuals depict, “the tank platoon is the smallest maneuver element within a tank company and the tank platoon is organized to fight as a unified element...” The training of the platoon, and thus the platoon leader, clearly becomes the purpose of revising current tank gunnery tables.

Chapter 2, FM 17-15, further states “the command and control of combat elements are the biggest challenges faced by combat leaders on the modern battlefield... command has two vital components: decision-making and leadership.” Control at platoon level is defined further by the wingman concept. “Under battlefield conditions, the wing-

man concept facilitates control... tank 2 orients on the platoon leader’s tank, while tank 3 orients on the platoon sergeant’s (PSG) tank. The PSG orients on the platoon leader’s tank.” Again, the platoon leader is the focus.

Situational awareness is another critical factor in understanding and mastering control. Situational awareness is described as “the ability to maintain a constant clear mental picture of the tactical situation... For platoon leaders and PSGs... the key to making sound, quick tactical decisions. It allows them to form logical conclusions and to make decisions that anticipate future events and information.” FM 17-15, Chapter 2, section II. Developing situational awareness as a skill is difficult, but paramount to success as a combat leader.

Seeing the battlefield, based on reports from the platoon, is critical to success and the development of platoon leaders. Too often, platoons and platoon leaders who are successful in gunnery fail to achieve similar results during CTC rotations. Primarily, this is a direct reflection of the platoon leader’s ability to react and act in unfamiliar situations. All gunnery tables are rote. Learn the fire commands, G2 the course, and you’re guaranteed some level of success. The problem is that the OPFOR doesn’t react the same way; it doesn’t deploy on a given piece of terrain the same every time. Is it realistic to expect the platoon leader to generalize those skills from TTVII to the fluid battlefield? So, why are we training precision gunnery to an expected, unrealistic opposing force? Train proficiency in battlefield awareness, and success in gunnery and CTC rotations should increase. Only then will a platoon be able to accomplish what FM 17-15 says it can, “At the most fundamental level, battle space is the three dimensional area in which the platoon can acquire enemy forces and influence them with effective fires.”

The first major maneuver training experience for a platoon leader is a CTC rotation. The learning curve is often too steep, and doesn’t afford the platoon an

opportunity to digest and learn, because immediately after CTC rotations, it's back to garrison for three to four months of gunnery prep (again, that precision training broken-up by weeks of duty company). With shrinking training funds and downsizing almost complete, the Armor community needs to rethink the focus of tank combat training. The Gunnery and Tactical Departments at Ft. Knox should combine efforts in development of a training concept which complies with advanced technology, limited funds, advanced simulations, and audacious leaders in the Armor Corps. More challenging tables, combining leader and tactical development with precision gunnery techniques, would be more applicable.

With the focus on training platoon leaders, the time has come to rethink our training strategy. Chapter 16 of FM 17-12-1-2 states that, "tank gunnery tables are designed to develop and test the proficiency of individual, crew, and platoon gunnery techniques at the basic, intermediate, and advanced levels for both the active and reserve components." Chapter 16 further states that "the series of engagements on each is intended to duplicate... typical battlefield tasks under realistic firing conditions and against likely enemy target arrays. Thirty years ago or more, when the tank tables were developed, Unit Conduct of Fire Trainers, platoon gunnery trainers, and numerous gunnery training devices did not exist. Knowledge and technology have advanced greatly, and changes should be considered for tank combat training. The changes need not effect the 'gate' system, but merely reemphasize that the 'gates' will be based on training the platoon leader.

Currently, the Armor Corps is presented with a double standard. FM 17-12-1-2, Chapter 14 states, "The tank tactical tables parallel the gunnery tables; together these tables overcome the deficiencies inherent to range training. Preferably, the tactical tables are conducted in concert with the gunnery tables." Honestly, how often does that happen? How often does a unit train tactical tables in conjunction with the gunnery tables? According to our doctrine, together the tables overcome the deficiencies! Great! Of course, now we have to refer to two separate FMs in order to train Abrams tank gunnery and tactical proficiency through platoon level. How can we combine the tactical tables and gunnery tables, providing a realistic training experience for the platoon leader and the platoon? First, the

Armor Corps must link gunnery to doctrine, tactics, techniques, and procedures of the developing Force XXI. We must link gunnery to FM 17-15 and ARTEP 17-237-10-MTP, and, as mentioned, refocus the 'gate' system to accommodate a Tactical VIII. The improved gate system would still contain individual qualification, crew qualification, and platoon qualification.

Individual qualification consists of the Tank Crew Gunnery Skills Test (TCGST), but *all* crewmembers would be required to pass *all* stations. The focus of individual qualification would become familiarization and proficiency with all aspects of the tank, possibly through a written test as well. Once the individual effectively qualifies the TCGST and proficiency exam, Gate 1 is complete.

Gate 2 would begin with crew certification, and be completed upon crew qualification. The platoon leader (PL) would begin training by fully participating in the crew certification program. All PLs would have to be Instructor Operator (IO) certified. This serves two purposes. First, it fully integrates the PL into understanding the functions and use of the Unit Conduct of Fire Trainer. Second, the PL would begin his training in the tactical portion of Tactical VIII. As the IO, the PL begins tactical reporting, command and control, and decision-making. As targets appear, the scenario is relayed as such, "A12, this is A11, enemy tanks vicinity TRP 2, engage and report, over." The tank commander then takes action, but must also report tactically through contact reports and spot reports. Of course, the tank commander must also issue a fire command. Using the advanced matrix, commanders can also utilize the current TT VIII scenario to train crew technical proficiency. The UCOFT is a great tool for training crew proficiency in fire control malfunctions. The ability to induce subsystem failures greatly enhances the level of preparedness of crews prior to firing any main gun ammunition; however, the battalion and company commanders must stress proper IO feedback. And, again, the platoon leader would be the primary trainer, the quality control manager, of the training of his crews. Thus would begin the tactical training, reinforced by the technical aspects of UCOFT.

Crew certification also consists of TT IV (Tank Crew Proficiency Course). This is the first time the platoon leader would begin training from his fighting

platform. Stress must be placed on the platoon leader in reporting, directing, and moving his tank during TT IV. FM 17-15 designates the platoon as the lowest level of a tank company. Field Manual 100-25 directs that we train one level down, and evaluate two levels down; therefore, the platoon leader would initiate engagements for his tank commanders on TT IV similar to UCOFT; however, during TT IV, the platoon leader would report battlefield information to the company commander. This training would reinforce UCOFT and prepare the platoon leader for Tactical VIII, and TT XII.

Crew qualification would begin with training intermediate tank gunnery tables consistent with current standards; however, the platoon leader would again be involved with reporting, disseminating information, controlling his tanks, and moving on his tank. Crew qualification is complete upon qualification of the second gate, Tactical VIII.

Platoon certification focuses on the use the Platoon Gunnery Trainer (PGT), Simulations Network (SIMNET), and a Platoon Tactical Proficiency Course (PTPC). The PTPC would be a combination of platoon MTPs and current tank tactical tables G and H. The tanks would be equipped with the Multiple Integrated Laser Engagement System II. Platoon qualification would be qualification of TT XII.

Use of simulations, such as the Unit Conduct of Fire Trainer (UCOFT), Platoon Gunnery Trainer (PGT), and SIMNET, in conjunction with home station certification programs, would ensure maximum training for platoon leaders and bring crew proficiency levels up to a standard where the gunnery experience more fully focuses on the platoon leader. Simulations are excellent for teaching the technical aspects of gunnery. Leaders can induce errors and malfunctions into the fire control system, and help the crew learn to deal routinely with those malfunctions.

The proposed qualification course consists of any of a number of varying scenarios; scenarios based on guidance from the company commander, recommended by the battalion commander, and approved by the division commander; scenarios driven by the tactical decisions of the tank commander and platoon leader; scenarios which offer a standard, but challenge the tank crew and platoon leader and are based on any variety of "threat" doctrinal templates.

Development and execution of Tactical VIII scenarios focuses on the platoon leader. Scenarios for Tactical VIII are developed by combining FM 17-15 and ARTEP 17-237-10-MTP. Focusing on the leader tasks in ARTEP 17-237-10-MTP, and applying these tasks to doctrinal concepts in FM 17-15 increases the proficiency of our platoon leadership. Reconnaissance by Fire is an example of an engagement in a proposed scenario. Perform Reconnaissance by Fire, (17-3-0218) is an uncommon task which is often not applied in a tactical environment, often to the detriment of the platoon, but is an easy task to rehearse and practice.

The conditions for Recon by Fire state, "The platoon is operating in a tactical environment, as part of a company team attack where Threat contact is expected. The commander gives the platoon permission to develop the situation through reconnaissance by fire to flush the threat out of a suspected position. The threat consists of no more than a platoon in hasty defensive positions." Task standard is "The platoon flushes the Threat from its position or determines that there is no Threat in the position, with minimal expenditure of ammunition and time. No friendly losses are incurred." By studying the Task Condition and Standard, Recon by Fire could be the initial engagement for Tactical VIII scenarios involving Attack or Defense — the two primary missions of a tank platoon.

There are five leader tasks under Recon by Fire, 1) The platoon leader (PL) identifies the expected location(s) of Threat contact, 2) The PL identifies overwatch position(s), 3) The PL issues a FRAGO to the platoon to occupy the overwatch position and to prepare to conduct reconnaissance by fire, 4) The PL or PSG utilizes indirect fires, and 5) If indirect fires are not available or the indirect fires do not flush the Threat, the PL orders the platoon to conduct reconnaissance by fire. The scenario would be constructed in the following manner. The commander issues a FRAGO to the PL via FM, while the platoon occupies an attack position. The PL determines likely Threat positions and issues a FRAGO to the firing tank to occupy an overwatch position on the course. The firing tank moves to identified position, reports set, and prepares to engage. The PL issues the order, and the firing tank begins Recon by Fire of designated areas — first with crew served weapons. The tower then presents Threat targets for the fir-

ing tank to destroy with main gun and machine gun. The PL leader sends appropriate reports to the commander and Tactical VIII continues based on decisions by the company commander.

Execute Actions on contact (17-3-0221) is a very necessary drill that must be practiced to perfection, and should be included within the Tactical VIII scenarios. Again, Actions on Contact is an easy scenario to develop. Conditions are "the platoon is conducting offensive operations in a tactical environment, is moving, and encounters a moving or stationary Threat tank or motorized rifle platoon. The Threat force engages the platoon." Task Standard is "the platoon returns fire, and the platoon leader orders a contact drill within 15 seconds. No more than one tank is lost to hostile fire." Leader tasks for this scenario include, PL directs a platoon battle drill; PL informs the commander of Threat contact; and the PL sends a complete spot report to the company team commander.

Following Recon by Fire, the PL could issue FRAGO for the firing tank to begin movement to a designated Phase Line. The firing tank reports REDCON 1 and begins movement. As the firing tank moves, the tower presents Threat targets which present signatures representing enemy fire. The firing tank returns or initiates fires to destroy or suppress the enemy, seeks cover or concealment, and alerts the platoon leader with a contact report. The PL then directs a battle drill, and the firing tank completes destruction of the enemy with direct fire.

Meanwhile, the PL informs the commander of Threat contact. Upon destruction or suppression of the enemy, the PL sends a complete spot report to the commander, and Tactical VIII continues.

Scoring and evaluation would be similar to current standards. The changes to scoring would involve target exposure time, engagement range, and incorporation of tactical scoring. Qualification standards would only vary based on scenarios, 70% target destruction or suppression within allocated times still being a standard for qualification. The scoring still involves crew cuts to include correct reporting procedures (SALT format). Consideration to target presents may alter, but not the 70%. How often in war do we get a chance to pull off the range, conduct diagnostics, and continue when we are ready?

Integrating FM 17-15 and ARTEP 17-237-10-MTP into Tactical VIII offers Armor the much needed combination of Tactical Tables with Gunnery Tables. The integration allows home station training to focus on one training event, and the result will be more competent, aggressive platoon leaders. Tactical VIII will also provide the base for success on TT XII, and CTC rotations. Development of a Tactical VIII would be more challenging, realistic, and would better prepare crews, platoons, and the platoon leader for combat than our current gunnery models. Similar to any new concept, there are plenty of bugs to be worked out, but with current simulations, the advances in technology, and the quality of armor/cavalry crewmen, let's present a challenging, gratifying training experience based on the M1A1/M1A2 series tank, not a series of tables — tactical and gunnery — based on the M48/M60 fleet.

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Mobility Analysis for the Digitized Brigade

by Captain Robert S. Mikaloff

Today's emphasis on achieving unprecedented levels of situational awareness by digitization of the battlefield and visualization skills of battle command requires a greater knowledge of terrain than in the past. New and sophisticated weapons, sensors, and command and control methods demand detailed information for employment. The ability to gather and understand information about the terrain is critical to our success.

ST 71-3, *Tactics Techniques and Procedures for the Digitized Brigade* outlines the importance of more precise terrain products to a digitized force, given the nature of its operations: "The brigade must integrate its combat power at the right time and place to achieve the effects required to accomplish the mission and protect the force." Listed as a capability critical to the integration of the force is a "movement rate program" able to predict rates of movement of subordinate units along independent approaches.

During the 1995 Armor Conference, the Army Corps of Engineers Waterways Experiment Station displayed automated mobility prediction software that can provide this information; it is called Risk Based Mobility Modeling. The focus of this model is on ground mobility. It examines how various factors, such as soil composition, slope, and precipitation, relate to terrain data for any given area. Risk Based Mobility Modeling can provide mobility estimates with a level of accuracy, detail, and precision impossible to achieve through manual terrain analysis. The program can be applied to movement of enemy forces or planning the movement of friendly forces.

At brigade and task force levels, the formal process of terrain analysis traditionally belongs to the S2. It is a familiar sight to see S2s bent over a map, circling terrain features and making an educated guess about the trafficability of terrain. Through a map analysis, the S2 seeks to define if the terrain is trafficable at all, where vehicles are likely to be able to go, and how long it will take to move through certain areas. An automated mobility prediction capability, such as Risk Based Mobility Modeling, will increase the quality and

quantity of terrain information and speed its production. By reducing time used to classify terrain (severely restricted, restricted, or unrestricted), more time is available to analyze the significance of terrain relative to enemy and friendly force tactical situations.

Currently, an automated terrain analysis capability is available to commanders at division level. This resides at the Division Topographic Engineer Detachment. The Topographic Engineer Detachment supports the entire division, and has adequate conventional systems to aid in terrain visualization. There are several factors that limit the adequacy of this support to meet future needs.

Operations other than war, force protection operations, and other diverse requirements generated by the end of the cold war increased the burden on division topographic teams. With this increased workload, the Division Topographic Detachment cannot adequately answer the brigade commander's requirements in a timely fashion while still responding to the needs of the division commander.

The Topographic Engineer Detachment supports the entire division. At brigade or task force level, getting topographic support involves making a request through intelligence channels to the G2. Once a request is in the queue, the G2 sets the detachment's priorities. The increased operational tempo of digitized forces requires that terrain analysis be responsive and timely. If your request is not high on the priority list, the support you get will be late in coming, probably too late for your purpose. Once again, the S2 will be left in the corner drawing lines on a map and making a guess on terrain. A solution is giving the brigade S2 an automated terrain analysis capability that addresses one of his, and his commander's, principal concerns — mobility.

The All Source Analysis System (ASAS) WARLORD, projected to be fielded to brigades, has limited terrain analysis capabilities. The map and terrain tools currently resident on ASAS WARLORD are Digital Feature Analysis Data (DFAD) and Digital Terrain Elevation Data (DTED). DFAD provides information on natural and man-

made features, such as vegetation, soil composition, roads, drainage, and urban areas. DTED provides elevation data. Both are good tools to aid a commander in terrain visualization and provide some baseline information needed to perform mobility analysis. However, these applications cannot integrate this information into mobility predictions. To adequately meet the needs of the commander, the brigade requires a mobility prediction tool, like Risk Based Mobility Modeling, that can merge all variables that affect mobility.

The Risk Based Mobility Model is a UNIX-based system potentially compatible with the ASAS, being fielded to divisions, and ASAS WARLORD, projected to be fielded at the brigade level. It complements the capabilities of DFAD and DTED. With DFAD and DTED, the S2 has information on the characteristics of the area. Risk Based Mobility merges the type of information found on DFAD and DTED with information on soil composition, precipitation, etc., into predictions useful for intelligence, tactical maneuver, fire planning, and battlefield logistics.

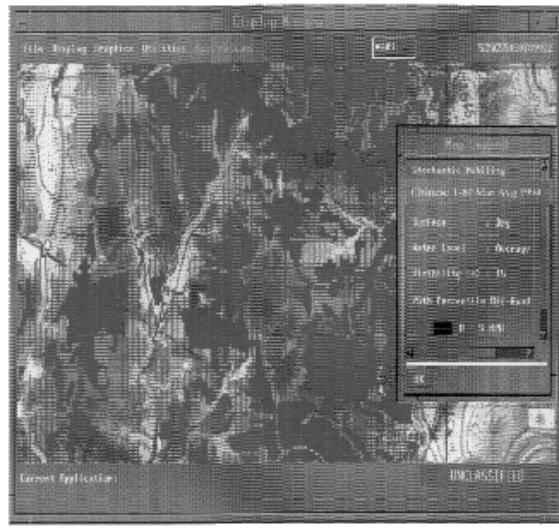
The capabilities of Risk Based Mobility Modeling include standard IPB products, such as identification of unrestricted, restricted, or severely restricted terrain. These are principal considerations for Phase II of the IPB process, "Describe the Battlefield's Effects," and a major element in the development of the Modified Combined Obstacle Overlay (MCOO). Risk Based Mobility Modeling can further define trafficability based on the type of vehicle, (i.e., areas where tracked vehicles can move).

Risk Based Mobility can take this a step further. Mobility analysis can be tailored to specific characteristics of enemy and friendly vehicles and formations (see Figure 1). In addition to identification of unrestricted, restricted, or severely restricted terrain, Risk Based Mobility Modeling can render a prediction of the speed at which specific vehicles can traverse an area. Figure 2 illustrates cross country speed for an M1A1.

Other mobility studies analyze terrain based on homogeneous soil composition. The Risk Based Model compen-

AREA: KOREA VEHICLE: M1A1

VEHICLE: THREAT VEHICLE



Solid = Conclusive NOGO.

Hatched = Not Recommended For Travel; May Possibly Navigate With Difficulty

Figure 1

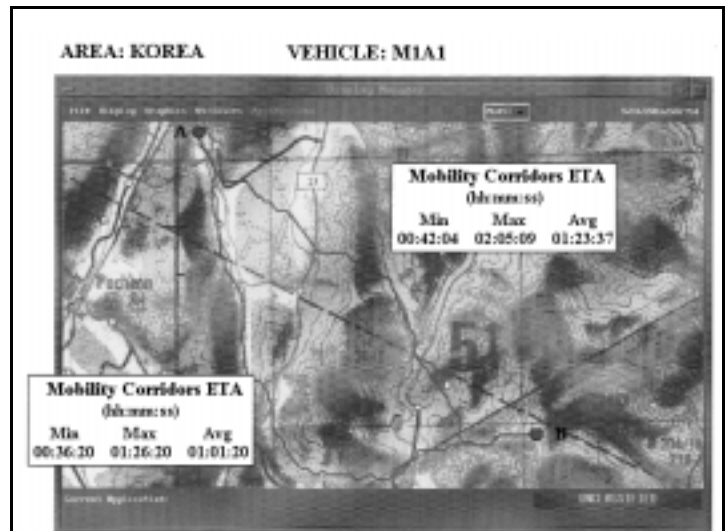
These illustrations are intended to give readers a feel for the screen formats of the mapping system. Many of the fine details visible in the actual color versions are not apparent in these black-and-white renderings.

Even in the black and white versions here, the capability of the system to quickly reveal go and no-go areas can be appreciated. In the lower left illustration, the heavier lines show the optimum routes selected by the system.



Solid = Conclusive NOGO. Hatched = Not Recommended For Travel; May Possibly Navigate With Difficulty.

Figure 2



Two routes from Point A to B showing ETA differences.

Figure 3

sates for heterogeneous soil composition as part of the mobility prediction algorithm. Through a series of tests comparing actual movement rates of vehicles and the predicted rate of movement, the differences are factored into the mobility predictions rendered by Risk Based Modeling. In addition, recent precipitation is accounted for in mobility predictions. The model adds further accuracy by allowing the user to consider subjective variables effecting mobility, such as the level of maintenance of the vehicle and the proficiency of the driver. If levels of maintenance and driver training can be generalized to a unit, an adjustment for unit movement times is possible. For example, we know that enemy vehicles are well maintained, but the training of enemy drivers is generally poor. Risk Based Mobility accounts for these conditions and allows differences in movement time based on variance in driver training and vehicle maintenance. Figure 3 identifies two routes from point A to B. The time of travel between these routes is given in minimum, maximum, and average time. A good driver in a well maintained vehicle will take the minimum time, an average driver will take the average time, and a poor driver the maximum time.

The most unique capability of Risk Based Modeling is its ability to predict random movement. This means the model can identify a range of possible routes for vehicles. Using Risk Based Modeling, a start point and an end point are selected for analysis. The model identifies possible routes between selected points for the type of vehicle indicated and specifies the time it will take for each route giving a best case, worst case, and average time. The routes identified in Figure 3 were identified by picking a start point and an end point. The model identifies routes and the minimum, maximum, and average time needed to traverse the routes.

To illustrate the utility of a mobility prediction tool at brigade, consider the following scenario. (Borrowed from Virtual Kyrgyzstan III, a JANUS exercise held at Ft. Knox to validate the concepts of ST 71-3, *Tactics, Techniques, and Procedures for The Digitized Brigade*.) The brigade was to attack an enemy mechanized division. The enemy division defended with two understrength brigades forward and a tank brigade situated to their rear (see Figure 4). The enemy tank brigade had dual missions of division reserve and

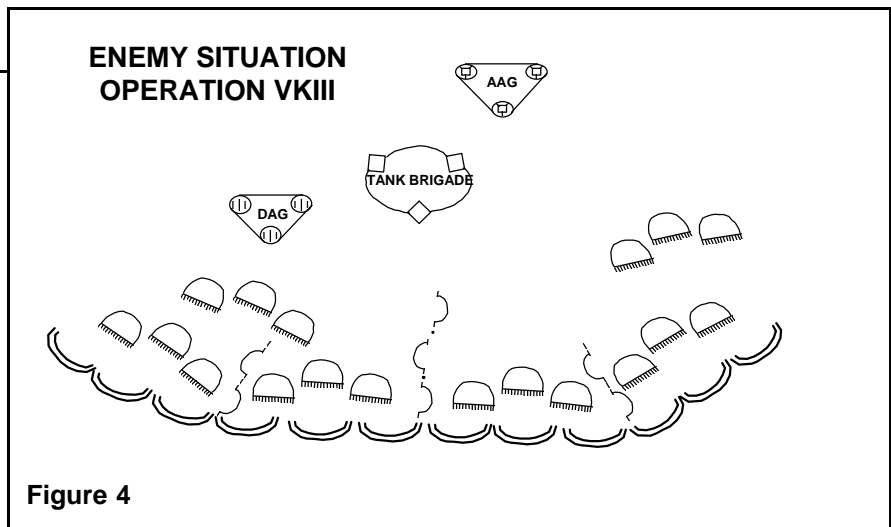


Figure 4

being lead element of a follow-on force when the enemy division resumed the offensive. The friendly brigade commander's plan called for destroying the enemy tank brigade and the division artillery group simultaneously. By attacking them simultaneously he could defeat both the enemy defense and the coming offensive operations. The friendly brigade commander's scheme of maneuver called for infiltrating subordinate mounted task forces through the enemy main defensive belt, then conducting a near simultaneous attack against the enemy tank brigade and the enemy division artillery group. An air assault task force would be inserted to the north between the enemy tank brigade and an artillery group present to support the future enemy offensive (see Figure 5). Due to the non-linear nature of the battlefield, the friendly brigade

commander directed his S2 to develop a graphic showing where and in what time frame the enemy tank brigade could move in any direction. Normally, the short time given to an S2 to develop this product demands that it be done in the TOC and involves the S2 guessing about the trafficability of the terrain, applying normal movement speeds for that type unit, and developing time phase lines to illustrate movement times (see Figure 6). The precision and reliability of this product is low. With a mobility prediction tool, like Risk Based Mobility Modeling, this product is at the S2's fingertips. By picking a series of start points and end points, as shown in Figure 3, the S2 can develop a product that provides a mobility estimate with much greater precision and speed than any manual product.

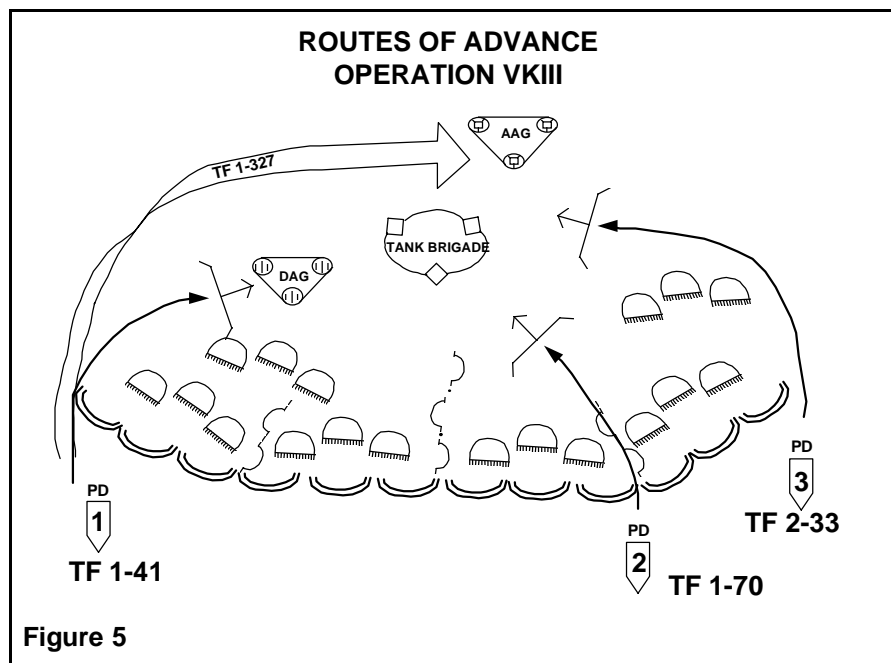
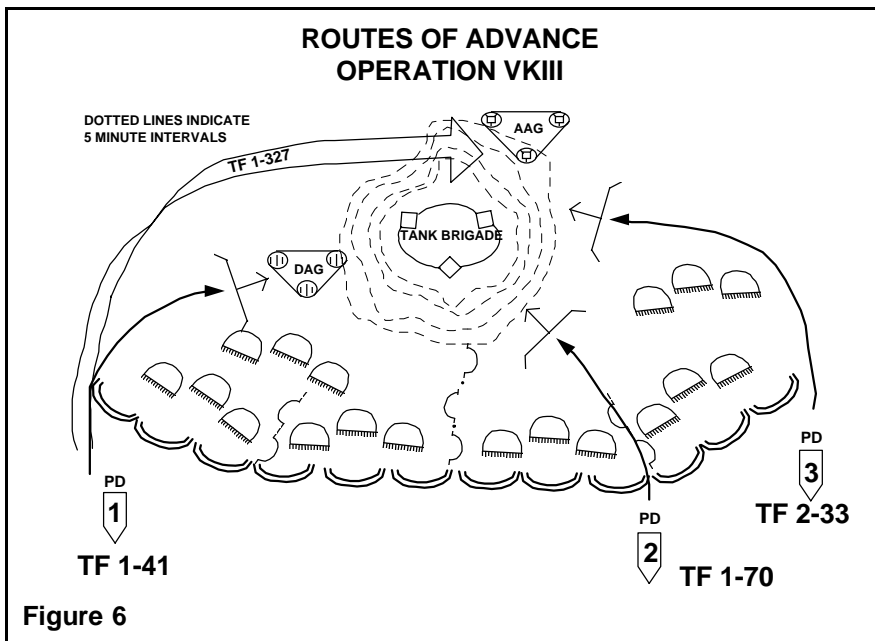


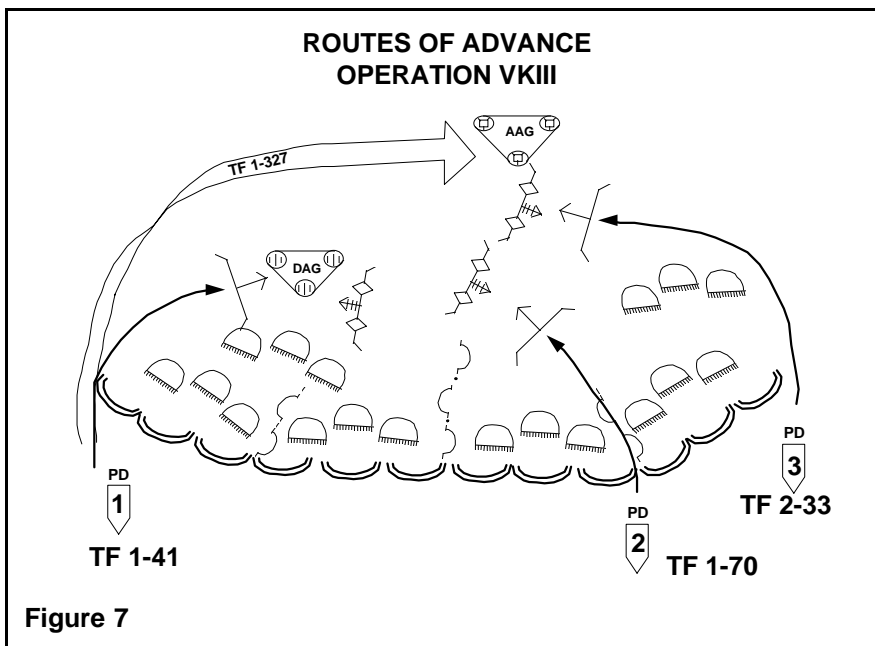
Figure 5



The application of mobility prediction software is not limited to intelligence. As part of the same scenario, the scheme of maneuver called for all the subordinate task forces to be in position to attack the enemy tank brigade and division artillery group in a near-simultaneous manner. During execution, the subordinate units crossed multiple points of departure at the same time. Resulting from inaccurate mobility predictions, the unit with the shortest distance to travel, TF 1-41, took the longest to get in position (see Figure 6). This was due to the nature of the terrain along his route. The soil was soft, resulting in slower movement. Because his movement lagged behind the other

task forces, the brigade plan had to be altered. Other units had to slow their movement and go into concealed positions to wait for the slow task force to get into position. This gave the enemy commander time to react. He dispersed the tank brigade into battalions and used them to counterattack (see Figure 7).

Using an automated mobility prediction tool with the capabilities of Risk Based Modeling, movement times are indicated on routes selected by the task forces. If a certain route is identified as unsuitable during analysis, an alternate can be chosen. With more precision in planning routes, and a better estimate



on movement times, the commander can sequence departure times for subordinate units allowing for the planned near-simultaneous attack against the enemy tank brigade and division artillery group.

This scenario highlights the utility and need for an automated mobility prediction tool, at least at the brigade level. The information requirements and high tempo of Force XXI operations demand a terrain visualization aid that can provide the commander accurate and useful mobility predictions. If resident at brigade level, this capability would provide the commander an invaluable decision-making aid with utility in both operations and intelligence, responsive to his needs before and during the battle.

During the Army's transition from an industrial age force to an information age force, we are providing brigade commanders the means to gain unprecedented situational awareness of the enemy and his own forces. To complete this, the commander needs a precision tool to help him understand the terrain on which he will fight. An automated mobility prediction application such as Risk Based Mobility Modeling provides this tool.

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The author would like to thank Dr. Niki C. Deliman of the U.S. Army Corps of Engineers Waterways Experiment Station for technical advice in the writing of this article.

The Task Force Commander's Role In Fire Support Planning

by Lieutenant Colonel Harry L. Leiferman

One of the trends reinforced with the transition to brigade operations at the National Training Center is the inability to synchronize indirect fires and maneuver to achieve the effects desired from combined arms operations. *The task force commander is not getting timely, accurate indirect fires.* There have been a number of reasons identified, some of which are related to the training level of the field artillery battalion staffs and firing units. However, it has become more and more evident that part of the problem is the task

force commander's inability to understand his role in fire support planning as well as the role of the task force as an executor of the brigade scheme of fires during brigade operations.

This article attempts to explain what the task force should expect from brigade as the 'provider' of indirect fires and clarify the role of the task force and task force commander in fire support planning. Although some of what is contained in this article introduces new terminology and may be considered 'emerging' tactics, techniques and procedures, there is a basis for this methodology in *FM 6-71, Tactics, Techniques and Procedures for Fire Support for Combined Arms Commanders*. These observations are also based on lessons learned during the first six brigade-level rotations at the National Training Center. This article also offers a step-by-step approach to task force fire support planning.

Brigade's Role: The brigade plays a vital role in task force fire support planning and execution. With the exception of the task force mortars, the brigade is the 'provider' of indirect fires. Therefore, before we can accurately clarify the task force role in executing the brigade scheme of fires, it is necessary to quickly review brigade's role. The brigade develops a synchronized brigade scheme of maneuver and brigade concept of fires, translating that concept into a scheme of fires.

There is no clear doctrinal definition for either concept of fires or scheme of fires. For the purpose of this article, concept of fires, expressed in terms of task, purpose, method, and endstate, is the allocation of fire support assets to achieve a specific effect on an enemy formation with a visualized purpose and endstate to support the scheme of

maneuver. The scheme of fires is the detailed sequencing of fire support events that must occur in order to achieve the endstate articulated in the concept of fires.

The brigade concept usually assigns fire support tasks to subordinates. As part of the concept, it is brigade's responsibility to provide indirect fires to the task force close/direct firefight. These fires are for a specific period of time and a specific purpose. The brigade must clearly specify when fires will transition to the task force and when the task force will lose them. Refinements to the brigade scheme of fires from subordinate units must also be integrated. Finally, the brigade integrates the movement of artillery units with the scheme of maneuver.

Brigade Role in Fire Support Planning

- Synchronize the brigade concept of fires with brigade maneuver
- Develop brigade scheme of fires and assign tasks to subordinates
- Provide indirect fires for task force close/direct firefight (specified period of time and purpose - clearly defining when fires transition to the TF close/direct firefight and when the task force will lose fires)
- Integrate refinements from subordinates
- Integrate movement of artillery units with scheme of maneuver

The Task Force Role: The task force is the 'executor' of their portion of the brigade scheme of fires. With the exception of the task force mortars, the brigade commander 'owns' the indirect fire assets. The artillery is normally in

"Army forces prefer to fight as a combined arms team... producing effects that are greater than the sum of the individual parts. The combined arms team strives to conduct fully integrated operations in the dimensions of time, space, purpose and resources.... The goal is to confuse, demoralize and destroy the enemy with the coordinated impact of combat power.... The sudden and devastating impact of combined arms paralyzes the enemy's response, leaving him ripe for defeat.... The application of combined arms in this manner is complex and demanding. It requires detailed planning and violent execution by highly trained soldiers and units who have been thoroughly trained."

FM 100-5

direct support (DS) of the brigade. Therefore, the task force must clearly understand not only the brigade concept of fires, and how it is synchronized to support brigade maneuver, but the task force's role in the brigade scheme of fires so that the task force can execute its portion. Understanding this, the task force must develop its own concept of fires. This concept normally involves assigned tasks from the brigade scheme of fires along with targets to support the task force close/direct firefight. This may require only the refinement of a brigade target or may require the task force to submit new targets to support the task force commander's scheme of maneuver. Additionally, the task force must plan to synchronize mortar fires with the scheme of maneuver, integrate the mortars into the scheme of fires, and synchronize their movement with the scheme of maneuver. The task force then develops a scheme of fire that supports those tasks assigned by brigade and the targets developed by the task force. It then issues the fire support plan to its subordinates. Bottom-up refinement to support the company/team commander's scheme of maneuver will also be incorporated. The task force forwards a concept of fires and target refinements to brigade as soon as possible to ensure it is fully integrated with, and does not desynchronize, the brigade scheme of fires. Finally, the plan must be rehearsed to ensure it is clearly understood. This process is the essence of the step-by-step approach that will be discussed in more detail later.

Task Force Role in Fire Support Planning

- Understand the integration of brigade maneuver and fires
- Understand task force role in brigade scheme of fires/maneuver
- Act as 'executor' of their portion of brigade scheme of fires
- Develop task force concept and scheme of fires
- Integrate/refine brigade targets for close/direct fire fight
- Plan for the synchronization of TF mortars with the scheme of fires and their movement with the scheme of maneuver

- Bottom-up refinement from company/teams
- Forward TF concept of fires and target refinements to brigade
- Rehearsals

Task Force Commander's Role:

Much of the following relates directly to work being done at the National Training Center on the abbreviated planning process. One lesson we have learned with brigade operations is that time for planning at the task force level is very limited. A task force cannot plan to have sufficient time for the deliberate planning process. This is equally true for planning indirect fires.

"Synchronization is arranging activities in time and space to mass at the decisive point... Synchronization thus takes place first in the minds of commanders and then in the actual planning and coordination of movement, fires and support activities."

FM 100-5

The key role of the task force commander in indirect fire planning is **synchronization** of indirect fires with the scheme of maneuver. Fires and maneuver must be considered together. Commanders must first decide *precisely* what they want their fires to accomplish. If the commander thinks maneuver first, and then tries to add fires later, he will have difficulty.

Once he has decided what he wants fires to accomplish, the commander must take an active role in developing the task force Concept of Fire Support. He must clearly articulate to his staff, not just his fire support officer, **the 'sequenced' critical fire support tasks** in terms of the desired effects for each target; the purpose of each target as it relates to the scheme of maneuver; the method he would like to use to achieve the desired effects; and the endstate he wants for each target. This will be explained in more detail later.

TF Commander's Role in Fire Support Planning

- Synchronization of indirect fires with maneuver
- Clearly articulate the task force concept of fires
- Articulate for each target the 'sequenced'
 - Task in terms of desired effects
 - Purpose for each target (as it relates to maneuver)
 - Method
 - Endstate
- Synchronization of mortars with concept of fires and the scheme of maneuver
- Ensure the brigade commander/staff understand the importance of task force fires to the scheme of maneuver

It is worth noting here that once the task force commander approves the scheme of fires, he must clearly articulate to the brigade commander and brigade staff the importance of those fires to the task force scheme of maneuver and the impact on mission success if those fires are not received. If a task force critical fire support task is not also included as a brigade critical fire support task, the likelihood of getting the target fired by artillery or CAS is greatly diminished.

Observations at the National Training Center indicate that many commanders are unable to clearly define what they want their fires to do, and cannot visualize their synchronization with maneuver. Of those that can, many cannot articulate their intent for fires to their staff. If they can, the level of training and experience of their staff and particularly their fire support officer is not sufficient to translate that guidance into a concept of fires. It is clear that, until time permits more deliberate planning, or until the staff and FSO become better trained, the task force commander must take a more active role in developing the concept of fires. He cannot afford to divorce himself from this process.

Now that we have discussed the role of the commander, as well as the role of the brigade and task force in fire support planning, what follows is *one* method of indirect fire planning at the task force level. Again, it is important

to note that this methodology is tied directly to the abbreviated planning process and the commander's role in abbreviated planning.

Step 1: Mission Analysis Brief: In order to make the right decision about the employment of his indirect fires, the commander must get certain information from his fire support officer. This is normally done during the Mission Analysis Brief. The key information he must receive includes a clear understanding of the brigade scheme of fires as those fires relate to the maneuver plan, a clear understanding of the task force role as an 'executor' of its portion of the brigade scheme of fires, and a clear picture of available indirect fire assets.

Step 2: Specify the Concept of Fire Support: (Note: One could argue that this step should be the 'Commander's Intent for Fire Support' as part of the commander's planning guidance to his staff. This is probably true above the task force level, where you have a planning staff and a FSCoord and can effectively plan and execute simultaneously. However, at the task force level you do not have a planning cell, and most FSOs do not have the experience of fire support planners at higher levels and are unable to translate commander's intent for fire support into an effective, synchronized concept of fires. Couple this with limited planning time, and the result is a requirement for the commander to specify the 'concept of fires' as the next step rather than simply provide his intent for fires. Time and training permitting, the 'commander's intent for fire support' could be the second step at the task force level.)

At the conclusion of the mission analysis brief to the task force commander, the commander gives his planning guidance to the staff. The commander *specifies* his maneuver course of action, assigning maneuver task and purpose to subordinate units. To ensure synchronization of indirect fires with maneuver, rather than giving only his intent for fires, he must *specify* his concept of fire support. He does this by clearly articulating his '**sequenced critical fire support tasks**'. There is no clear definition of a critical fire support task. However, from a maneuver commander's perspective, it is a fire support task that, if not properly executed,

Mission Analysis Brief (FSO Input)

- Brigade Scheme of Fires
 - Higher Commander's Concept of Fires
 - Allocation of FPFs/priority TGTs
 - Current and on order FSCMs
 - Specified and implied tasks
 - Limitations
 - Priority of fires
- FA Organization For Combat
 - Location
 - When in position
- Assets Available/When
 - FIST status
 - Mortar status/location
 - CAS allocation
 - COLT allocation/location
- Current Ammunition Status
 - Number of killing missions Available (FAMTR)
 - Smoke (length/duration)
 - FASCAM (# of disrupt, fix, turn, block/release authority)
 - Number of Copperhead

will have a severe impact on the ability to accomplish the maneuver task it supports. It is imperative that the commander personally establish the task and purpose for each target. The FSO can assist the commander in establishing the method and endstate. Critical fire support tasks should be expressed in terms of...

The **Task** ...Although *FM 6-20-10, The Targeting Process* discusses task and purpose in terms of disrupt, limit, and delay, at the maneuver task force level it is more appropriate for the task force commander to state his tasks in terms of the effects he desires... *Suppress, Destroy, Obscure, Screen*. These effects should be related to a specific enemy **formation** and/or **function**.

The **Purpose** ...of the fires as they relate to the scheme of maneuver. This is how the commander synchronizes indirect fires with maneuver.

The **Method** ...to achieve the desired effects (FA, mortars, CAS). At this point, the commander may have a preference for delivery of indirect fires. He may specify that he wants to use his mortars; he may specify that his desire is to use artillery or CAS; he can leave developing the method to his FSO. However, with the exception of specifying mortars, he must 'negotiate' with brigade for artillery or CAS. The method may also be refined during the wargame.

The **Endstate** ...as it relates to the enemy or friendly formation/function. Endstate at the task force level is often the accomplishment of the task. However, a statement of the endstate is still desired and can be developed by the FSO.

and **Sequenced** ...to clearly prioritize the order the targets should be fired based on the scheme of maneuver. Commanders must ensure that artillery is available when required to support the scheme of maneuver. If the scheme of maneuver requires firing of more than one critical fire support task at a time, the commander may have to '**apportion**' his assets to meet all the needs. This 'apportionment' normally occurs at brigade level.

It may be worth noting here that not all critical fire support tasks have to be firing tasks. For example, the insertion of an observer to have eyes on a target may be so important that the commander specifies it as a *critical* fire support task. Another example may be the use of CAS or nonlethal EW fires.

Step 3: Wargame - Develop the Scheme of Fires: The sequenced critical fire support tasks specified by the commander are a key component of the wargame. Proper wargaming will enhance synchronization with maneuver. When time is limited, as it is for abbreviated planning, the commander should participate in wargaming with his staff. During the wargame, the commander and fire support officer may need to make minor adjustments to the concept of fires. What the wargame should accomplish is flushing out the **method** of achieving the desired effects — the scheme of fires. This scheme of fires must be 'nested' in the brigade scheme of fires, focused on a few key targets/critical fire support tasks, and link observers to firing tasks, firing units and an established schedule of fires. The wargame will refine the target locations, means of delivery, target triggers, observer locations, movement and

“How To” Commander’s Critical Fire Support Tasks

positioning for the mortars, CFZs, NFAs, and Fire Support Coordination Measures (FSCMs). The fire support officer produces two key products during the wargame, the target overlay and the fire support execution matrix. The target overlay is often incorporated with the maneuver overlay. The scheme of fires must be forwarded to brigade to ensure they incorporate the task force fires into the brigade concept. The fire support plan must also be disseminated to the task force.

Step 4: Rehearsals: Rehearsal of the fire support plan is the next critical event. The bottom line to all this planning is ensuring that it is clearly understood by those who must execute it (subordinate co/tms, observers, etc.) and those who must support with fires (brigade, firing units, mortars). The most important task force rehearsal is the combined arms maneuver rehearsal. *This rehearsal must integrate fully the fire support plan.* Task force personnel should also participate in the brigade fire support ‘technical’ rehearsal to ensure the task force targets are incorporated and synchronized in the brigade scheme of fires. Time permitting, the task force should also conduct a fire support rehearsal.

Step 5: Refinement: A plan is just that — a plan. As new information is gained on the enemy, the fire support plan must be updated. The staff must ensure that changes are coordinated and disseminated. It is also a proven technique to establish a ‘target cut-off time.’ This is a time after which any change to the fire support plan requires approval by the commander responsible for the target. If a refined target location is determined after the target cut-off time, shoot a grid mission. The task and desired effects, purpose and endstate should not change.

Before concluding this paper, there are a few other important issues that impact on task force fire support planning and execution.

High Value Targets/High Payoff Targets: (High Value Target (HVT) - a target whose loss to the enemy can be expected to contribute to substantial degradation of an important battlefield function; High Payoff Target (HPT) - a target that, if successfully attacked, will contribute to the success of our plan.) At the task force level, there seems to be very little utility in identifying

Scenario: Your task force is the lead element in a brigade deliberate attack to destroy an MRB-size enemy. The enemy is defending with three MRCs abreast. You are the supporting effort. Your task is to breach the enemy northern MRC, which cannot be supported with direct fires from the two southern MRCs. Your purpose is to allow the trail task force to pass through the breach you create in the enemy position and complete the destruction of the two remaining MRCs.

Maneuver Course of Action: Because planning time is short, part of your commander’s planning guidance to your staff, specifies a maneuver course of action that calls for a task force deliberate breach of the northern MRP. You assign maneuver task and purpose to subordinate units: two company/teams will suppress the two southern MRPs from support by fire positions to protect the breach and assault forces; one company/team will breach the enemy obstacles and northern MRP to allow the assault force to pass through the breach; and one company/team will pass through the breach and destroy the remainder of the northern MRC to allow the trail task force to pass through the breach and destroy the two southern MRCs.

Concept of Fires: To ensure synchronization of indirect fires with maneuver, you also *specify* your concept of fires. You develop three “*Sequenced*” *Critical Fire Support Tasks* (CFST) to support your scheme of maneuver.

CFST #1: First, I want to continuously suppress the northern MRC for approximately 12 minutes — the time I estimate it will take to occupy the two SBFs. The purpose is to allow both company/teams to occupy their support by fire positions without taking effective enemy direct fire. The method I prefer to use is FA fires on a group target by one battalion of artillery. The endstate is both co/tms in their SBFs without losses to enemy direct fire.

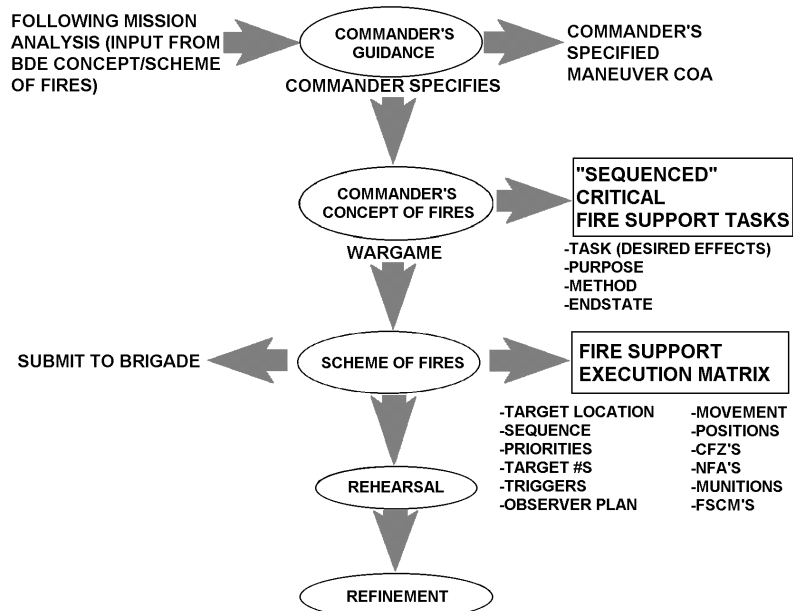
CFST #2: Next, I want to screen the point of penetration from the two southern MRPs of the northern MRC. The purpose is to prevent the enemy from engaging the breach force with direct fires until the breach is complete (approx. 30 minutes). I want to use our 20 minutes of mortar smoke initially — followed by generated smoke if wind conditions permit. This will free up FA fires for my last CFST. It is critical, however, that FA smoke be available if wind conditions are not blowing in our favor. The endstate is both southern MRPs unable to bring effective direct fires on the breach force until the breach is complete.

CFST #3: Finally, as the smoke builds, I want to shift FA fires and suppress the two southern MRPs of the northern MRC. The purpose of these fires is to allow the assault force to pass through the breach and build combat power on the far side without taking effective direct fire from the two southern enemy platoons. Again, the method I prefer is FA fires on a group target by one battalion of artillery. We should need the suppressive fires for approximately 30 minutes. The endstate has the assault force through the breach and postured on the far side to complete the destruction of the remainder of the MRC.

HVTs or HPTs. Normally, they are designated by the brigade commander and incorporated into his concept and scheme of fires. The issue with HVTs and HPTs is their synchronization with the ‘sequenced’ critical fire support tasks. Oftentimes, at the exact point in the battle when the commander wants a critical fire support task fired to support his scheme of maneuver, someone calls an HVT/HPT, and because so designated, the guns shift off the target in

order to fire somewhere else. If the commander is going to designate and fire at HPTs and HVTs, they have to be carefully synchronized with critical fire support tasks, and all observers must clearly understand that the target may only be an HVT/HPT during a specified time or phase in the battle. For example, AT-5s may be a HPT, but when the first echelon battalion is in your face, the payoff is less than if the AT-5s are identified and destroyed earlier.

FIRE SUPPORT PLANNING METHODOLOGY



HPTs are only high in payoff relative to the time they are identified during the fight. HVTs/HPTs must not undermine the sequenced critical fire support tasks.

Priority of Fires: (The organization and employment of fire support means according to the importance of the supported unit's mission.) Worthy of discussion is its relationship with the commander's sequenced fire support tasks. If indirect fires are properly synchronized with maneuver, and the commander has sequenced those critical fire support tasks to support maneuver, then it seems priority should go to firing those targets regardless of who has priority of fires. One could argue that, if the commander has developed a scheme of fires properly, then the right observer will have priority when the commander wants to fire the critical task. The key has to be every observer and leader understanding the concept of fires — the sequenced critical fire support tasks — and sticking to that concept. It is especially important for the various artillery FDC and fire control officers to understand this and not deviate from what the commander wants. However, priority of fires remains a valid concept that should allow anyone to receive fires as long as no critical fire support task is being fired.

Observer Planning: The issue at the task force level is who owns and posi-

tions the FISTs, the task force or company/team commander. The company/team commander needs them to assist in his fire support planning and to trigger targets assigned to him from the task force scheme of fires. The task force commander wants to position them to ensure they are in the proper positions to call the targets he wants. Observations at the National Training Center offer this — **the amount of certainty or uncertainty will dictate the level of control of the FISTs.** In a movement to contact, the task force is more likely to leave control of the FIST with the company/team because the situation is unclear.

In the defense, where the targets are fully synchronized with the task force scheme, the task force is more likely to dictate where the observers are positioned. In a deliberate attack, the task force may take the observer away from the breach force company/team to provide redundancy at the point of penetration but leave the FISTs with the rest of the teams.

Close Air Support: Simply stated, CAS is another means of indirect fire support available to the brigade and task force. The commander, first understanding the capabilities and limitations of close air support, must synchronize it with the fire plan to support the scheme of maneuver. The capabilities

and limitations (windows for use/targets/observers) have some unique challenges that must be considered, but the commander must plan his CAS together with maneuver the same way as his other indirect fires. It is conceivable at the task force level that CAS may be allocated or a CAS target assigned from brigade as part of the scheme of fires. More likely, however, CAS will be 'handed-off' to the task force when brigade has no viable target. If this happens, the task force must have a plan that synchronizes it with maneuver and their concept and scheme of fires.

Conclusion

This paper is not designed to solve all the challenges of getting timely and accurate indirect fires at the task force level. Hopefully, it has addressed some of the issues that are encountered at the National Training Center and highlighted the emerging observations from brigade operations. The step-by-step approach to fire support planning is *one* way to approach the challenge of getting the effects of combined arms operations. Whatever method used, the key is **synchronization** with maneuver, **commander involvement** in planning and refinement, and well **rehearsed** plans **understood** by every observer, leader, and firing unit.

Lieutenant Colonel (P) Harry L. Leiferman is a 1974 graduate of Gonzaga University. His troop experience includes two company commands, battalion S3 in 9ID, battalion XO in 1AD, and commander, 2d Battalion, 5th Cavalry, 1st Cavalry Division. He has served on the DA staff and on the staff of Armed Forces Central Europe. His most recent assignment was Senior Mechanized Infantry Task Force Trainer (Scorpion 07) at the National Training Center. He is currently attending the Naval War College.

LETTERS

(Continued from Page 5)

ever slowly it may move, than well into the 21st century.

CPT MICHAEL L. PRYOR
Co C, 1-156 Armor
Louisiana ARNG

PIRs Are Not Focused Enough For Scouts' Reconnaissance

Dear Sir:

After reading the article, "Training the Task Force Scout Platoon," by LTC Lynch and CPT Cichocki in the July-August issue of *ARMOR*, I need to clarify a fine point on tasking R&S assets. In the article, the authors use Priority Intelligence Requirements (PIR) to task the scout platoon, stating these "provide focus for the actual conduct of reconnaissance." This is not entirely true.

According to *FM 34-2-1, Reconnaissance and Surveillance and Intelligence Support to Counterreconnaissance*, PIRs provide the initial focus for R&S. In essence, they get you started. The real focus comes from translating those PIRs into indicators of a particular enemy activity. The S2 takes the indicators and develops Specific Information Requirements (SIR). SIRs are nothing more than indicators put in the form of a question. It is from these SIRs that the Specific Orders or Requests (SOR) that tasks the scouts are issued.

The key to successful R&S planning and tasking is to give the scouts a mission they can accomplish. Even the most focused PIR is often too large a requirement for scouts. By breaking PIRs down into specific pieces of information, you give scouts requirements they can satisfy. Through all of this, the S2 and the rest of the staff need to understand the logical ties between the SORs that the scouts are collecting against and the PIRs that the specific requirements are focused on.

ROBERT S. MIKALOFF
CPT, MI
USAARMC Threat Manager

Army's Users, Not Ordnance, Delayed Sherman Uppunning

Dear Sir:

With some interest, I read MAJ Mansoor's book review about the M4 Sherman tank (May-June 1996), especially where he wrote: "...The Ordnance Department could

have done more to correct the greatest weakness of the Sherman — the low muzzle velocity of its main gun — but the Army did not realize the changing nature of tank combat until the huge losses in Normandy forced the Army's leadership to face the stark reality of modern armored warfare..." and other comments about the M4's deficiencies.

Not entirely so, MAJ Mansoor! I refer you to my letter to *ARMOR* in the March-April 1974 issue, pages 3 and 51. I'll quote only a portion of that letter on the matter of the controversy surrounding the 75mm gun on the Sherman: "It was the Ordnance Department's position that this gun was inadequate, but this viewpoint was overruled by the Army Ground Forces. After the combat experiences in North Africa highlighted the discontent with the Sherman, it was the Ordnance Department, ironically, that accrued the 'blame.' At the time when General Patton was supposedly incognito in England, just prior to the Normandy invasion, he and my father (then Colonel George G. Eddy) got embroiled in a very loud and public argument about the source of the tank's deficiencies. The dispute was broken up in a large officer's mess in London by Major General E.S. Hughes, later Chief of Ordnance when General Eisenhower was Chief of Staff, who pulled General Patton away, reminding him of General Eisenhower's concern about any publicity of Patton's whereabouts."

It should be remembered that the using service determines what it wants in outlining key specifications, not Ordnance. Certainly Ordnance is expected to point out consequences and alternatives. This was done with the Sherman, and the using service got what it requested.

While I hope I've got your attention, may I use this opportunity to recommend to your readers the article, "Planning For Kwajalein" by my father, BG George G. Eddy, in the July 1996 issue of *ARMY*. After he retired in the 1960s, I prevailed upon him to describe some of his most significant WWII experiences in a number of tapes. Years later, I transcribed and edited some of the events he related, and this article was the result. During WWII, he was the Director of the Ordnance Research Center at Aberdeen Proving Ground, Maryland, and became intimately familiar with a great variety of weapons, armaments and ammunition, and especially terminal ballistics. As a result of General Marshall's first-hand knowledge of my father's competence, he sent him on several special missions overseas to demonstrate new weapons and equipment, as well as to review upcoming invasion plans for the proper designation and employment of Ordnance materiel.

COL (Ret.) GEORGE G. EDDY, PH.D.

Author's Queries

For a study of women's experiences during the Vietnam War, I would appreciate hearing from the mothers, wives, and girlfriends of men who fought in the Vietnam conflict. Please include memories about the period your loved ones served overseas, including (but not restricted to) strategies for coping, networks of support, and attitudes of the population at large. Please also include a brief description of your background, including age, race, ethnicity, and the area of the military with which your loved one served. Send responses to:

VIRGINIA LAFFEY
P.O. Box 2052
Jamaica Plain, MA 02130

* * *

I am researching the U.S. Armed Forces stationed in and around Stroud, Gloucestershire, England, prior to the Normandy landings, June 1944. I would like to obtain enough information on the units camped around Stroud, who were here for training and practice before going into battle, for a publication in memory of the men and also for a part of Stroud's history.

I need additional information on the following unit that was camped on Minchinhampton Common on a hill above Stroud. I think it to be a tank destroyer force, with the shoulder flash (patch) was a Tiger with a tank in its jaws; a Collar Dog that I have here belongs to the Quartermaster Corps. This was given to a boy at that time by one of the men. Also, they were Black Americans. Lastly, I have one name and possible address: Andrew (Andy) Dodson, North June Street, Philadelphia, Pa.

I would like to hear from some of the guys who were here for their memories, and any photographs, including themselves in uniform, that I may purchase.

PAUL F. ASTON
15 Hillclose
Lightpill
Stroud
Gloucestershire
GL5 3PG England

* * *

For a book on the Maginot Line, I would like to hear from anyone with personal reminiscences or family papers, military or civilian, from the period August 1939 through July 1940.

John J. Gallagher
c/o Sarpedon Publishers
166 Fifth Avenue
New York, NY 10010

Confessions of an Observer/Controller

Dear Sir:

Now that I have concluded a year as an observer controller (OC) in the Battle Command Training Program at Fort Leavenworth, I believe I have some experiences and opinions worth sharing. And since I am no longer an OC, I won't have to eat my words at a later date. The opinions and observations expressed in this letter are mine alone and DO NOT represent the opinions or policies of the Battle Command Training Program or its leadership.

I was a brigade OC for Division Warfighting Exercises (WFXs). As an OC, I always emphasized the TOC operations and not the results of the Corps Battle Simulation (CBS) or the game. The game can become a great distracter from the learning experience. It simply does not have the fidelity necessary to determine the combat success of a unit. It is not an analytical model. The key for an OC and a unit is to look at what the commander and staff did, based on the information the game provided, the commander's guidance, and the techniques and procedures the unit wanted to exercise. No one should believe they will be successful in a future battle based on winning at a WFX. A WFX is only one of many contributors to the future success or failure of a staff.

I realize that everyone wants to win. I also believe we do not want personnel in the Army who are not competitive. Competition and the will to win keeps us motivated and sharp; just be careful of the conclusions you draw from a computer simulation. Try to draw conclusions about the staff process and what needs to be done to improve the performance of the staff.

I am proud to say that I never once went into a TOC where I was considered a threat, and it was not necessarily because I was a great OC. Today's soldiers and leaders want to learn, and will take every advantage offered. The members of today's Army are true professionals who believe they must be tactically and technically proficient and believe in the individual's responsibility to improve himself.

Because of the learning attitude of today's soldier, the informal AARs are easy and very rewarding. Commanders and their soldiers are willing to listen, willing to analyze the successes and the failures, and make appropriate changes. The AARs are great learning experiences and an opportunity to hear someone else's ideas (for both the staff and the OC). But, I truly believe I had the greatest impact on the captains, lieutenants, and sergeants I had a chance to talk with one-on-one. These conversations were truly non-threatening and private. I really felt I had an impact because

of their willingness to listen and learn. However, if I recommended a soldier do something differently, I would also strongly recommend he first get the approval of the chain of command. This kept me from stepping on toes, and I did not want to give the impression that I was the judge of success or failure.

In today's Army, everyone believes he or she is being evaluated all the time. We have almost a zero-defects mentality that has made some soldiers fearful of making mistakes and taking chances. Many of us believe that one screw-up can potentially differentiate us on the next rating. All of this may be true, but I believe commanders still want soldiers who are imaginative, knowledgeable, and willing to take chances to get the job done.

Don't misunderstand; you are being evaluated, just not by us. Most BCTP OCs believe strongly that they are not evaluators. Most of us believe outsiders should never evaluate a unit. It is the chain of command's responsibility. The chain of command wants to do it; they just cannot be everywhere all the time. That is where the OC comes in. We observe and provide information to the chain of command to assist in assessment of individuals and staffs. The unit commander decides what he wants the OC to focus on.

The bottom line is that all of us are getting evaluated every time we do our job. This is true in everyday life, as it is true during a Warfighter.

My greatest recommendation to any staff officer is: know what capabilities your Battlefield Operating System (BOS) brings to the battlefield; how to adapt those capabilities to the ever-changing plan, but staying within the commander's intent; and a current status of those capabilities. Too often I have seen some assets go unused because the person responsible for integrating those assets into the fight was just not paying attention, or was sitting back waiting for someone to tell him what to do.

Most of the brigade commanders, XO's, and S3's I have observed do have an excellent understanding of the BOS's and how to integrate those into the fight. However, these key personnel often get overwhelmed about the same time the plan goes awry. Therefore, such critical assets as artillery, GSR's, UAV's, helicopters, volcanoes, and transportation go unused. Every staff officer and NCO in the TOC must keep abreast of the current tactical situation and be willing and able to suggest how his battlefield operating system can assist in the fight.

A division WFX is an excellent opportunity for a new staff to get to know how the commander operates. The pace usually allows the brigade commander and XO to do lots of mentoring of the staff. There is time for the staff to discuss their operations and make improvements during the WFX. A di-

vision WFX is an excellent new staff team building exercise.

Several times I have been asked if the brigade should operate with a TOC only, or operate both a TAC and a TOC during a division WFX. A brigade can provide the division all the radio traffic and staff interaction they can handle from a single TOC. However, I have seen units exercise both very well during division WFXs. Everyone believes we must train as we would fight, but the brigade really needs to address where they are in the development of the staff to determine if they want to operate a TAC. The brigade should ensure it will not detract from the focus of the exercise, which is the division commander and his staff.

I have had the opportunity to observe a brigade operate both a TAC and TOC just before they deployed to the National Training Center. This brigade had spent considerable time training as a coherent staff and used the WFX as an opportunity to fine tune their SOPs. They were more prepared after the WFX. Another brigade had just returned from a different CTC and used the division WFX as an opportunity to exercise the changes recommended there. The WFX gave them an opportunity to assess the changes and continue to improve.

As most can tell you, TOC operations are basically information management. The right person, usually the commander, needs to know the right information at the right time so he can make the right decision. There is little well-written doctrine on how to operate a TOC efficiently. Being efficient is a matter of practice, practice, and practice. Unfortunately in today's Army, there is not much time for practice. In each WFX I observed, two-thirds to one-quarter of the staff was new.

Because of the great turnover, many staff officers look to the OC for an approved solution. There aren't any. An OC can tell the staff what he has seen work, or not work, but usually cannot explain why a technique is successful for one staff and not another. I have tried. I believe group dynamics is the only real reason for these inconsistencies. The staff's experience, the length of time the staff has worked together, the wants and needs of the commander, and the staff officer's ability to fully understand how his battlefield operating system can affect the mission are all keys to success. The relative importance of these keys are different for every staff.

I will truly miss being an OC. My greatest reward in the Army has been knowing that I was having an impact. I hope my comments will be helpful to someone somewhere.

MAJ EDWARD W. PAYNE
Fort Leavenworth, Kan.

BOOKS

An Exciting Combat History... ...But with a Hidden Agenda

Grenadiers by Kurt Meyer, translated by Michael Mende, J.J. Fedorowicz Publishing, 106 Browning Blvd., Winnipeg, Manitoba, Canada R3K 0L7 (PH: 204-837-6080), 1994, 254 pages. \$45.00.

One might say that *Grenadiers*, an interesting combat narrative by a key leader in WWII Germany's panzer forces, is for armor officers what Rommel's *Infantry Attacks* is for infantry officers.

Told in the first person, from an enemy perspective, it is a personal account of Kurt "Panzer" Meyer's experiences in World War II, beginning in 1939, when Meyer was a reconnaissance battalion commander in the 1st SS Panzer Division, fighting in Poland, Holland, France, Greece, Russia, and eventually in France. By that time, he was division commander of the 12th SS Panzer Division. Meyer provides an intense description of his experiences in mechanized warfare; one can almost feel the wind and smell the gunpowder. The translation is excellent, and little is lost in Meyer's countless stories of men gallantly charging against foes no less so vigorous and bold, if less successful. Meyer paints himself as a fair-fighting, gracious victor, never cutting down foes in cold-blood, offering cigarettes to captured officers, a man caught up in his times, doing deeds he could not conceive of as criminal.

He describes the attitude of the men in his unit as outstanding, and is often moved by their camaraderie, especially when enemy fire takes several of his drivers out from under him.

There are tense moments. Meyers describes the assault on a hill in Greece as his most "dire situation" as an officer, when he had to toss a grenade behind his covering men (and himself) to get them to assault. In Russia, he outruns his reconnaissance battalion and finds himself in the middle of a Russian assembly area. He promptly exchanges cigarettes with the ranking Russian and waits for his men to arrive and rescue him on cue. Countless stories of such bravery and leadership abound. Meyer is the leader every soldier dreams of being led by. He joins his new troops as a comrade and rides with the reconnaissance battalion in their first battle

when he becomes their regimental commander. His units never break, from Normandy to the Falaise Pocket, even though they never receive reinforcements and are at below 20% strength when he is captured. They never break international laws of warfare, either, according to Meyer.

Only near the end of the book does Meyer's hidden agenda emerge. It becomes clear that he is writing to convince readers that the members of the 1st and 12th SS Panzer Divisions were soldiers who did their duty to their country, and were not war criminals. He skillfully avoids any discussions of a political nature, focusing instead on battlefield vignettes. The target audience is the future military historian whom Meyer must have pictured as a well-educated doubting Thomas. He knows that after time, there will be those who doubt the judgment of history, those who want to know details of life in the Waffen SS. He bluntly states this near the end of his story.

Meyer was convicted of war crimes because he was in command when a member of his unit executed 37 Canadian soldiers within rifle shot of their comrades on the Normandy beachhead. Though Meyer does not dispute that the event occurred, he despises the men who convicted him. While he admits that war crimes occurred in his command, he insists they were not unpunished and not without cause. At his trial, he tries rather unsuccessfully to convince his judges that the Canadians had committed exactly the same crimes on the same day. He makes little headway because the commander who had faced him on the beaches of Normandy happened to be the chairman of the tribunal which eventually sentences him to death.

(Editor's Note: Soldiers of the 12th SS Panzer Division murdered 19 soldiers of Canada's Royal Winnipeg Rifles on 7 June 1944, near Authie. The bodies of the prisoners were thrown down in a roadway and crushed by trucks and tank treads, according to one Canadian historical study.)

The reader who believes Meyer's one-sided argument might be convinced that Meyer was wronged, and that possibly many more like him were also falsely accused. The most convincing piece of evidence that Meyer presents is that, on his birthday in prison, on death row, company

and field grade officers who had fought against the 12th SS Panzer Division at Normandy threw Meyer a secret birthday party. He was allowed to see his wife, and was promised that his execution would be commuted by their efforts. This happened, as promised.

Shortly after writing this book, Meyer would die of a heart attack. To the end, he spent his days trying to raise support for former members of the SS, who received no pensions and were treated as outcasts. He died trying to rewrite history, and in this book, he has.

The book was never translated into English until 1994, and most of the evidence is so convoluted it is hard to prove or disprove. One thing is certain: Kurt "Panzer" Meyer was a great warrior whose story is well worth reading. Whether or not his conviction on charges of war crimes was just is a question for great debate. If his side of the story is not true, why was Meyer freed? And, at what level is a war crime an individual decision or a command climate problem? This is the puzzle which Meyer frames in his well-told story. Meyer cleverly convinces the audience that he is a gracious war hero and then paints the picture of vindictive Allied war tribunals acting out of victor's anger. Clearly, there are other sides to the story of Meyer's part in the war crimes; it is very much worth investigating more deeply.

The amount of "political correctness" involved in writing or translating a book of this nature cannot be overestimated. Meyer never mentions the Jewish question and, for all intents and purposes, plays ignorant of the Final Solution. In not addressing the actions of the Allgemeine (General) SS, Meyer has limited the topic to something for which only few can answer — the conduct of Waffen SS units in combat. He is very careful not to bruise his enemies' egos. He often praises their bravery, a subliminal method to gain their support and make himself look more humble and heroic.

But overall, Meyer has created a masterpiece in combat documentary. The book is packed full of adventure and pictures. It does lack maps, which makes following Meyer's path difficult at best. However, any leader of mechanized forces should arm himself with maps and read this book.

More adventurous historians could travel to Normandy, where, at the Abbey of the Ardenne, near Caen, Meyer had his regimental headquarters. This is where the 37 Canadians were executed and buried. There is a gardener in the abbey who was a child when Meyer was there. He holds keys to the towers where Meyer could see all the way to the beaches at Juno and Gold. This man gave insight into Meyer the man. He said to me, "No we did not hate this man. He was very charismatic. He came here in peace after his release from prison, and some people were afraid. It was a bad time for our people and his. Maybe he was angry with us. But no, Panzer Meyer said he only wanted to see the battlefield again. He said a great warrior must always return to his battlefield."

In the end, Meyer's book is an attempt to return to the battlefield and separate himself from the record revealed at his trial. He honestly believes he was wronged, and wants a chance to set the record straight. Despite the author's bias, and the book's lack of maps, it is a must-read account of armored warfare from an enemy perspective. Whether or not you agree with it, Meyer's story is a compelling one.

JOHN R. STARK
CPT, Armor
1st Armor Training Brigade
Ft. Knox, Ky.

The Rise of U.S. Grant by Colonel Arthur L. Conger (1872-1951), new introduction by Brooks D. Simpson, Da Capo Press, New York. Originally published 1931, republished 1996. 362 pages (includes 12 maps and 8 illustrations), plus 25 pages of appendices, bibliography, and index. \$15.95.

You've got to be a big U.S. Grant fan to really appreciate the full content of this meticulously detailed book. The new introduction, by a noted Civil War historian, updates the relevance of the text, yet with every page, I was waiting for something to happen as I plodded through verbatim orders and counter-orders between Grant and his subordinates at Cairo, Illinois; Forts Henry and Donelson; Shiloh; and Vicksburg. COL Conger's formal, dry writing style, although appropriate for the early 1930s, fails to hold the 21st century reader's full interest.

However, select parts of the book are quite interesting. Specifically, COL Conger details how Grant rose, in 1861, from an obscure civilian clerk in Galena, Illinois, to command the Union armies by 1864. There are several interesting leadership points concerning Grant's rapid rise. Foremost, COL Conger highlights Grant's common sense. Without the flash and charisma associated with many Civil War generals,

Grant relied on his ability to chop complex problems down into simple segments. For example, when dealing with strategy, Grant had no need for multiple intelligence annexes, detailed orders of battle, or studies of the enemy commander's personality. To Grant, who boiled down information to its necessary essence, all questions about the enemy could be answered by understanding strength, disposition, and intention.

Most historians focus on Grant's leadership and strategic record from Vicksburg through Appomattox. In contrast, *The Rise of U.S. Grant* provides a detailed analysis of Grant's tactical and logistical skills at the regimental and division level. If you are willing to sift through a cumbersome text, then you will enjoy linking together the daily events in Grant's early commands that shaped the eventual leader of the Union Army.

COURT R. HORNCastle
CPT, Armor
USAR
Mandeville, La.

From Battlefield to Boardroom: The Leadership Lessons of Robert E. Lee by Bil Holton, Ph.D., Presidio Press, Calif., 1995. 158 pages. \$9.95.

For over one hundred and thirty years, Robert E. Lee has been an inspiration to military leaders. Bold and audacious in the attack; firm and resolute in the defense; magnanimous and charitable in victory; dignified and courageous in defeat, can Lee also be an inspiration to civilian leaders? As military leaders, we understand the timeless universality of leaders and soldiers. What inspired and motivated the Roman legionnaire still inspires and motivates the modern soldier; it is only updated to account for era and social circumstances. From battlefield to boardroom is an attempt to show civilian leaders that they, too, can learn from past military leaders, and who better to study than Robert E. Lee? Unfortunately, the transition from battlefield to boardroom is not very smooth.

Dr. Holton is a management and leadership consultant who, rightly, believes there are qualities essential for good leadership regardless of profession. To illustrate his point, he uses a series of brief sketches of Robert E. Lee's leadership and several vignettes of Civil War battles. Drawn from numerous sources, each sketch is titled with a leadership trait or quality and arranged alphabetically. Following each sketch is Dr. Holton's interpretation and business application for that trait.

Under the headings of the basic leadership competencies, Dr. Holton is on firm ground. The traits of honesty, integrity, loy-

alty, and courage are essential for any successful leader. Dr. Holton's civilian interpretation and analysis of Lee's actions under these headings ring true and are useful for all leaders. However, some of his analysis misses the mark completely for military readers. The most striking was a very moving description of the desperate fighting at the "Bloody Angle." During a critical point in the battle, a group of Confederate soldiers were attempting to surrender when another Confederate soldier shouted, "Shoot them fellows! Shoot them fellows!" The soldiers trying to surrender were gunned down by their own. Soldiers fight for each other; their highest loyalty is to their buddy next to them. It is a very intense loyalty that when betrayed results in incidents like at the "Bloody Angle." That would be a military interpretation. Dr. Holton, however, uses this extreme act as an example of "Groupthink" warning, "...in their intense desire to be team players and collaborators... group members censor the kind of independent, critical thinking that produces more objective and discriminating results." The connection to the example is a stretch. In another, Dr. Holton uses Lee's last words, "Strike the tent," as the starting point to list similar words a civilian leader might utter such as, "Balance the budget" or "Decouple old electronics networks." Perhaps, these words carry the same significance to a plant manager as Lee's to a soldier, but next to Lee's, these phrases seem incongruous.

It has become fashionable to read and study civilian management methods and theories in the name of breaking old paradigms and moving the Army into the 21st century. It is imperative that we maintain an open mind and accept leadership lessons from any source. However, *From Battlefield to Boardroom* illustrates the gulf in the "bottom line" between the Profession of Arms and all other professions. Few, if any, CEO's have had to make decisions they knew would cause the death of their subordinates or, like Lee, have had the fate of a nation placed on their shoulders. Yet, a 22-year-old platoon leader may be called upon to make life and death decisions daily. We must also remember that we do not have "customers" or "products," rather we lead and command soldiers and units of the United States Army.

Dr. Holton is to be commended for his thorough and extensive research. The passages he chose for the sketches provide concise insight into Robert E. Lee's personality. He is to be further commended for his noble attempt to teach leadership principles to civilian managers by interpreting military history into business language. However, a soldier may find some of his interpretations disconcerting.

M.R. PIERCE
MAJ, Armor
Austin, Texas

“Driver, how much fuel do we have?”

Here’s an easy way to report accurately...

by SSG Stephen A. Krivitsky

In all operations conducted by M1A1 forces, to include Operations Other Than War (OOTW), logistical reporting must be clear, concise, and accurate. These reports, when tabulated correctly, may save hours wasted in unnecessary resupply or missent fuelers. To aid the tank commander, platoon sergeant, and platoon leader, each vehicle commander can use this simple chart, which allows the tank crew to quickly compute an accurate Class III report.

The tank commander requests fuel status from the driver, who reads fuel levels from his instrument panel in this order: Right Front first, followed by Left Front and finally the Rear tank.

The driver states each tank’s level: “Right Front.... 1/2 Left Front 3/4 ... Rear1/2”

The tank commander, following the driver’s response, moves down the “RIGHT” column to 1/2. While staying in that block, he moves to the 3/4 mark for the “LEFT” Column. Once there, he moves his finger right to the “REAR” columns where he continues to go to the right until he reaches the 1/2 section.

The fuel remaining is **277** gallons.

		REAR					
		LEFT	E	1/4	1/2	3/4	F
RIGHT FRONT	E	EMPTY	0	62	124	186	248
		1/4	26	88	150	212	274
		1/2	52	114	176	238	300
		3/4	78	140	202	264	326
		FULL	107	169	231	293	355
	1/4	EMPTY	38	100	162	224	286
		1/4	64	126	188	250	312
		1/2	90	152	214	276	338
		3/4	116	178	240	302	364
		FULL	145	207	269	331	393
	1/2	EMPTY	75	137	199	261	323
		1/4	101	163	225	287	349
		1/2	127	189	251	313	375
		3/4	153	215	277	339	401
		FULL	182	244	306	368	430
	3/4	EMPTY	112	174	236	298	360
		1/4	138	200	262	324	386
		1/2	164	226	288	350	412
		3/4	190	252	314	376	438
		FULL	219	281	343	405	467
FULL	EMPTY	150	212	274	336	398	
	1/4	176	238	300	362	424	
	1/2	202	264	326	388	450	
	3/4	228	290	352	414	476	
	FULL	257	319	381	443	505	

GREEN 401-505	RED 201-300
AMBER 301-400	BLACK 0-200

SSG Krivitsky has served as an armor crewman and battalion master gunner. He is currently a company master gunner and tank commander with C/1-68 Armor at Ft. Carson, Colo.

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