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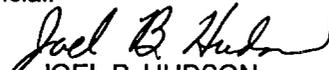
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COVER: The Korean War evolved into a series of hard-fought actions that saw the American Infantry pitted against a tenacious enemy. This illustration of an infantryman engaging Communist Chinese forces with his M-1 Garand rifle captures the nature of those fights, in which the accurate, long-range fires of the Infantry again proved the value of the M-1 in the hands of a well-trained soldier.

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Commandant's Note

MAJOR GENERAL CARL F. ERNST Chief of Infantry

MOUT—PROGRESS AND CHALLENGES

The need to conduct military operations on urban terrain (MOUT) is nothing new, and I want to bring you up to speed on what we have done—and are continuing to do—to prepare our Infantry to win in what may well be the toughest combat condition. In every war fought during this century—as well as in many earlier conflicts—combatants on both sides have been confronted with the challenge of dislodging a determined enemy who has chosen to go to ground in built-up areas. The MOUT fight has always been a manpower-intensive and highly costly one, both in terms of casualties and in terms of the time and ammunition it demands. The lessons of Stalingrad, Manila, Aachen, and Berlin in World War II, the bitter fighting to eject North Korean and Chinese forces from the towns and cities of Korea, and the U.S. Army and Marine Corps units' fight to recapture the old Vietnamese imperial capitol of Hue in 1968 have all contributed to our pool of knowledge on how to conduct the MOUT fight. More recently, our experience in Mogadishu, Somalia, in 1993 and Russian operations in Chechnya in 1994 validated some of our MOUT tactics and techniques while showing the need for further training and doctrinal modifications.

We realize that extensive collateral damage is not always an unavoidable consequence of operations in built-up areas, and that too much may in fact hamper our own forces' ability to maneuver, evacuate casualties, and resupply units in contact. We have likewise learned that timely, informed control of population movements can both reduce casualties among the indigenous population and yield valuable information on enemy dispositions, capabilities, and intentions. This human intelligence can be a significant combat multi-

plier in the fast-paced, ever-changing MOUT fight, and is one that we must learn to fully exploit.

Technological advances have given us unchallenged control of the night and other conditions of reduced visibility; now we can move about freely while denying the enemy the same advantage. In an achievement limited to science fiction a generation ago, we can now detect the presence of living persons in buildings and confined spaces by means of thermal imagery, acoustical enhancement devices, and motion detectors. This technology has found valuable application outside of combat as well, being used to locate survivors of earthquakes and other natural disasters, and its value in reducing casualties among our soldiers is no less significant. Fratricide, a particular concern in the close-quarters MOUT environment, will be reduced by the latest soldier and vehicle identification systems available to us, while we possess state-of-the-art abilities to identify and target enemy personnel and vehicles.

We have not been idle since our return from Somalia: our doctrine, our training and leader development, and our ongoing initiatives all reflect our emphasis on preparing to fight the enemy wherever we may find him. We are currently laying the groundwork for a study to develop an overarching MOUT training strategy that will meet the needs of all units up to and including brigades tasked to execute missions under MOUT conditions. This will not be a unilateral effort of the Infantry: it will demand the best efforts of all Army combat, combat support, and combat service support branches. Additionally, in a tradition of intraservice cooperation that goes back to the earliest days of our Republic, the Army and the United States Marine Corps (USMC) have been examining and conducting warfighting ex-

periments on ways to improve the operational capabilities of Soldiers and Marines in MOUT. Part of this joint effort has been an evaluation of advanced capabilities that will continue to assure us of technological dominance in the fight to secure built-up areas. Another element of the process has been preparation for the rapid acquisition of selected technologies once we have identified their potential value. The final part of the MOUT equation is the ongoing Army and Marine Corps partnership to provide operational units with the tactics, techniques, and procedures to give them interim capabilities beyond those they already possess, until the full array of technological advantages is within their grasp.

This is the azimuth we are following; now let me talk about some of the experiments that USMC and the Army are executing to reach our common goal. The Marines are testing a man-portable shield—a similar but much improved version of that used by civilian police and rescue units—and a non-explosive breaching means that will reduce collateral damage to personnel and structures, and that will enable U.S. forces to more quickly enter the room or building of interest. They are likewise refining systems to positively identify friendly personnel, develop a sensor to afford deployed units an accurate imaging of what is on the other side of a wall, and a stun grenade that will complement rapid entry and room clearing operations. This, coupled with the Corps' countersniper initiatives, will significantly reduce an enemy's options in the MOUT environment.

Army efforts, for which the Infantry School is the lead, have kept pace with the Marines' progress, developing and testing materiel improvements as diverse as remote marking, joint protection, a protective mask better suited to MOUT, improved obscurants, and blunt training munitions and frangible bullets to heighten training realism. The Army is also testing technologies to let us put soldiers on top of buildings faster than we can today, giving us a positional advantage over adversaries. We have made progress on the development of a non-line-of-sight radio, a personnel protection kit, and a personnel restraint system that will facilitate the control and handling of prisoners. We are refining casualty evacuation equipment and procedures, developing an improved sling, a combat identification system, and an inside position locator that will improve both soldiers' situational awareness and their ability to request and adjust supporting fires.

Experience has highlighted the need for a munition that will breach walls and similar barriers without excessive collateral damage, and we are examining options that will allow us to create a man-sized hole while

leaving a structure largely intact. One of these, the Remotely Launched Entry Munition, is currently undergoing testing. Another Army project—the updating and production of high resolution maps for areas of potential interest—will enhance the operational capabilities of all services. General Patton may have had to rely upon a Michelin Guide for some of his maps in World War II, but we can do better than that for our deployed forces. These are some of the initiatives that we and our sister service are currently working, and whose many benefits we will jointly share.

As the focal point for MOUT doctrine, training, and materiel, the Combined Arms MOUT Task Force will ultimately oversee publication of the update of Army MOUT doctrine at brigade level and below. This revision will incorporate the recommendations of an Infantry School MOUT study that embraces the whole spectrum of doctrine, training, leader development, organization, materiel, and soldier (DTLOMS) issues. The doctrine will increasingly address larger unit operations, and will include lessons learned from our own and our allies' stability operations in Haiti, Macedonia, and Bosnia. It will likewise draw upon the results of the MOUT Advanced Concepts Technology Demonstration and multiple Joint Readiness Training Center and Combat Maneuver Training Center rotations. The updated Army MOUT doctrine will refine the discussion of close-quarters battle techniques and breaching, and will discuss the role of joint forces and nongovernmental organizations in MOUT. The roles of snipers in Sarajevo, Bosnia, and other regions have not gone unnoticed either: the doctrinal revision will address both sniper and countersniper operations in the detail they deserve.

The urban battle is the scenario of choice for many of our potential adversaries. As the world becomes increasingly urbanized, an enemy lacking either the resolve or the materiel assets to face us in open combat will hope to draw us into a protracted house by house battle of attrition, in the hope of inflicting losses as high as they were in past wars. But we need not—and will not—duplicate the mistakes of the past. Circumstances may demand that we seek out an enemy who has chosen to hide in built-up areas, and in the midst of a civilian populace, but the Infantry will be better prepared than ever before to deal with such an eventuality. The initiatives that I have outlined will ensure that U.S. Army Infantrymen and U.S. Marines—working jointly or independently—will continue to develop and retain the ability and the resolve to deploy quickly, hit hard, and get the job done right the first time out. Hooah!

INFANTRY LETTERS



BRADLEY'S INFANTRY "HAS EVAPORATED"

I applaud Major General Carl Ernst's recognition of the fact that Bradley-equipped infantry units have difficulty conducting "the close gunfight," and I also applaud his efforts to rectify this situation. It is refreshing to see a top leader recognize what many in the lower ranks have known for a long time.

The core problem is that Bradley units cannot perform infantry tasks. General Ernst is right: the main problems are organization and manning. The units are so undermanned now that there are few if any dismounts. This is a bit ironic because the dismounts *are* the Infantry. The vehicle has become so important that while it remains fully manned the infantry it is supposed to transport, protect, and support by fire has evaporated.

I don't believe adding a machinegun team to each platoon will help, however. Unfortunately, neither will adding slots to a TO&E that is badly undermanned as it is. Additionally, it doesn't seem logical to have five soldiers get out of an armored vehicle to flop down behind a couple of machineguns to support the maneuvering fire teams. The Bradley, with its stabilized thermal sighted weapons array, is more than capable of providing adequate support fires, including 7.62mm. What is needed is more riflemen on the ground clearing those obstacles, buildings, trenches, bunkers, etc., and closing with and destroying the enemy infantry.

The other problem is organization. Praise to Lieutenant Colonel Chester A. Kojro, who wrote in the May-August

1998 issue of *Infantry* that current infantry fighting vehicles (IFVs) are "merely oversized light tanks with stowed local security elements." He is absolutely right. We have organized around the vehicle instead of organizing the vehicles around the men. Bradley units are infantry in name only. This is further exacerbated by the fact that the Bradley's design priority got lost somewhere. Boasting more firepower than many World War II tanks, it will only carry six "dismounts" while its predecessor, the M113, would comfortably carry ten soldiers.

One way to fix the problem of the Bradley's dismount strength was recommended some time ago in an article in this magazine: Of the four Bradleys in each platoon, have two of them with turrets and two without. This would allow the Bradley platoon to carry at least eight more dismounts and would significantly reduce the weight, expense, visual profile, and maintenance requirements of half the platoon's vehicles, while retaining very credible firepower.

We need to recognize the obvious. Webster's Dictionary defines the Infantry as "that branch of the Army consisting of soldiers trained to fight on foot." Isn't it obvious that soldiers who operate an armored vehicle are not infantrymen; they are armored vehicle crewmen. IFVs should be viewed like any other means of mobility. Until we separate the dismounts from the vehicle crews, we will continue to have doctrinal problems. Let's get our infantry units fully manned, out of the motor pool, and into the field doing infantry training.

While we look at concepts for mod-

ernizing the Army through the *Revolution in Military Affairs*, the *Army After Next*, etc., perhaps we should consider putting IFVs/crewmen and dismounted infantry in different organizational elements. They could train separately on their individual tasks and then come together to train in combined arms operations on a habitual basis, much like tank units do in the traditional armor and mechanized infantry task force. Additionally, if dismounted infantry were recognized as a separate element, there would be more resistance to letting it get so low in operational strength.

This is all heresy, I know, but I believe that until we get the infantry elements fully manned and trained as infantry, mechanized infantry units will continue to have difficulty "fighting the close fight."

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FIRST INFANTRY DIVISION REUNION

The Society of the First Infantry Division will hold its 81st Annual Reunion 4-8 August 1999 in Louisville, Kentucky.

For more information, please contact Society of the First Infantry Division, 1933 Morris Road, Blue Bell, PA 19422; telephone 1 (888) 324-4733, or e-mail Soc1ID@aol.com.

EDWARD J. BURKE
Executive Director

PROFESSIONAL FORUM



Javelin A Quantum Leap in Infantry Weapons

MAJOR BRADLEY N. McDONALD

The Javelin antitank missile system represents an advance in infantry weapons technology comparable to the invention of the machinegun. It enables light infantry to deploy anywhere in the world within hours and carry with it the means to defeat mechanized and armor forces. Light forces equipped with Javelin will soon be among the most lethal and versatile within the Force XXI battlespace.

The Army and Marine Corps are be-

ginning to capitalize on the lethality and firepower that light infantry gains with the addition of Javelin. During recent combat training center rotations with light forces, Javelin-equipped units have decisively defeated mechanized and armor forces on a regular basis. Commanders have selectively employed Javelin gunners as antiarmor snipers during the defense, deploying them in concealed positions and fortifications with numbers of pre-stocked missiles.

Due to Javelin's extended range capability, battalion frontages have grown to 16 kilometers wide and six to eight kilometers deep.

During one battle, a Javelin-equipped battalion was credited with destroying approximately 75 percent of all reconnaissance elements, forward security elements, a motorized rifle battalion (MRB), and lead elements of the follow-on MRB. During another battle, one company destroyed an estimated 60 opposing force (OPFOR) vehicles while itself sustaining minimal casualties.

The OPFOR units made locating Javelin positions an intelligence priority, dispersing chemical munitions on suspected dismounted positions, but without success. The rotational unit eluded most OPFOR indirect fires by occupying sub-optimal and less detectable positions, utilizing the inherent flexibility gained with extended engagement ranges and man-portable weapons. The light forces negotiated all terrain, with little loss of mobility during all weather and light conditions, and occupied those positions that best supported their engagement areas. When equipped with Javelin, a dismounted light infantry force performing at or above standard dramatically enhances its opportunity for success against a mounted or armor threat.



The Javelin is a medium-range, manportable, shoulder-launched antitank weapon system that employs true fire-and-forget technology.

During Operation *Desert Storm*, soldiers who deployed as part of the 82d Airborne Division expressed their concern about holding terrain against the armor and mechanized threat. But with the advent of Javelin, every gunner has the ability to destroy any known armor and to employ the missile's secondary capabilities against helicopters and ground fighting positions. The system has an engagement range that extends from less than 100 meters to more than 2,500 meters and may be deployed on any terrain.

The System. The Javelin is a medium-range, manportable, shoulder-launched antitank weapon system. It is the infantry's only antiarmor system that employs true fire-and-forget technology. The system consists of a command launch unit (CLU) and a missile contained in a disposable, composite launch tube assembly (LTA). The gunner acquires a target through the CLU and activates the missile. The gunner can select either a lofted trajectory for top-attack or a flatter trajectory for the direct-fire mode. It takes about 10 seconds to download the missile software from the CLU and cool the missile seeker, which uses a focal plane array (FPA) to form an infrared image of the target. The gunner then locks the missile's feature-based autotracker onto the target. After launch, the missile guides itself to the target using its onboard FPA seeker, image processing ability, and tracking algorithms. The missile, adjusted by its on-board tracker, then flies to the target for the kill.

The field tactical trainer, which is attached to the tactical CLU, allows gunners to engage multiple integrated laser engagement system (MILES) targets during gunnery and field tactical exercises. A simulated round contains a MILES scoring system and a launch-effects simulator. Events can be played back and reviewed using the instructor station.

Survivability. The Javelin dramatically enhances soldier survivability through its fire-and-forget capability, its soft-launch feature, its minimal launch signature, and its ability to defeat armored targets. Soldiers increase their own survivability by using fortifications

and by taking advantage of the system's unique characteristics. First, they do not have to leave structures to engage targets. The soft launch allows for firing the missile from bunkers, buildings, and fighting positions with overhead cover. Second, when firing Javelin, the gunner does not have to remain exposed to enemy fire until the missile reaches the target. As soon as he pulls the trigger, he is free to continue whatever mission has been assigned to him or seek cover. Depending on how the unit conducts resupply and the number of missiles that are with the system, the gunner is capable of engaging several targets per minute.

Both the signature and the soft launch of Javelin are unparalleled among ground-based antitank missiles. The system's soft launch and top-attack missile flight path minimize the signature. When the trigger is pulled, a launch motor flies the missile out of the LTA approximately 18 feet down range. This stage of engagement is referred to as a soft launch due to the demonstrated effects on the gunner. Upon completion of the launch motor impulse, the flight motor ignites. The signature from the flight motor depends upon the weather;

The Javelin training system is composed of the basic skills trainer, designed for classroom and shipboard use, and the field tactical trainer, for advanced instruction and field training exercises.

higher humidity increases the condensation trail, but smoke from the flight motor is negligible.

The flight motor activates following soft-launch sequence, sending the missile, in top-attack, to an altitude of more than 100 meters above the target until it dives to make the kill. The probability that ground troops, concentrating on ground operations, can detect either the missile in flight or the gunner's location, is minimal. In fact, the Javelin gunner may never be detected, and en-

SYSTEM CHARACTERISTICS

General:

Type:

Man-portable antitank weapon
Carry weight: 49.2 pounds
Shelf life: 10 Years
Ready to fire: < 30 seconds

Command Launch Unit (CLU):

Type: Passive target acquisition/fire control, with integrated day/thermal sight
Carry weight: 14.1 pounds
Magnification:
Day sight = 4X
Thermal sight = 4X and 9X
Operation time: 4 hours/battery (hot)
Battery type: BA5590/BB390

Round:

Missile-

Type: Passive imaging infrared (IIR)
Guidance: Lock-on before launch, automatic self-guiding
Weight: 35.1 pounds (11.8Kg)
Length: 42.6 inches (1081.2 mm)
Diameter: 5.0 inches (126.9 mm)
Range: > 2,000 meters

emy forces will not be able to determine what has engaged them.

Training. The Javelin training system is composed of the basic skills trainer, designed for classroom and shipboard use, and the field tactical trainer, developed for advanced instruction and field training exercises.

The basic skills trainer consists of an instructor station and a simulated missile round and CLU to teach gunners basic target identification, acquisition, and lock-on skills. The instructor can select the mission scenarios and score the gunner's performance.

The Javelin training system has proved effective. Out of the 70 missiles fired by first-time gunners during 1998, virtually all hit their intended targets and most hit the vehicles' turrets. Gunners understand that if the missile is detected during flight, the target's options for evasive action are very limited. If the target is a vehicle, then the combatants may either dismount or maneuver the vehicle to any formidable overhead protection, such as a bridge culvert. No current or projected countermeasures have been identified that significantly decrease the effects of the Javelin missile against stationary or moving targets. Low Rate Initial Pro-

duction (LRIP) missiles have a 96 percent reliability with a high level of confidence.

Maintenance and Logistics. The Javelin Project Office maintains a database of all maintenance actions, called JAVTRAK. It includes a software program for maintenance, logistical data collection, and analysis. Contractor logistical support personnel enter all identified faults, part requests, part status, repair status, repair time, identified malfunctions, and disposition of all systems. The information may be configured to identify or highlight any of these items. This excellent tool gives managers, engineers, contractors, logisticians, quality control personnel, and limited users valuable information for management of their Javelins.

The Javelin's maintenance and reliability exceed the Joint Services Operational Requirement (JSOR) of 92 percent. Current missile reliability is over 96 percent, and CLU reliability is equally impressive. The CLU has built-in-test (BIT) capability that is designed to detect and isolate the required 95 percent of faults. The current test has demonstrated more than 99 percent fault isolation with less than one percent false alarm rate. The JSOR requirement of mean time between operational failures is 129 hours; Javelin is now running approximately 280 hours. No direct support test program sets are required, and no additional tools are needed to repair the system.

Maintenance for the CLU is a three-level concept: operational, intermediate (27E MOS), and depot. Operators are responsible for recognizing CLU failures through BIT. The 27E maintainers provide direct support and are responsible for replacing shop replaceable units (SRUs) and sending inoperable items to depot level. The SRUs are integrated circuit cards, four in one CLU model and two in the other. The mean-time-to-repair requirement is less than 1.5 hours with actual repair times being 0.75 hours or less, depending on experience level. Depot-level repair is currently being conducted at Fort Bragg, North Carolina, by the manufacturers. Equipment requiring this type of maintenance is shipped to Fort Bragg, and

turnaround time for repair has been less than 30 days.

The Javelin missile is classified as a wooden round. All of the information the missile requires for successful launch and target engagement is housed within the CLU. Once the CLU is mated to the round and the seeker button is depressed, the CLU downloads all information to the missile.

While this may not sound very impressive, this feature accomplishes two important operational functions: First, the information download provides essential information that allows the missile to be fire-and-forget and obtain its phenomenal probability of hit. Second, any software enhancements to the system can be accomplished in minutes through the interface between a portable memory loader verifier (MLV) and the

Javelins have been fielded to the Rangers, selected Special Forces units, and the 82d Airborne Division.

CLU. This greatly reduces future system upgrade costs and schedule for the redesign of hardware. Units will no longer have to retrofit to obtain the latest in Javelin technology. Only a software change will be needed to upgrade Javelin; qualified personnel will take their MLVs to the unit arms room and spend minutes transferring data to CLUs.

Although Javelin is new to the field, the senior leaders witnessed the system's effectiveness in 1997, during the Advanced Warfighting Experiment at the National Training Center. General Dennis J. Reimer, Chief of Staff of the Army, said, "As we start to perfect our ability to work our heavy forces together with this capability, I think we have something very powerful."

Javelins have been fielded to the Rangers, selected Special Forces units, and the 82d Airborne Division. So far, only light infantry forces have deployed to the training centers with Javelin, but it is not hard to imagine how much more effective mechanized forces will be when they, too, are equipped with

this system: An infantry fighting vehicle will not only retain the long range armor killing capability of the TOW but will add a medium range, very lethal alternative system that is capable of multiple applications. The U.S. Army Infantry School is currently developing doctrine, techniques, tactics, and procedures to capitalize on the synergistic effects of Javelin.

Because of the obvious advantages of Javelin, military leaders requested early fielding and training. In conjunction with the U.S. Army Infantry Center and Javelin Project Office, fielding and training at Fort Benning began 18 months ahead of schedule. The fielding of the Javelin missile system to the 82d Division was completed eight months ahead of schedule. Training and fielding at both locations were conducted within program budget. In addition, the Javelin Project Office has instituted a DoD-mandated cost reduction plan that is designed to return \$1.4 billion in total obligation authority. The plan is based on multi-year contracts and more than one may be broken if the Office of the Secretary of Defense reduces the total number of missiles to be produced.

The Javelin dramatically increases the ability of our forces to fight, survive, and win the next battle. Forces are already realizing the major warfighting enhancements that units equipped with the system bring to the modern battlefield. It provides light infantry, engineers, and marines with the firepower to hold terrain against enemy armored forces.

Javelin has proved its reliability, accuracy, and versatility to defeat all known armor and fortified fighting positions, and may be used to defeat attacking helicopters. It can be deployed anywhere in the world within hours to play its important role in peacekeeping or warfighting missions.

Major Bradley N. McDonald is the Assistant TRADOC System Manager for Antitank Missiles at the Infantry School and has served as a weapon system manager on other programs including the Future Scout and Cavalry System, the Future Combat System, and the Future Infantry Vehicle. He has commanded both Infantry and Armor companies. He most recently served as Assistant Project Manager (Up-Armor HMMWV).

Heavy Infantry

Let's Revive Its Lethality

LIEUTENANT COLONEL ANTHONY A. CUCOLO
MAJOR DALE S. RINGLER

If you have served in a mechanized infantry unit in recent years, you have experienced the frustration of under-resourcing. The heavy force is infantry-poor. A good-sized rifle company might have one squad of seven to nine men per platoon, instead of eighteen. There's plenty of room in those M2 Bradleys out there—some units have even resorted to consolidating all their riflemen into one platoon and having no riflemen, just crews, in the remaining vehicles. Sometimes it seems the only things that come out of a Bradley fighting vehicle when the ramp drops are sagebrush and wishful thinking. Let's be frank: The heavy infantry, while not broken, is a shadow of what it could be.

The good news is that the Infantry branch won a significant victory in the fight for structure within the Force XXI concept. With the loss of one rifle company in the Force XXI battalion organization, it was important to make sure the platoons in the remaining companies were capable of winning the close fight. Analysis showed that the four-vehicle platoon with three nine-man squads was best. Each of the three rifle squads in the Force XXI platoon has two balanced fire teams, as well as a medium machinegun and a Javelin missile launcher for use as the situation demands. Think of it: 27 riflemen in each platoon, 81 in each company. Finally, the heavy force will have a maneuver element robust enough and resilient enough to be effective. And heavy units will see this 27-rifleman platoon organization very soon with the advent of the Limited Conversion Division XXI modified

tables of organization and equipment (MTOEs) taking effect from now through Fiscal Year 2000 for most of our mechanized and armored divisions. We all know that it may take a full-up regional conflict for us to see 100 percent of this authorization, but we are sure to see more riflemen than we have now.

More Soldiers Won't Fix It

Low foxhole strength, however, is not the properly identified problem in the heavy force. Our problem stems from being infantry-poor, and simply adding more men won't solve it. Over

We lost sight of the two basic building blocks common to all five types of infantry: base of fire and maneuver.

the years, the lack of riflemen has significantly affected the way the heavy force fights. Empty and near-empty BFVs and an increasing desire to exploit the firepower of the vehicle itself gradually caused us all to stray from the basics of fighting the heavy infantry organization. We lost sight of the two basic building blocks common to all five types of infantry: *base of fire* and *maneuver*. The infantry-poor organizations, lacking maneuver (robust rifle squads) turned to their base of fire (the BFVs) to serve as both. The BFVs exceptional armament and mobility, along with the low infantry strength, have driven us to use the BFV as a tank, and this has embedded some bad habits.

These bad habits, in turn, have translated into bad tactics, techniques, and procedures (TTPs) that a generation of young leaders have come to understand as the way they should fight.

One needs only to review the most repeated trends at the combat training centers (CTCs) over the past several years. Most assaults are mounted, with no integration of the infantry squads. Units rarely plan a coordinated attack in which the dismounted force is attacking an objective in conjunction with the mounted force. Dismounted elements are most often sent to conduct an attack forward of the task force, hours before the mounted forces of the task force cross the line of departure. Frequently, these operations result in failure because they are not properly planned and coordinated or because they are out of supportable range of the mounted element.

Units do not plan for or conduct the defile drill as required. While we generally understand the fundamentals of this drill, leaders often lack the tactical patience to allow the dismounted element to clear the defile. As rifle squads conduct clearance, anxious commanders push the mounted force through the defile too early, and the result is failure. Time and again, in both the offense and the defense, the rifle squads are employed almost as an afterthought and frequently with ill-defined and unachievable assigned tasks: It is the BFV that remains the be-all and end-all, the base of fire and the maneuver, and that is not how we want to fight.

This current condition is quite understandable: With such low foxhole

strength and such limited time at home station, it is a challenge to conduct collective training of a heavy infantry platoon to proficiency, and the CTC becomes the first place to plan and execute some of these exceptionally tough tasks. To make this new mechanized infantry organization work and break some of these bad habits, we need to make a significant change in our attitude, training methods, and emphasis within heavy outfits. The first step would be for us to return to basics.

It's All About Suppression

The mechanized infantrymen are our shock troops. Their purpose is to sustain the mobility and momentum of the total heavy force. The tremendous shock effect of massed suppressive fires, and the sudden introduction of rifle fire, grenades, and bayonets, are hallmarks of the heavy infantry. Mounted riflemen are tasked to sweep aside impediments to movement. They gain or clear complex terrain for security or position. Armored infantry units were formed for this purpose in World War II, and they were the key to maintaining momentum in the European Theater. Their techniques—learned at cost from well-trained German units—remain effective today, even though the equipment has radically changed: Achieve fire superiority through suppression, drive the enemy to the ground, close with him under the suppression, and finish him with grenades and rifle fire. All of this requires that the base-of-fire element and the maneuver element work in close coordination, as a system, and not as separate entities.

The timeless lessons in the Infantry School's *Infantry In Battle* (published by the Infantry Journal, Inc., 1934) emphasize this fighting system:

From the time Infantry becomes exposed to the fire of hostile infantry, fire and movement become inseparable. At the longer ranges, supporting weapons will furnish the fire and the riflemen will furnish the movement. This fire must be adequate and it must be effective if the Infantry is to close to assaulting distance and still have strength enough to storm the position.

This concept of the BFV's primary

role as transport and base of fire, as a support weapon for the rifle squads, is hard for some leaders to accept. Who can blame them? The stabilized and armor-protected 25mm Bushmaster has proved to be ten times as effective as any standard infantry machinegun. Considering both the main gun and the coaxial machinegun, a single platoon of four M2s has the firepower equivalent of 80 standard infantry machineguns. With TOW and armor-piercing 25mm ammunition, the Bradley is without question a tank killer. It is a stable, lethal, capable platform and one of the finest fighting vehicles in the world. Why should it be "relegated" to a fire support role? Because it can't get close—it wasn't created or intended to get close—and the close fight, those last few hundred meters, is still the responsibility of the riflemen.

Again from *Infantry In Battle*:

At dawn on July 18, 1918, Company D, 1st Battalion of the U.S. 16th Infantry attacked in the vicinity of Missy-Aux-Bois. Company D found itself in an unusual and unexpected situation. The lifting fog revealed that the company had gone astray. Contact had been lost with all friendly troops with all weapons that had been supporting the advance. Such were the conditions in which this isolated unit stumbled against the strongly held Missy-aux-Bois position and there it was stopped in its tracks by a storm of

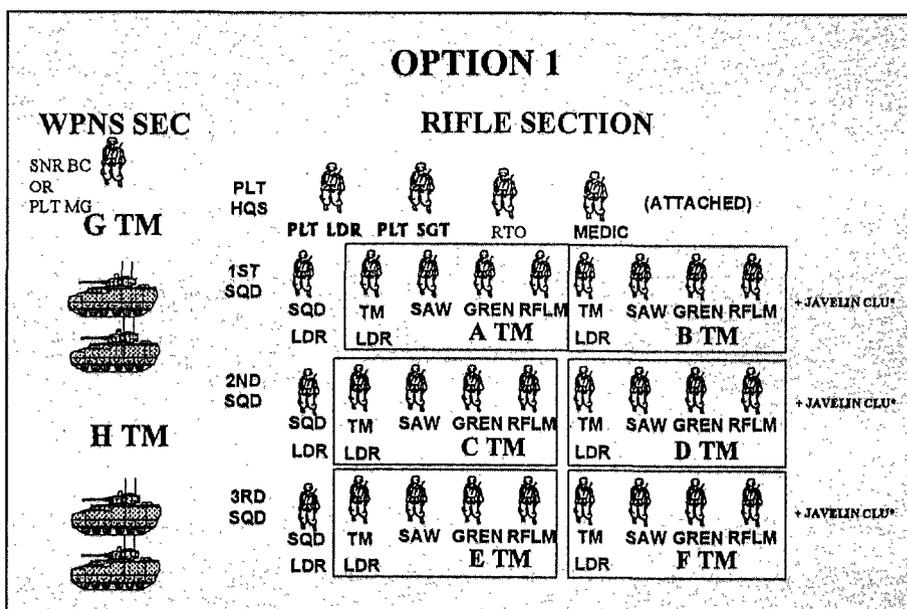
machine-gun fire from the front and both flanks. Further advance was impossible.

Then came the tanks—literally a deus ex machina. Here were supporting-weapons indeed; here was a base of fire—a moving base of fire—that could and did silence the murderous machine guns. Thus did Company D gain the fire superiority that enabled it to resume its advance.

We should think of the BFV as the world's finest mobile base of fire, whose indispensable contribution to the fight is to move rifle squads and to fire accurately. We must think of the rifle squad as the element that maneuvers and finishes the close fight, supported by this base of fire. And do not for one moment think we are "fighting the last battle." This is critical as we look at future battlefields. The dispersed and nonlinear nature, the high tempo, and the fleeting windows of opportunity demand a heavy force that can close fast and apply decisive shock effect at key points. By starting with these basics, and reminding ourselves of the unchanged purpose of the mechanized infantry, we can move forward to train proper TTPs that will improve our current situation and make us ready to meet this challenge.

How We Can Improve

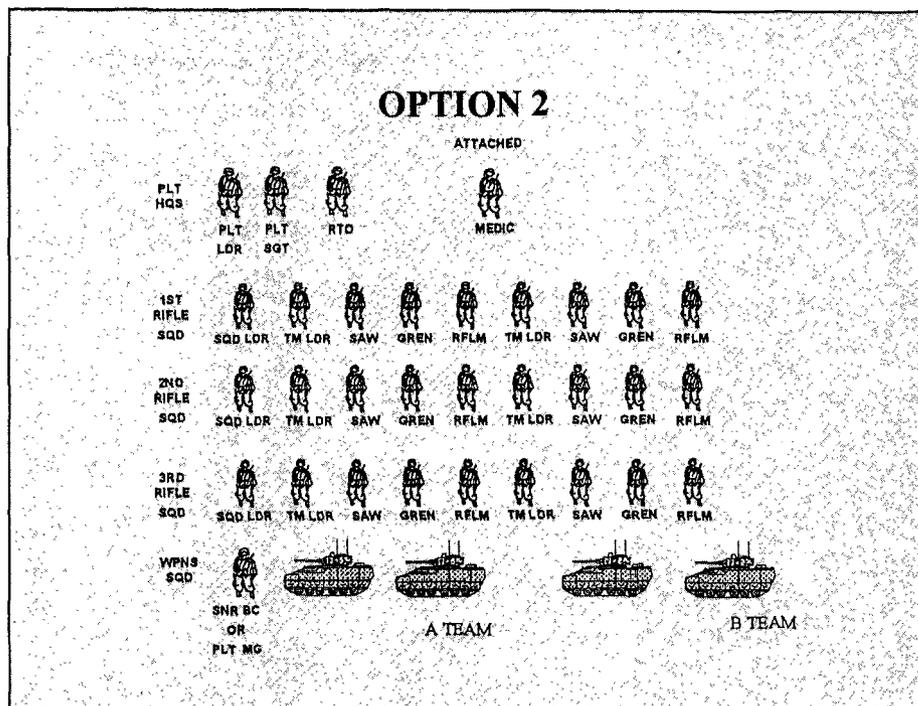
We have sound mechanized infantry doctrine. Our current problems do not



stem from a doctrinal deficiency at platoon or company team level. Nor does there seem to be a problem with doctrinal employment of the BFVs at task force level. But equal or greater consideration in home-station training must be given to the doctrinal employment of the infantry carried by the BFVs, as fully two-thirds of all platoon tasks are dismounted. The next version of FM 7-7J, *Mechanized Infantry Platoon and Squad (Bradley)*, out to the field in draft form this Spring, will incorporate the best of FM 7-8; will give tasks, conditions, and standards for drills; and will be focused on the new platoon organization. While there are no great revelations in this revision of the manual, the emphasis on the base of fire and maneuver roles is clear, and it will be a great training resource.

At home station, it is time to heed the call of many to narrow the training focus for the heavy platoon and make the most of that limited training time. We leaders must fight to minimize the separation in the training of the BFV crews and the squads and train tasks together as often as possible. Our practiced TTPs need to refocus on the basics through the repetitive execution of a finite number of platoon collective tasks for the offense and the defense: For the offense, *react to contact, platoon attack, and move tactically*; for the defense, *build an engagement area and maintain operational security*. Within these collective tasks, mission specific battle drills (such as *clear a trench, knock out a bunker*) can be incorporated. Achieving proficiency in these tasks takes time. Forcing detailed training and rehearsals will give a good feel for the amount of time it takes to accomplish these tasks, help leaders develop tactical patience, and, if practiced as a system, strongly reinforce the base of fire and maneuver concept into platoon organizations.

At the task force level, train to employ this base of fire and maneuver system for success. Again, one only needs to look to the CTC Trend publications for TTPs that work. Some of these include the maneuver element clearing flanks to guide or assist mounted elements, repositioning a



dismounted element to conduct a simultaneous attack with mounted elements, reconnaissance operations, and security operations. Almost all of the successful employment techniques have involved the sound employment of the squads and their base-of-fire fighting vehicles in support. The arrival of the Javelin on the battlefield brings additional considerations and TTPs for employment. Commanders may first determine the best location for the weapon, then task rifle squads to emplace and secure the positions. The Infantry School is looking closely at the initial Javelin-equipped units, and will incorporate into doctrine the new TTPs that work.

Organization and Lexicon

We believe the strongest catalyst to help regain the purpose of mechanized forces and the lost base of fire and maneuver concept would be certain organizational and doctrinal changes. These changes focus on the basis of organization, the terminology, and the M240B machinegun.

First, and perhaps simplest, we should purge an unofficial term from our lexicon. The term "dismount," used as a noun in reference to a rifleman, is no longer accepted here at the Infantry School. If we are to truly support the

concept of one Infantry in which there are five types, then there is essentially no difference between a rifleman and a squad member in airborne, light, mechanized, and air assault infantry; the only difference is the means by which they are brought to the close fight.

Another institutional change that could help bridge the gap within the mechanized infantry with the elements of maneuver is terminology. We consider that the only differences among the five types of infantry are in the mode of transport and the base of fire. The BFV provides the heavy platoon's base of fire. Airborne, air assault, Ranger, and light infantry platoons, on the other hand, rely on machinegun teams or weapons squads for their bases of fire. In mechanized infantry, there are 1st through 3d Squads, as in other types of infantry. But what is the appropriate reference for the four BFVs?

In our recent travels to a number of heavy outfits, we have heard numerous terms: *heavy sections, vehicle sections, fire support element, 4th Squad, mounted element*, and simply *Brads*. Doctrinally, the four-BFV element is the base of fire. We offer several possibilities for your thoughts and comments: In both of the options presented here, the platoon sergeant can either dismount with the platoon leader and

the three rifle infantry squads or stay with the base of fire.

One option is a platoon of two sections: a weapons section, with two teams of two BFVs each, and a rifle infantry section of three squads, with two teams. Team designations change from the standard Alpha and Bravo to Alpha through Hotel. This option avoids confusion during quick references on the net and helps track the actions of platoon elements. When the entire rifle infantry section dismounts, the platoon leader leads it, again, with the option (based on mission, enemy, terrain, troops, and time) to have the platoon sergeant also dismount. The senior Bradley commander or the platoon master gunner would take charge of the base-of-fire element; 27 men make a sizeable maneuver element that needs a "second-in-command."

A second option is a platoon of four squads: rifle infantry squads 1, 2, and 3 and a weapons squad of four BFVs with two teams of two BFVs each. Team designation would not change, and this option aligns infantry terminology across all five types.

Delete M240B From MTOE

The existence of M240Bs in the heavy platoon TOE is causing confusion in the field. Under the current organization, if the platoon leader determines that he needs a dismounted base-of-fire element, he must designate that the M240Bs be taken for the mission. He places them where he wants them to support the maneuver and gives specific instructions along with a plan for initiating, lifting, and shifting fires. He then continues the mission with the assault element. In the offense or the defense, the machinegun team becomes a base-of-fire element when the mounted element cannot provide support. Unfortunately, these ad hoc machinegun teams subtract from the platoon's maneuver strength, and the challenge of their training is great. Feedback from experienced infantrymen has been clear: An "arms room concept" for machineguns won't work. The selection, assignment, training, and qualification of machinegun elements are crucial to their success. Therefore, if the machinegun

crews are assigned within the squad, again, the issue becomes reduced rifle strength.

In current U.S. Army doctrine, the machinegun provides fire support, while the automatic rifle provides assault fires. Once again, let us return to our roots. A *machinegun* is characterized as a weapon that can fire on fully automatic and that may or may not be fired in the semiautomatic mode. It has a front-end supported mount, which is often a tripod or bipod for light and medium machineguns. Although one man, under emergency conditions, may operate the machinegun, a two-man crew normally operates it. It is capable of sustained fire and is designed to facilitate barrel changes to prevent overheating.

An *automatic rifle* is characterized as a rifle that has been designed to fire fully automatic. The automatic rifle is operated by one man and, due to its portability, is ideal for offensive operations. The automatic rifle was developed when machineguns became too heavy and bulky to be used in a maneuver force. It is normally fired in bursts and is not capable of sustained rates of fire.

The distinction between these two concepts is important, and we believe, from our recent observations, that there is confusion among our junior infantry leaders. While machineguns provide accurate, sustained, lethal, long-range fires to support both offensive and defensive operations, in the heavy infantry platoon it is the BFV, with its chain gun and coaxial machinegun, that provides this capability. But the M249 can also provide it when necessary: With the standard machinegun accessories (tripod, traversing and elevating mechanism, spare barrel) and additional ammunition, the M249 becomes a light machinegun. The M249, when employed with these accessories, provides the platoon with sufficiently accurate, sustained, lethal, and long-range fires to support both offensive and defensive operations. We understand that the basic MTOE must be changed to add these accessories.

There are differences in the performance characteristics of the M249 and the

M240B, but these differences are not operationally significant. Specifically, there is little difference between the two weapons' maximum effective ranges or rates of fire.

The bottom line is that infantry platoons need resiliency in terms of rifle strength. The M240B was originally added to the heavy platoon to support an organization of two nine-man rifle squads plus a five-man machinegun team. The Force XXI structure changed the platoon organization to three nine-man rifle squads. This new structure does not dedicate personnel to qualify with and fight the weapon system. If the M240B is retained in the Force XXI platoon structure, squads will be required to select, assign, and train machinegun crews, thereby reducing the number of riflemen available for maneuver, which is a step in the wrong direction. We value your comment and input on this issue, too.

We believe that greater training emphasis on the basics, fighting the BFV base of fire and the robust rifle maneuver element as a system, will improve the lethality of the heavy infantry. Input from the field is critical to us so that training and doctrinal literature will reflect the best way to use the new force structure and technology. This will ensure that tomorrow's infantrymen can dominate the full spectrum of challenges in close fights around the world. Please send any comments to our Doctrine Division, by e-mail at durantea@benning.army.mil; or U.S. Army Infantry School, ATTN: ATSH-ATD (Art Durante), Fort Benning, GA 31905.

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Force XXI Concept Tested

The Forward Support Company

MAJOR CARL D. GRUNOW

During an exercise at Fort Bragg, North Carolina, earlier this year, opposing force units tested an innovative combat service support plan modeled on the Force XXI concept of the forward support company (FSC). This new doctrine, still in draft form, decentralizes brigade logistic assets down to the battalion task force level and places a logistics company in direct support of each task force. Although the test was only a rough approximation of the Force XXI design, it yielded many important lessons for logistics planners who will be charged with executing the new doctrine.

Exercise *Purple Dragon 98* involved more than 33,000 soldiers, sailors, airmen, and marines, which made it the largest U.S. maneuver training exercise since World War II. The exercise included operations from Puerto Rico to Fort Bragg, both on land and on the Atlantic Ocean. In the major ground action of the exercise, U.S. forces conducted airborne, heliborne, and amphibious assaults onto "Bragg Island" to liberate it from an occupation force from an aggressor nation.

The 10th Mountain Division at Fort Drum, New York, was originally tasked to provide a brigade task force to act as opposing force (OPFOR), but a devastating ice storm prevented the deployment. In less than two weeks, planners built an ad hoc organization to serve as OPFOR. This composite force included a brigade headquarters from the 10th Mountain Division charged with command and control of three distinct maneuver battalion task forces. The 2d Battalion, 187th Infantry, from the 101st Airborne Division (Air Assault), and the 1st Battalion, 505th Infantry,

from the 82d Airborne Division, became OPFOR Task Forces 1-73 and 2-73, respectively.

Task force 3-73 consisted of a composite force led by the 30th Engineer Battalion and rounded out by various units from the 20th Engineer Brigade, XVIII Airborne Corps. This battalion of engineers, approximately 250 strong, fought as infantry during the exercise and brought their own unique ideas on service support. The result was an unusual collection of battalion size units that produced a variety of approaches to implementing the FSC concept.

The service support package for the exercise was ad hoc as well. Because the 10th Forward Support Battalion (FSB) from Fort Drum was busy supporting disaster relief operations in the wake of the ice storm, a combination of XVIII Airborne Corps units made up the combat service support slice. The 307th FSB, 82d Airborne, contributed assets to augment the infantry battalion trains, thereby creating the FSCs. The 264th Corps Support Battalion (CSB) formed the base support element, eventually named the Base Support Company (BSC). Under current modified tables of organization and equipment, this amalgamation of assets was necessary to approximate Force XXI logistics doctrine, since a standard FSB does not have enough assets to outfit three FSCs and a BSC. The size and number of Corps Support Command (COSCOM) units involved in the exercise made it possible to implement this new concept of OPFOR support.

Using FSCs during the exercise was not a conscious decision to use new doctrine but a matter of necessity that came out of mission analysis. The ex-

ercise scenario prompted OPFOR logistics planners to gravitate toward a concept of support that would enable the maneuver battalions to be logistically self-sufficient for five or six days. The "aggressors" would command the air and ground lines of communication. There would be little opportunity for the OPFOR to logistically assist its forward battalion task forces once the battle was joined. Additionally, any large base would be extremely vulnerable to air or ground attack. Finally, the logistics support to the task forces would have to be extremely mobile in order to make frequent survivability moves. These conditions demanded that maneuver units be self-sufficient and led to a combat service support plan that relied upon dispersed and mobile assets along with extensive caches.

To achieve self-sufficiency in the task force, planners replaced the brigade support area (BSA) and the traditional battalion trains with a base support company and three composite forward logistics elements (later named FSCs). The base element located along the boundary between two battalion sectors had the primary mission to reinforce the support elements of the battalion task forces. This BSC contained bulk fuel and water assets capable of refilling battalion HEMTT (heavy expanded-mobility tactical truck) tankers and water trailers. A CSB headquarters provided command and control to this element. The 307th FSB provided assets to augment the battalion trains to produce the provisional FSCs for each task force. To assist the battalion S-4s and HHC commanders, the FSB also provided a lieutenant to act as support operations officer. The composition of

these support elements is shown in the accompanying table.

The purpose of constructing the FSCs was to enable each battalion task force to be largely self-sufficient for five or six days of battle. The core of the package was made up of the battalion field and combat trains that provided command and control, water, medical, and organizational maintenance assets. FSB assets augmented the battalion trains to make self-sufficiency possible. Each unit carried or cached five-day supplies of water and rations. The addition of a palletized loading system truck to the FSC allowed the task force to keep rations uploaded to maintain maximum mobility. With the three cargo trucks, the infantry could move up to three platoons around the battlefield, adding to the units' tactical mobility. The tanker allowed units to operate for 48 hours before going to the BSC to refuel. The end result was a package that gave each task force commander a robust and mobile logistics base that could respond quickly to the maneuver companies.

To implement the FSC concept, planners first had to surmount the learning curve that is created whenever new doctrine is introduced. Four logistics nodes distributed around the battlefield with distinct FSCs in direct support to each task force is quite different from normal LOGPAC (logistics package) operations conducted by echeloned trains out of a brigade support area. Light infantry battalion S-4s and headquarters company commanders are not accustomed to maneuvering PLS (preservative, lubricant, solvent) trucks, fork lifts, and tankers. In addition, infantry officers felt that they were receiving a forward support company and not merely an augmentation to their own internal assets. It took some time to emphasize to them that their own trains formed the bulk of the FSC. This mind-set was important because these infantry officers needed to realize that these assets were theirs to task organize and maneuver on the battlefield. The actual implementation of Force XXI logistics will mitigate some of the problems, since the doctrine is projected to apply only to mechanized and ar-

Base Support Company	Forward Support Company x 3
C2 element from the CSB or FSB	C2 element (Bn S-4, HHC Cdr, FSB SPO)
Heavy maintenance support and recovery for the mechanized company	Combat and field trains
Light maintenance support team	3 x M149 water trailers
5 x 3,000-gallon fuel tankers	Battalion medical platoon
2 x 5,000-gallon water tankers	HEMTT fuel tanker
Transportation slice	DS maintenance support
- 2 x 5-ton cargo trucks	Transportation slice
- 2 x PLS trucks	- 3x 5-ton cargo trucks
- Rough terrain forklift	- 1 PLS truck for rations
Additional fuel assets (MOGAS, kerosene)	- Rough terrain forklift
Forward treatment team with FLAs	Point supply system (FAWPSS)

mored forces and each FSC is a distinct organization with its own command and control element.

There was some resistance to the FSC concept, although this abated as time went on. The advantages of increased responsiveness in support are tempered by the disadvantages of the increased signature these additional assets create in a battalion area of operations. Battalion S-4s now had to organize, protect, and maneuver a logistics base almost twice its normal size. The weather cooperated during the exercise, but some planners expressed concern over their ability to manage and maintain some 30 pallets of rations. Again, the implementation of this new doctrine will alleviate some of these concerns, since the FSC commander will be familiar with his own organization, and he will be able to train on its employment.

One other new condition introduced by this method of support was the addition of women in front line infantry battalion sectors. One FSC support operations officer was a woman, and each infantry battalion had three women serving in maintenance or driver specialties. This did not affect the quality of support rendered to the infantry units, but it did require some minor adjustments to accommodate a dual-gender force. FSC doctrine definitely means that the Army's leaders will have to look again at the issue of women serving at the forward line of troops.

The final assessment of the feasibility of the FSC concept by the OPFOR logisticians was positive. In the end, the advantages of responsiveness out-

weighed the problems of signature. The design for self-sufficiency was a success. Throughout the eight days that the OPFOR was in the maneuver box, units reported green on all classes of supply except ammunition. But limitations on Class V were really a function of training ammunition accounts, not a limitation imposed by the FSC concept. Bulk fuel and water were also potential shortages even though the increased organic liquid haul capability more than doubled the amount of time the unit could operate without resupply. Units anticipated and accounted for this challenge by increasing the use of five-gallon cans. Also, support platoon leaders were able to launch periodic transport missions to the base support company for wholesale resupply.

Rations were plentiful in both carried stocks and caches due to the increased haul capacity provided by the PLS trucks. Battalions could break rations to companies quickly by dropping off flat racks and retrieving them later. Self-sufficiency in rations also reduced the vulnerability of logistics operators. Shorter resupply routes to the forward companies and the elimination of the need for battalions to go to a BSA created fewer opportunities for enemy ambush or detection.

Direct support maintenance assets traveled with the trains and provided responsive support within the limitations imposed by having only the prescribed load list items that they could carry with them in their trucks. Each battalion had direct support maintenance for automotive, armaments, and

communications. As is often the case in training exercises of short duration, however, maneuver units did not bring many jobs to the attention of the maintenance operators, so the true worth of this asset was not tested to any significant degree.

The effect of the increased signature of the trains is difficult to assess. The U.S. enemy had virtually unlimited collection assets, and the survivability of any kind of trains was always doubtful. Three of the four logistics nodes on the battlefield were harassed or attacked almost daily. Since OH58D helicopters found anything with an antenna or a tent, the ability to hide was extremely limited. At least one FSC did jump frequently, somewhat validating the tactical mobility planners intended. But this tactical mobility was of limited value on a battlefield made transparent by a multitude of assets capable of finding and tracking movements. Future FSC commanders will need to get a

“front-line” mind-set and train hard to enhance survivability.

The forward support company concept, as applied during this exercise, provided some limited support for the new doctrine. Even with infantry logisticians unaccustomed to the doctrine or the assets, there was overall approval of this method of support. Extremely responsive support and increased self-sufficiency are powerful lures to maneuver commanders, and these advantages insured general acceptance of a new way of doing business. In practice, the delivery of support was simplified for logisticians at all levels. Battalions did not have to ask for assets, and brigade planners did not have to figure out how to get routine resupply packages forward.

The limits on the value of this experiment lay mostly in the fact that infantry logisticians implemented the concept of support with an ad hoc organization within an extremely short

planning and preparation period. An FSC commander with organic assets and established doctrine could certainly overcome many of the difficulties that planners encountered in this exercise. Furthermore, U.S. units working with the advantages of superior intelligence and air and ground dominance would be even more agile without the same level of worry over a relatively vulnerable FSC located close to the front lines. In all, forward support company doctrine appears to make sense for U.S. maneuver units.

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Deception and the MRB Defense

CAPTAIN KENNETH A. SPRINGER

The Soviet victory at the battle of Kursk in July 1943 resulted from the Red Army's ability to create a favorable correlation of forces while also maintaining exceptional operational security.

The Red Army was able to conceal strategic reserves and to mislead German aerial reconnaissance and signal intelligence as to actual troop dispositions in the defense, which allowed the Soviets to concentrate forces on the Kursk salient. Soviet intelligence provided early warning of the German offensive, and deception enabled the Red Army to prepare for the attack near Kursk while creating the impression of offensive efforts elsewhere. Red Army

commanders employed dummy troop concentrations—complete with deception radio nets, hundreds of dummy tanks in simulated assembly areas, and phony aircraft and airfields—to make the German Army think the Kursk salient had few or no strategic reserves. In fact, German intelligence failed to identify the Soviet strategic reserve concealed east of the city of Kursk, which created a force ratio of 3:1 in manpower and 1.5:1 in armor and set the conditions for a defeat of the German attack, as well as a deep penetration into German areas immediately following the attack.

Because of the success of deception

in operations such as Kursk, Red Army doctrine came to incorporate deception into all its operational planning. This tradition of deception operations became a key element of Soviet operational doctrine and currently occupies a similar position in the doctrine of the opposing forces (OPFOR) at the U.S. Army's combat training centers.

The OPFOR at the National Training Center (NTC) relies on deception operations to create similar favorable conditions on the NTC battlefield. The benefits of these operations, however, have varied from mission to mission, depending—as in other operations—on an analysis of METT-T (mission, en-

emy, terrain, troops available, and time). Overall, deception has proved to be a successful combat multiplier for the OPFOR and is an integral part of all OPFOR operational planning, both offensive and defensive.

The use of deception in the motorized rifle battalion (MRB) defense is the one units training at the NTC most often encounter. The MRB defense is also where the most resource intensive deception operations occur during that training.

The cornerstone of OPFOR tactical operations—Training and Doctrine Command (TRADOC) Pamphlet 350-16, *Heavy Opposing Force (OPFOR) Tactical Handbook*—discusses deception operations briefly under the heading of *Maskirovka*. The pamphlet provides a general explanation of this term and lists three goals for deception that Red Army commanders considered during World War II. A more thorough understanding of OPFOR deception tasks and the goals they seek to achieve comes from the literature of the former Soviet Union.

The Soviet Military Encyclopedia of 1978 describes the concept of *Maskirovka* as a complexity of measures directed to mislead the enemy as to the presence and disposition of forces, objectives, operations, and combat readiness, all of which contribute to the achievement of surprise for the actions of friendly forces, the preservation of combat readiness, and the increased survivability of objectives.

In sum, *Maskirovka* aims at causing the enemy to act, or refrain from acting, on a mistaken assumption, thereby preserving the operational freedom and combat power of friendly forces. The Red Army's dedication to deception operations was born of the success of employing *Maskirovka* at the operational level in such places as Kursk. The development of operational doctrine relied on deception to create a favorable correlation of forces at the decisive point on the battlefield.

OPFOR deception tasks on the NTC battlefield reflect this reliance on deception and acknowledge its potential for gaining tactical advantage over opponents on the battlefield. Knowing

what guides OPFOR deception, we can get a better appreciation of tactical techniques from our own doctrine. Field Manual (FM) 71-123, *Tactics and Techniques for the Combined Arms Heavy Forces*, identifies four deception tasks that the OPFOR also performs: the *display*, the *demonstration*, the *feint*, and the *ruse*.

The *display* is simply a static presentation created for enemy collection systems to focus on. It is the most basic element of OPFOR deception in the defense at the NTC. The *demonstration* is a show of force in an area of a supporting effort meant to deceive the enemy as to the location of the main effort. Contact with the enemy is avoided when conducting a demonstration and, unlike the display, the demonstration requires active participation. More complex is the *feint*, which is a limited

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objective attack making contact with the enemy to create the appearance of the main effort. Finally, the placement of false information in the hands of the enemy falls under the heading of *ruse*, and is normally outside the sphere of MRB operations, although the OPFOR uses this task as part of a large deception operation.

Of these four, the OPFOR primarily employs the demonstration and the display in the defense with complementary assets from the military intelligence (MI) company. With its limited resources, the MRB can accomplish these two deception tasks without degrading its defensive preparation. Before discussing these two tasks further, I want to introduce three principles that guide the MRB commander in his use of deception in the defense:

Deception tasks must be integrated

into the maneuver plan. Deception operations help delay enemy maneuver units and disrupt the synchronized enemy maneuver plan and decision cycle. As part of the Estimate of the Situation, the OPFOR commander provides guidance as to the deception objective for the upcoming mission. The staff also chooses a specific target for the deception (almost always a brigade commander) and coordinates with appropriate combat support elements such as the OPFOR MI company. Adhering to FM 100-5, *Operations*, OPFOR deception operations target "the enemy commander and the decisions he is expected to make during the operation." The OPFOR commanders, or the MI company commander, specifically target enemy collection assets such as battalion scouts, which will influence the overall deception target.

A good deception plan must be believable. A credible deception plan will let the enemy task force or brigade intelligence officer see what he wants to see. In other words, deception operations should try to portray the intelligence officer's concept of the enemy's situational template. This template and scout reports will influence the targeted commander the most, and when deception replicates what is likely and believable, it succeeds.

Deception operations must be properly resourced. The OPFOR devotes enough resources to its deception operations to make them believable. Engineer vehicles and support platoon assets are dedicated in the MRB defense. In his operations order, the MRB commander normally charges engineers, MRB reconnaissance, and a motorized rifle company (MRC) to accomplish certain deception tasks along with its survivability, countermobility, and reconnaissance tasks common to the defense.

For the OPFOR commander, the benefit of following these three principles is realized when a deception operation provides a necessary delay or disruption of enemy combat elements that supports the maneuver plan or even directly contributes to the destruction of the enemy. Equally, deception seeks to counter the enemy's initiative and pre-

vent him from massing overwhelming combat power at the decisive point on the NTC battlefield. Moreover, if a display or demonstration delays a maneuver force in a deliberate attack long enough to prevent the premature occupation of fighting positions in an MRB defense, precious combat power can be protected from enemy close air support (CAS) and indirect fire. Further, a display can delay a maneuver unit in an engagement area, serving the same purpose as a fixing obstacle, allowing MRB combat vehicles to engage the enemy with volley fire in a well-developed engagement area. But the success of the maneuver plan should not depend on the success or failure of a deception operation.

Deception serves to enhance the maneuver commander's ability to create a favorable correlation of forces in a given battle space with the maneuver plan based on direct fire. Deception also helps shape the battlefield along the same lines as special munitions, CAS, and indirect fires.

The OPFOR uses the following techniques with the *display* and *demonstration* tasks to create deception during an NTC rotation:

OPFOR *display* tasks largely affect enemy ground reconnaissance, but OPFOR commanders also factor in other collection systems the rotational unit may bring to the battlefield. In recent rotations, OPFOR displays have been intended to deceive aerial reconnaissance, intelligence and electronic warfare (EW) collection and jamming platoon operations, and brigade combat observation lasing teams (COLTs), as well as divisional cavalry and armored cavalry air scouts, particularly the OH-58D. OPFOR deception accounts for the enemy's ability to use airborne and ground radar, infrared and electro-optical collection devices, and simulated laser targeting devices. Common examples of OPFOR displays include simple scrapes in the terrain meant to replicate two-tier vehicle fighting positions, unserviceable T-72 visually modified (VISMOD) turrets replicating dug-in vehicle turrets complete with gun barrel, vehicle camouflage nets, thermal signatures from charcoal, bicycle re-

flectors, infrared chemical lights, or any combination of these simple displays.

The *demonstration* is routinely used along with the display. For example, a demonstration of vehicular movement in the deception area and deception radio traffic from the display location make a display appear all the more real.

Like displays in an MRB defense, OPFOR demonstrations usually involve engineer assets, MRB reconnaissance vehicles, unserviceable VISMOD turrets, and MRB combat vehicles to portray combat support operations (CSOP) or forward defense vehicles. As in the creation of a display in an MRB defense, the commander normally tasks his combat reconnaissance patrol (CRP) vehicles, as well as a designated MRC awaiting survivability and counter-mobility assets, to create deception. This usually requires two or three combat

OPFOR deception accounts for the enemy's ability to use airborne and ground radar, infrared and electro-optical collection devices, and simulated laser targeting devices.

vehicles from an MRC to assist the CRP demonstration and display.

Unlike a static display, the demonstration relies on activity in the deception area of operations. MRB vehicle activity in the deception area can come from the support platoon, helping to create the display as well from MRB combat vehicles on counterreconnaissance and those awaiting engineer support.

Generally, an MRB defense will use a mix of the demonstration and the display to create the desired effect identified in the MRB operations order. The two are by no means mutually exclusive. Again, communications security along with deception radio traffic can considerably increase believability. Ironically, the more effective and aggressive an enemy collection and jamming platoon is, the more helpful it can be in adding credibility to a deception

operation. The MRB, along with OPFOR EW assets, can assess the rotational unit's EW capabilities and factor them into the overall deception operation, using different levels of phony radio traffic to create misleading information, and consequently misleading intelligence, for the deception target.

Further, engineer assets critically enhance deception signatures in several ways. For instance, the M9 armored combat earthmover performs a critical function in preparing phony fighting positions, creating dust signatures, or simply demonstrating engineer support in the deception area of operations for enemy collectors. The commitment to resource deception tasks with engineer assets lends authenticity to the overall deception operation. The M9 normally comes from the movement support detachment (MSD) attached to the MRB in the defense. While the M9 is of limited use in preparing survivability positions in an MRB defense, it can significantly contribute to deception without degrading its mission capability during the battle. Additionally, such deception obstacles as single-strand concertina and phony antitank ditches, also a prime role for the M9 in the defense, may not appear convincing on close inspection. But if done correctly, they can create the illusion of a CSOP or MRC engagement area to distant ground and aerial reconnaissance.

Similarly, smoke, which traditionally helps in a screening or obscuring maneuver, can contribute to deception operations. The most familiar doctrinal applications of smoke on the battlefield are screening, obscuring, and marking, but smoking operations, on their own or along with other deception tasks, can confuse and mislead the enemy.

OPFOR missions have successfully used smoke alone on its own in a supporting area of the battlefield to create a situation in which units assumed that smoke was screening the main effort. Smoke has the potential for delaying and disrupting reconnaissance in this way. Likewise, smoke can degrade the ability of an advance guard company team to identify and close with the enemy, disrupting the synchronization of the maneuver plan. In a supporting

role, smoke can obscure displays and demonstrations to make them more difficult to identify.

Another illustration of the successful integration of deception tasks into the maneuver plan would be a demonstration that prompts an enemy commander to avoid a viable avenue of approach because of what he believes is there. Such demonstrations in the defense allow the MRB commander to focus his combat power on a single enemy course of action providing for minimal essential combat power to secondary efforts. In supporting economy of force missions such as this, demonstrations will also consume critical enemy reconnaissance efforts on misleading activity in an enemy named area of interest.

In a typical MRB defense, deception is created something like this: While engineer assets are working survivability positions and countermobility at the same time, CRP vehicles will be forward on counterreconnaissance. CRPs will supervise the emplacement of un-serviceable visually modified turrets to create a deception battle position. Depending on the time available, one or two M9s will create phony two-tier fighting positions for the turrets. These phony positions will have spoil on the sides and to the rear of the hole, replicating a hastily prepared fighting position. The position is usually only about six inches deep but roughly of the same dimensions as an M551 Sheridan fighting position. The turret is placed as if it were on the firing platform, and a thermal signature (created by charcoal with a metallic reflector) is placed inside the turret. Ideally, turrets are emplaced just before EENT (early evening nautical twilight) with thermal signatures created immediately afterward. Deception positions have been convincing enough for COLTs and fire support vehicles to target on numerous occasions for precision guided munitions such as Copperhead.

This deception's benefit in terms of force protection cannot be overstated. Deception radio traffic to the deputy MRB commander from different locations in the deception battle position provides additional signatures for collectors. A CRP vehicle normally does

this while supervising the preparation of deception positions. Vehicular traffic from hide locations to the deception battle position is provided by the MRC tasked to aid in the deception. These vehicles replicate repositioning rehearsals and routine traffic to and from hide positions. Vehicle camouflage nets may also be erected in deception hide positions to attract enemy indirect fires and aviation assets concentrated on the deep battle. Markers such as VS-17 panels and engineer tape are placed forward of the battle position to replicate target reference points (TRPs) in an engagement area and add to the authenticity of the position.

Except for the M9s of the MSD, no more than two vehicles at any given time are involved in deception tasks. Discarded concertina wire may also be emplaced in a single strand forward to provide an obstacle signature. If time permits, the MRB chooses to construct a more elaborate obstacle. The OPFOR records all deception positions using a global positioning system, which also enables the deception positions to act as TRPs for OPFOR indirect fires.

Other deception tasks depend on the terrain, the time available, and the MRB commander's intent for deception. Deception antitank ditches cutting through an avenue of approach surrounded by constricted terrain have been created using M9s from the MSD. The phony ditch, along with deception turrets, created the illusion of a CSOP overwatching an obstacle forward of the MRB's main defense. In this instance, the engineers dug the ditch to a depth of about 12 inches, pushing as much of the spoil as possible to the friendly side of the ditch to create a berm large enough to provide a believable signature. Additionally, a CRP vehicle supervised the positioning of the phony turrets in locations that were suitable for fighting positions but could be detected as overlooking the obstacle by enemy collectors.

In a recent rotation, an MRB had enough time and resources to create an authentic antitank ditch as part of a deception CSOP. The ditch augmented limited mines and wire and served to establish an engagement area for one of

the MRC battle positions. The dedication of engineer assets to this deception made this display so convincing that the enemy templated it as a real CSOP and focused considerable firepower on neutralizing it.

Yet another MRB deception task attempted to portray an MRC battle position at the end of a narrow valley to prevent the rotational unit from choosing this as a possible avenue of approach. The operation used elements of both the demonstration and the display. The MRB used phony radio traffic in the deception area of operations and OPFOR EW monitored traffic from enemy intercept assets to evaluate its success. In this case, two OPFOR vehicles really were dug in to cover the approach, but deception turrets, a phony wire obstacle, and additional vehicle traffic created the appearance of a full MRC battle position. The MRB's reconnaissance vehicles provided counterreconnaissance to distance potential enemy collectors from the deception area with early warning coming from regimental scouts far forward.

In the end, OPFOR deception operations in support of the ground maneuver plan provide an exceptional combat multiplier. OPFOR deception is rooted in the Red Army's successful operational doctrine in World War II, emphasizing deception as an integral part of shaping the battle space and concentrating forces at the decisive point on the battlefield. Although simple and limited in scope, OPFOR deception operations at the NTC succeed because they are believable, well resourced, and well integrated into the maneuver plan. Ultimately, OPFOR deception seeks to make the enemy act, or fail to act, long enough to create conditions favorable to victory on the NTC battlefield.

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Brazzaville—The Congo

Dying Cities in An Unknown Civil War (1997)

ADAM GEIBEL

The four-month long 1997 Civil War in the Republic of Congo is a case-study in urban combat, since more than 62.5 percent of the Congo's more than three million people lived in cities. These citizens could be found in the capital, Brazzaville (1,059,000), the economic capital and coastal port of Pointe Noire (647,000), and Doilise (with 80,000 residents or half of the Congo's remaining urbanites, the Congo's third largest city).

Roads are rare in the Congo and air-fields more rare. The Congo River is one of two major national thoroughfares, and the 520-kilometer Congo-Ocean line between Brazzaville and Pointe Noire is the other. Congo-Brazzaville has had a violent history since receiving its nationhood in 1960. There have been a dozen coups, aborted coups, and one miniature civil war, as well as eight presidents. Four leaders were overthrown, one was assassinated, and another was executed.

Denis Sassou Nguessou ruled from 1979 until 1992, when democratic change swept parts of Africa after Soviet communism collapsed in Europe. Nguessou's African-style Marxism got along very nicely with Moscow, and, in his day, with French President Chirac.

In 1992 Pascal Lissouba was elected president in the country's first democratic elections, ending Nguessou's 13-year military rule. Lissouba inherited an economy

that was in critical condition and a country with a badly damaged infrastructure.

In the years following the election, both men built personal militias and attempted to incorporate them into the Federal Army. These lightly armed, generally undisciplined units would become the kindling for open warfare five years after Lissouba took office.

Since other nations relied on the Congo's natural resources, the civil war could not be fought out in a vacuum. One of the strategic power generation centers in the area is the Inga hydroelectric complex; its two dams which generate up to 2,700 megawatts of electricity out of an installed capacity of 100,000 megawatts are located on the

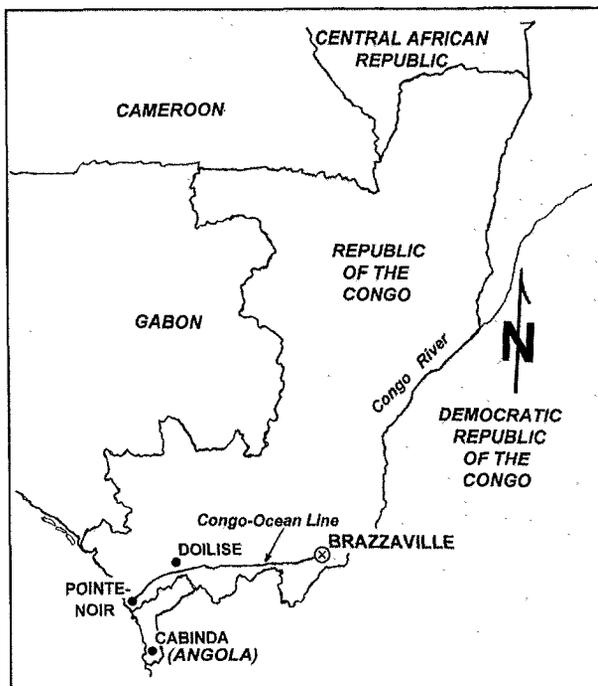
Congo river, one about 250 kilometers downstream from Kinshasa and the other about 50 kilometers upstream toward Matadi, the country's major seaport. Throughout the civil war, the Inga complex was operating at 35 percent of capacity (slightly above 1,500 megawatts) due to Congo's economic hardships. But Inga still supplied power to Kinshasa and the mining companies of Katanga in southeastern Congo, as well as northern Zambia and several countries in southern Africa.

The Congo was also Africa's fourth-largest oil producer and had vast untapped reserves. French and U.S. oil companies naturally took an interest in developments, but the standard of living was low and, since the nation was poor, some Congolese barracks didn't even have beds.

Lissouba began the war on an apparently firmer footing than his rivals; with the power of the Federal Army behind him, possession of the country's military bases, rail line, and major urban areas, as well as the country's bank accounts. But Nguessou, a northerner from a minority tribe, needed the support of the center and south of the oil-producing former French colony if he was to consolidate his hold over a nation with a history of bitter political and ethnic rivalry.

The Civil War Starts

On the night of 4-5 June 1997, the Cobras, militia loyal to former president Nguessou, resisted



a Congolese Army attempt to arrest two members at Nguessou's residence in the northern Brazzaville suburb of Mpila. The men had been accused of fomenting unrest in the Cuvette region (northern Congo) in May. The Army unit that was sent was outgunned and within hours, the city echoed with gunfire as the Cobras and the Zulu militia loyal to Lissouba took up arms. By midday, fighting between the Cobra militia loyal to Nguessou and the troops and Zulus had spread from the northern districts of the capital to the city's center.

Within hours, Brazzaville had turned into a dangerous, chaotic field of gang warfare, fiefdoms, and marauding freelance gunmen. Most of the fighting took place along the streets of Poto-Poto, Moundali, Plateau, and Moukondo wards. Law and order broke down completely, the remnants of what used to be the national army fractured into ethnic-based factions loyal to regional warlords.

Two days later, any part of town had become a hazard—except for the still-neutral Bacongo. Munitions were obviously not in short supply. The Cobras seized the naval base on the Congo River and an armored regiment camp at Mpila shortly after hostilities broke out, where Nguessou's residence was located. Nguessou's forces received additional artillery pieces from Gabon.

Strange lulls would occasionally take place while the city was being sacked. At one point Nguessou's Cobras and their arch enemies the Zulus were looting Brazzaville's largest supermarket at the same time, so absorbed in plundering that they forgot to fight each other.

Nguessou's militias cut Brazzaville in two from the 7th to the 9th of June, using mortars, machineguns, grenades, rocket-propelled grenades (RPGs), and tanks inside the city. Roadblocks sprang up across the city, and the government declared a dusk-to-dawn curfew. Lissouba's forces moved reinforcements into Brazzaville's center on the night of 7-8 June, with light tanks firing salvos of rockets on the working-class districts inhabited by Nguessou supporters.

With several thousand foreign nationals in the city, a French-American-

Belgian team was formed to airlift them out of harm's way. French units quickly moved into Brazzaville's Maya-Maya International Airport and set up an operations center at the aero club. Although the airfield was ostensibly out-of-bounds for the warring sides, Congolese militia units frequently fired over the site or fought close to it; some positions were placed only 100 meters away.

A scheduled Air France flight that was canceled on the 6th was able to leave the next day with 90 passengers on board. One French soldier was killed and five wounded in clashes with militiamen on the night of the 7th. While heavy weapons fire continued in central Brazzaville on the morning of the 8th, the evacuation of French nationals from danger areas under military escort also continued. They were escorted to official French locations in the city, in particular the French Embassy and the cooperation mission. The American airlift of expatriates was suspended because of the fighting, and an American diplomatic vehicle was shot at on the 8th.

Liaison officers of the regular Congolese Army helped French troops on the ground, but no evacuation order had been given for the 2,000 or so French nationals who lived in Brazzaville. They had been advised only to stay at home and keep in touch with the embassy by telephone.

About 500 French troops from other bases in Africa were due to arrive in Brazzaville on the 9th to back up the 450 already there. Six French light armored vehicles had to be flown in from Chad to ensure convoy protection to retrieve the remaining expatriates in the city.

By the evening of the 11th, the Brazzaville airport had become a strategic point for everyone in the Congo. The French Army had evacuated about 500 civilians aboard 12 planes, and the UN had chartered two planes to evacuate more than 200 personnel of the World Health Organization.

The 15th was the last day of the evacuation operation. Five rotation flights to Pointe-Noire and Libreville were scheduled, four by the French

Armed Forces and one by the UN, to evacuate the last foreigners from Brazzaville.

The War Continues

On 5 July, both sides agreed to a cease-fire. Nguessou's spokesman, however, accused Lissouba's forces of continuing to reinforce their military positions by sending tanks and Liberian mercenaries as well as UNITA (Jonas Savimbi's National Union for the Total Independence of Angola) soldiers up from Pointe Noire. The rail line running east to west through the city became the dividing line between the militias. By 9 July the Cobras controlled two-thirds of the capital. While outnumbered, they proved to be better disciplined than their opponents.

Indecisive fighting in Brazzaville continued throughout July and August and into the fall, despite several attempts at diplomatic solutions. A UN peacekeeping force recruited from neighboring countries was also discussed, but it never materialized because the situation never stabilized enough for it to be deployed.

Final Offensive

The situation around Pointe Noire over the 11-12 October weekend became unclear when the governments of Congo and Angola accused each other of aggressive moves. The Congolese military command asserted that Angolan troops had crossed the border, but Lissouba's forces claimed that the invaders were subsequently repulsed. Luanda, meanwhile, accused Congo of attacking Angolan territory.

On the 12th, Congolese troops were accused of having intercepted a column of Angolan soldiers in the southwest en route to Doilise (100 kilometers from Pointe Noire), and a complaint was lodged with the UN Security Council. Colonel Louembe, commander of Lissouba's Pointe-Noire Military Region, made the decision to surrender the economic capital, and thus spared it from futile destruction. The Pointe-Noire mayor's "Requin" (Shark) militiamen also avoided a fight with the invading Angolans.

About 1,000 Angolan troops, backed

THE PREWAR CONGOLESE REPUBLIC ARMY

The following figures represent the open-source estimate of the prewar Congolese Republic Army. Presumably, not all of the major weapon systems worked. And it was difficult for media sources to track new shipments of small arms and light weapons during the course of the war.

While the Congolese Army was trained and modeled on Soviet forces for internal security rather than on force projection, it was a shaky organization even before the 1993-94 mini-Civil War. The prewar muster strength was about 8,000, with most units seriously under-strength and much of the equipment

presumed to be unserviceable. Eastern Bloc and Cuban advisors were withdrawn in the early 1990s. The army was traditionally recruited from the Mbouchi Kouyou area in the north. While a Presidential Guard battalion had been forming, the armored battalions were little more than strong companies.

Infantry battalion groups included the infantry battalion (apparently organized on the Eastern Bloc standard), a signals platoon, a light tank troop (3 x PT76 or Type 62), an artillery battery (generally eight tubes), an engineer troop, and a logistics group.

Infantry weapons included various

9mm submachineguns, 7.5mm MAS 49/56 and M24/29 light machineguns (LMGs), 7.62mm NATO FN-FAL, and CETME 58 rifles, 7.62mm AK47-AKM, RPD and RPK LMGs, 7.62x54Rmm RP-46, and 12.7mm DShK HEAVY mg. Support weapons included 57mm M18 recoilless rifles and RPG-7s.

The civilian police mustered a pre-war strength of about 2,000, with 20 companies scattered across the country. During the course of the fighting and afterwards, they appeared to be a force quite independent of the army.

UNITS

Two Armored Battalions
Two Infantry BN Groups
One ParaCommando Battalion
One Artillery Group
One Engineer Battalion
Independent Infantry Bn
Signals Bn (-)
Supply/Log. Bn

MAJOR EQUIPMENT

TANKS:

20 x T-34/85
11 x Type 62 Lt. Tanks
5 x PT76
15 x Type 59
25 x T-54/55

VEHICLES:

25 x BRDM-1/2
50 x BTR-50/60/152
10 x OT-62

ARTILLERY:

82mm Mortars
82mm Mortars
10 x 120mm Mortars
6 x 75mm M116 Pack Howitzers
57mm ZIS2 ATGs
76mm ZIS3 ATGs
10 x 100mm M1944
85mm Type 56 Field Guns
8 x 122mm M30 (M1938)
122mm Type 54
122mm D-30
130mm M46
122mm BM21 MRL (about six)
(About 50 working field guns total)

ANTI-AIRCRAFT SYSTEMS:

14.5mm ZPU-2/4
8 x ZSU-23-4
28 x 37mm M1939
57mm S-60
100mm KS-19

2 x Alouette III
2 x SA 316
2 x AS 365C

AIR FORCE:

22 x Combat Aircraft
9 x helicopters

Captured at Pointe Noire's
Agosino Neto airport military
annex (12 October 97):

One operational Mi-24, one Hind
being assembled
Three Mi-8 'Hips'
Two small Antonov transport
planes (both operational)
One MiG-21 being fitted out and
Five MiG-21s needing serious
repair
Two BRDM armored cars
Ten dilapidated MiG-17s

by armor, attacked Doilise, which would cut Lissouba's soldiers off from Loudima, a strategic town in the economically important region 400 kilometers from Brazzaville.

Also on the weekend of 11-12 October, Bernard Kolelas, former prime minister under Lissouba threw in his Ninja militia on Lissouba's side to recapture Brazzaville's airport, but this combined force was not able to stop the Angolan/Nguessou sweep through Brazzaville's southern suburbs. When Brazzaville's Maya-Maya airport was taken by Nguessou's forces, Angolan troops were reported there. The Cobras also destroyed two Hind helicopters during the battle for the capital's airport.

On the morning of the 13th, Lissouba loyalist units began a two-hour long

helicopter rocket attack on Cobra units that had taken control of the international airport on the 10th. A Nguessou MiG-21 retaliated on government positions in southern Brazzaville's suburbs, killing about 20 people, mostly soldiers.

Angola's ambassador originally told the UN that Angolan forces had mounted hot-pursuit raids into Congo-Brazzaville on 13 October against UNITA and then returned to their base in the oil enclave of Cabinda.

When the Cobras, with the help of some of Kolelas's men who had switched sides, took the presidential palace and the last pocket of resistance fell around midday on 14 October, the Battle of Brazzaville was over. Many of Nguessou's units ended the war grouped on a bridge marking the southern edge of the capital.

Nguessou loyalists claimed that they had been greeted as "liberators" in parts of the city formerly under the control of government forces. While dozens of Ninjas fell in the last battle, very few Nguessou militiamen were killed, because they had been preceded by several tanks (type and number unspecified).

On 15 October 1997, after five months of civil war, General Sassou Nguessou returned to power. President Lissouba fled Doilise, where he had been holed up since fleeing the capital, and after a brief stopover in Togo, arrived in Burkina Faso on the 19th, where he was offered refuge on "humanitarian grounds." Lissouba was last in Burkina Faso on 3 October, at the height of the war, to plead for Burkina Faso troops to take part in an African

Faso troops to take part in an African intervention force. This, of course, never materialized.

The Angolan troops suffered higher casualties than expected, and it was unclear whether their equipment was flown home or redeployed in other parts of Congo-Brazzaville where pockets of fighting continued as the Cobra militia units tightened their grip on the country.

Arms Resupply

Arms deliveries by way of Angola, Gabon, and Senegal made it possible to equip Nguessou's militias, both before and during the height of the civil war. On the very day the war started, tons of very heavy cases (and T-shirts) took off from the Le Bourget airport in Paris and made a stopover in Franceville, Gabon, before Nguessou's men took delivery of them.

In August 1997, Lissouba got six Mi 8 and two Mi 24 helicopters (other reports limited to four Russian gunships, type unspecified). Lissouba's camp used the oil revenue regularly paid to the Congo presidency to buy the helicopters and pay Ukrainian pilots. Other equipment (such as light tanks and smaller artillery pieces) were expected from Russia and Belarus, but had not yet arrived when Brazzaville fell.

Around the same period, Nguessou's militia got MiG-21s and SA-7 MANPADS surface-to-air missiles. Angola had been funneling weapons and logistical support to the Cobras, apparently in retaliation for Lissouba's support to UNITA.

The Angolans offered the port of Luanda to receive nearly 200 tons of Brazilian arms, which were forwarded through Gabon to Sassou's supporters. Western aid agencies and news services alleged that both sides recruited professional soldiers, including Israelis, Rwandan government forces (FAR), Hutu Interahamwe militia, FAZ (former Zairian President Mobutu's Army and Presidential Guard), Gabonese, Chadians, Moroccans, Central Africans, and also Libyans, as well as Liberians and

Angolan UNITA rebels. Whether these were employed as trainers, unit leaders, or weapons systems specialists (save for the Ukrainian helicopter pilots) was never specified.

A South African firm was also accused of being involved, but publicly denied the allegations, as such support would be contradictory to their existing contracts with Luanda. At the end of the campaigns, some Russians, French, and Belgians were held on suspicion of aiding Lissouba in Pointe Noire. Most claimed to be civilian cargo pilots and apparently were later released.

Lessons Learned

Tactical information from this war is sparse and, since this account was taken from open sources, back-filtered through a wide variety of journalists. From the very first firefight, Lisbon's Army and his "cookies" militia were not prepared to fight a determined opposition in either a conventional or a guerrilla war.

Most of the fighting during the June-October period was limited to the capital and its surrounding suburbs (this later changed drastically with the renewal of fighting in December 1998). Predictably, the war caused an overnight refugee problem as the already strained city services completely collapsed. The economic capital of Pointe Noire managed to stay neutral, because it was far removed from the tribal dividing line and had vocal representatives of the civilian population.

Since regular army units were few, the Congo Civil War could be more accurately described as "conventional mob warfare." Limited television footage showed unidentified fighters using the "spray and pray" method of fire control and in particular Lissouba's forces, both militias and Army units, were continually referred to as undisciplined. While both sides looted, Nguessou's fighters were apparently less distracted. Major weapon systems, such as tanks, helicopter gunships and fighters, were committed in small groups and

most frequently as individuals. Tanks were used without finesse, as little more than mobile artillery, and coordinated attacks were apparently beyond the capabilities of most commanders. The RPG, mortar, and artillery piece dominated Brazzaville's battlefields.

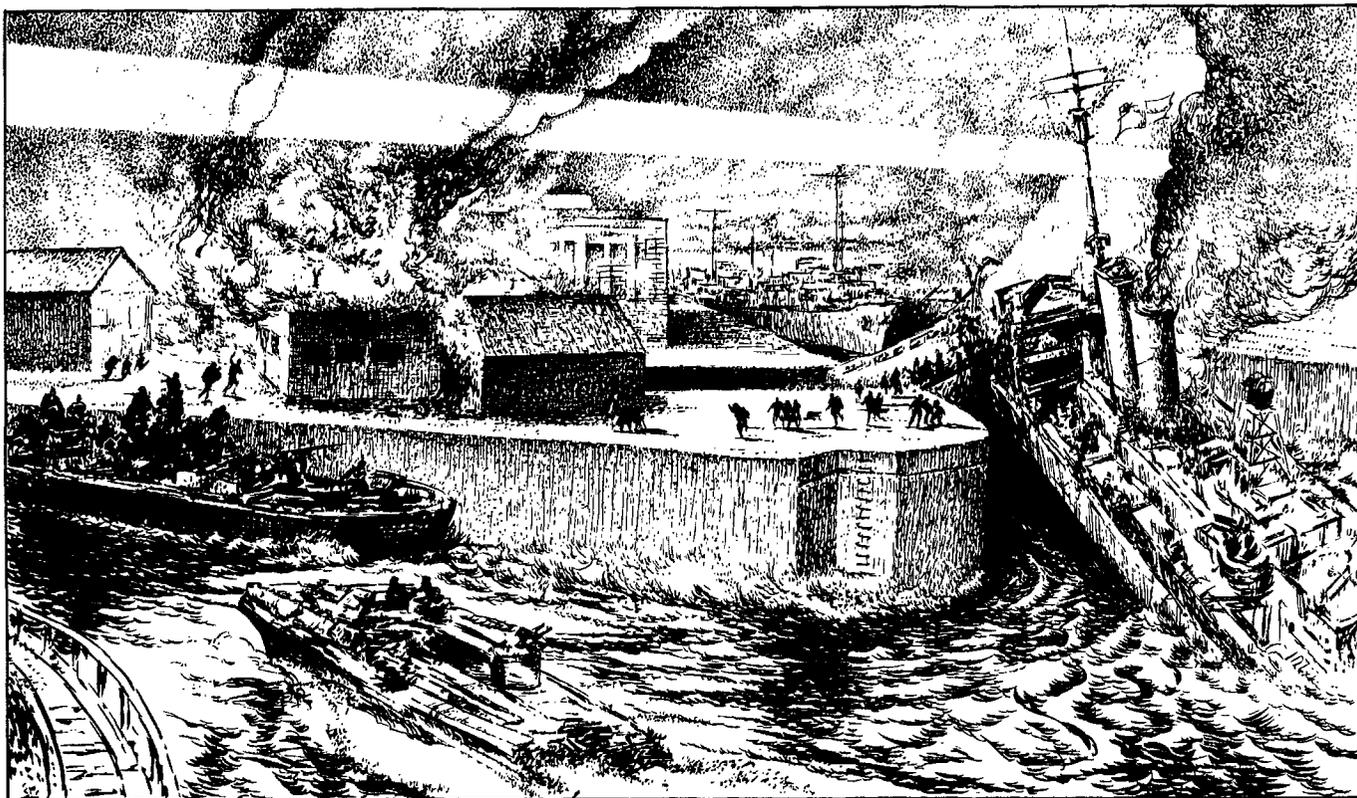
Save for the Ukrainian Hind pilots and crews, the effectiveness of non-native and "professional" soldiers is impossible to determine as of this writing. But if they had been truly effective, one side or the other would have developed a clear advantage before the Angolan ground offensive.

The Angolan decision to commit a ground force—roughly one infantry regiment with one attached tank company—turned the tide in favor of Nguessou. Battered as it was from nearly 25 years of constant fighting with the rebel UNITA, the Angolan Army had accrued substantial combat experience. Attacks, in conjunction with Nguessou allied units, appeared coordinated with what little air support could be mustered from Nguessou (the Angolan Air Force's own combat and transport assets were bogged down dealing with UNITA and supporting their ally Kabila in the Democratic Republic of Congo).

It didn't take much to roll up Lissouba's units, even when neutral militias threw in with the doomed President. Like many wars, however, the real problems came after the shooting stopped on 15 October 1997.

Fighting flared again in December 1998, and still gives no signs of abating.

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The Raid on St. Nazaire

Special Operations Planning

CAPTAIN FRANK K. SOBCHAK

On the night of 27-28 March 1942, British Commandos conducted a raid on St. Nazaire, France, to destroy the port's dry dock and related facilities. Although this attack accomplished its mission, a review of historical data shows that it did so at the cost of inordinately high losses in men killed, wounded, and captured among the attacking force.

The Combined Operation Command, the World War II British equivalent of the U.S. Special Operations Command, had chosen St. Nazaire in early 1942 as a strategic target in an effort to influence the war at sea. At that point, England was being strangled by German control over the sea lines of communication. German submarines, surface raiders, and warships were causing almost insurmountable casualties among the British and American merchant marines. In the first six months after the United States entered the war, six German U-boats sank more than half of the total U.S. Merchant Marine tonnage.

To make matters worse, the Germans had successfully sailed their last large battleship, the *Tirpitz*, to Trondheim, Norway, to protect her from British strikes. The *Tirpitz* displaced 45,500 tons and was as large as any British battleship.

Her sister, the *Bismarck*, had caused a monumental ship-hunt in 1941 when she went to sea and sank the British battle-cruiser *Hood*. Because of this lurking threat, England maintained several ships on quick standby in case the *Tirpitz* sailed, thus tying down ships that were desperately needed elsewhere. Winston Churchill, Prime Minister of England, wrote, "The whole strategy of the war turns at this period to this ship which is holding four times the number of British capital ships paralyzed, to say nothing of the two new American battleships retained in the Atlantic."

Fortunately for the British, there were few ports where such a large ship could be repaired and serviced. St. Nazaire, France, the battleship's home port (Map 1), had both the only dry dock large enough (85,000-ton capacity) and the only trained labor able to service the *Tirpitz*. Since the port could not be eliminated through airpower (the bombing accuracy of World War II aircraft left much to be desired), commandos were chosen to eliminate the target.

A scant one month before mission execution, the leaders of the raid, Lieutenant Colonel A.C. Newman and Commander R.E.D. Ryder, were ordered to begin planning and

preparation. After working through many problems, they settled on a plan whose mission was generally as follows: Number 2 Commando (Ryder's unit) with attachments would conduct a raid on St. Nazaire by 30 March 1942 to destroy the dry dock and other port facilities in order to deny its use to the *Tirpitz*. The attachments comprised members of 1st, 3d, 4th, 5th, 9th, and 12th Commandos, a total of seven different units.

The Commandos were chosen because they were an elite force whose specialty was striking from the sea. They were highly trained and motivated, all volunteers with superb physical conditioning and training. Their emphasis on fitness was so intense that "weekly marches exceeding 50 miles were said to be routine. One troop marched in fighting order 63 miles in 23 hours and 10 minutes."

The plan involved 19 naval vessels and 611 personnel (257 Commandos and 354 sailors) who would sail six miles up the Loire River to St. Nazaire. The river had a dredged channel, but many German ships, along with French fishing trawlers (potentially carrying Vichy French sympathizers) were expected to be traveling down it. Consequently, a route was chosen that passed over shoals so shallow that, after the war, professional Loire River pilots could not believe it had been possible. Additionally, high tide was selected for the mission to aid in the infiltration.

The port of St. Nazaire itself had a population of 50,000 in addition to its German defenders, and was divided into three main parts, the old town, the new town, and the port (Map 2). The port was made up of the dry dock and two basins to berth ships and protect them from the effect of the tides (through their locks and caissons).

The Naval Flotilla

The flagship of the 19-ship flotilla was the *HMS Campbelltown*, a heavily modified ex-American World War I four-stack destroyer. The draft of the destroyer had been reduced from 14 feet to 12 feet by removing all unneeded equipment. Additionally, hidden in her bow were nearly five tons of explosives, encased in concrete for protection against a crashing stop. The *Campbelltown* also acted as the insertion means for approximately 80 to 90 Commandos.

The attackers also included a combination of 16 motor launches and torpedo boats, which were 112 foot-long boats that could carry approximately 15 Commandos each. The naval command ship was a motor gunboat (also basically a small patrol craft), which carried Commander Ryder and his small staff. The fleet was rounded out by a motor torpedo boat, a 68-foot boat that had been specially modified to carry two time-delay torpedoes, each with a 1,800-pound warhead.

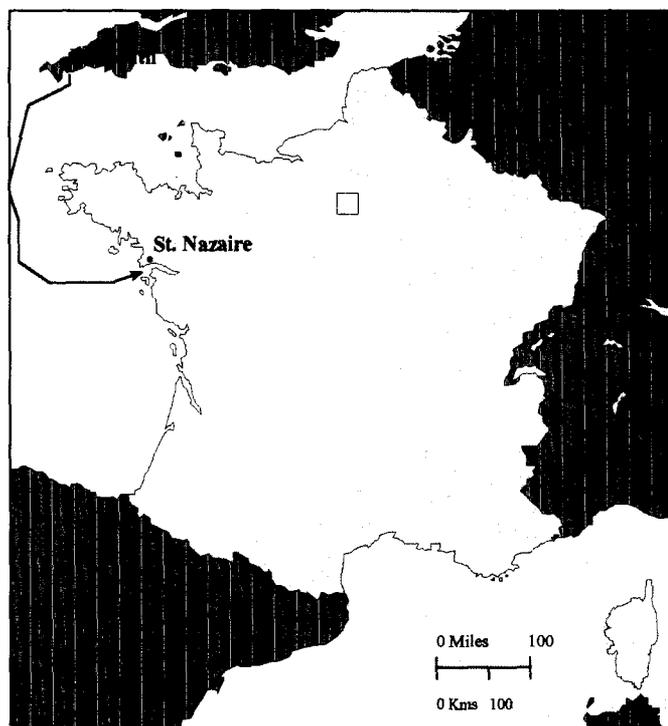
An extensive deception plan was prepared to help achieve surprise: Once the mission started, all vessels would fly the German naval flag until they were fired upon. To further help confuse the enemy, the *Campbelltown* had two funnels removed and two cut off to look like the raked-back stacks of a German *Moewe* class destroyer. A German-speaking Commando was also placed on a signaling lamp in case the Germans tried to signal the flotilla. Finally, a demonstration was planned in the form of an air raid on St. Nazaire. The

planners thought that such a strike would divert German attention and allow the Commandos to sneak in undetected.

To further ensure the element of surprise, tight security measures were employed to maintain operational security. During the rehearsals for the mission, the Commandos practiced on British port facilities similar to those at St. Nazaire. They were told, however, that they were practicing for the possibility that they would later have to destroy their own ports to prevent them from falling into German hands (the possibility of a German invasion in 1942 was still quite real). Shoulder flashes and all signs of Commando identity were removed also during the train up. Additionally, very few officers were told about the demolitions in the bow of the *Campbelltown*, to prevent the Germans from attempting to disarm it.

Once the flotilla had arrived at the St. Nazaire harbor, the *Campbelltown* would ram the dry dock gates, and her crew would scuttle the ship while the Commandos disembarked using rope ladders. The motor launches and torpedo motor launches would then disembark their Commandos at a pier known as the Old Mole and at the gate entrance to the old entrance to the Normandy Basin. The commandos would then proceed to carry out the demolition of their own targets before returning to the boats.

The commandos originally had only three targets, a North and South winding house (which opened and closed the caissons to the dry dock) and the pumphouse (which pumped water into and out of the dry dock). Sometime during the planning process, however, eight other targets were added, for a total of eleven. These additional targets included fuel storage tanks near the dry dock, swing bridges at the old entrance and the entrance to Penhouet Basin, lock gates at the old entrance, two fixed bridges at the main entrance, and two lock gates at the main entrance. The planners targeted



Map 1

bridges because they thought if the bridges were destroyed they would fall into the water and possibly block shipping. The lock gates were selected because their destruction would open the port to the effects of tides, seriously hampering its effectiveness.

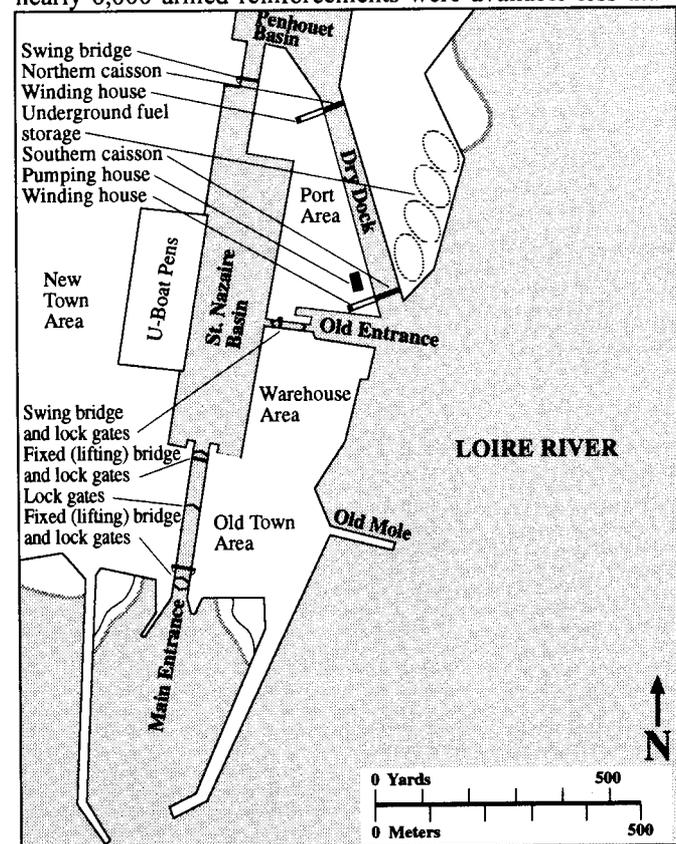
Task Organization

Colonel Newman task-organized the Commandos into three groups for each target: assault, protection, and demolition. The assault element acted as the outer ring of protection. Their purpose was to make contact with the enemy and clear the route for the other two elements. The protection element provided the inner ring of security, staying near and guarding the almost defenseless demolition element. The demolition element carried only pistols for self defense, but carried 90 to 95 pounds of explosives to strike at their targets. The Commandos, armed with Thompson submachine-guns, and Bren and Lewis light machineguns, were as well-armed as their German opponents.

Once the Commandos had destroyed their targets, they would return to their original landing site and reboard the launches. During the exfiltration, the motor torpedo boat would fire its time-delay torpedoes at the old entrance. Hours later, both the demolitions from the *Campbeltown* and the torpedoes would explode.

Enemy Situation

The German opposition was composed of approximately 300 Army guards and an unidentified number of armed Navy and Merchant Marine sailors. To make matters worse, nearly 6,000 armed reinforcements were available less than



Map 2

two miles away with very short reaction times. (Although these troops did not compare with the Commandos in morale and general fitness, they were heavily armed with a variety of infantry weapons.) The port was further protected against both air and naval attack by numerous guns and cannons. At least 23 anti-aircraft guns (25mm to 40mm), and 33 artillery pieces (70mm and up) were available to fire on the British raiding force, along with six searchlights to direct fire during the night (Map 3).

Rehearsals

The Commandos conducted limited preparations in the one month they had before the operation. They took their demolitions teams to three different British ports to practice the calculation and placement of charges, but they never did any live demolition training against port facilities, relying instead on the principle that if you put a lot of demolitions on one target, you would certainly destroy it. When the commanders finally put together their entire force (only one week before the operation, causing massive confusion), they chose to do a rehearsal with less than half of their forces. To make matters worse, this rehearsal discovered many problems that were not corrected before the deployment. First, they found that they had extreme difficulty docking quickly and getting the Commandos off the motor launches onto the piers. They also discovered that they had monumental problems controlling the multiple elements. To add insult to injury, their assault force was beaten by the British Home Guard, a force not noted for its training, equipment, or tactical skills at that time.

Intelligence

In spite of other weaknesses, the intelligence available for the operation was outstanding. The raid leaders had extensive authority to re-task aerial reconnaissance aircraft, and were able to get a large amount of imagery for the mission. From this imagery, they built a scale model that would help all personnel mentally rehearse and learn where they would be moving. The commandos gained access to the Cardiff dockmaster, who provided much useful information on how and where to place charges to close a port. The planners also received reports from members of the French Underground showing the exact location of the port's defenses. According to William H. McRaven, in his book *SPE OPS: Case Studies in Special Operations Warfare Theory and Practice* (Presidio Press, 1995), "The contractors who built the British dry dock *King George V* were the same ones who built the Normandie dry dock," and their information, made available to the raiders, basically gave them a blueprint of the port. This intelligence contributed greatly to the mission, because it helped acquaint the Commandos with the area so that they could accomplish their missions faster. The planners also received highly accurate hydrographic data for the river area, which would prove critical on the infiltration (and which became the reason for decreasing the *Campbeltown's* draft).

Execution

Unfortunately for the British, their execution did not go as

smoothly as their plan. The mission, originally planned for 30 March 1942 was moved up to the night of 27-28 March because of favorable weather and tide conditions. Unfortunately, for security reasons, the bomber pilots who were supposed to execute a demonstration were never told the purpose of their attack. When they discovered that the target area was obscured by heavy clouds covering the area, the bombers withdrew, to avoid endangering the civilian population by indiscriminate blind bombing. This alerted the German commander in the area, who put his troops on alert, warning, "The conduct of the enemy aircraft is inexplicable and indicates suspicion of parachute landings" (McRaven).

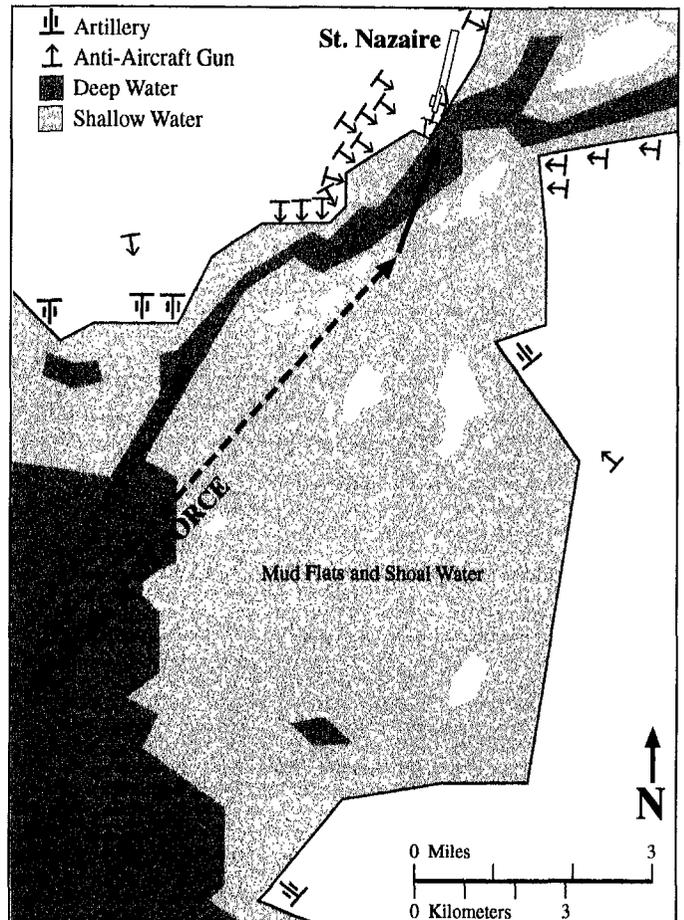
The modifications to the *Campbeltown* and the tide and water data proved critical, allowing the vessel to get within the harbor itself despite two scares when the ship slowed as she scraped over sandbars. Once inside the harbor, she was challenged by the Germans. A German-speaking Commando flashed a message identifying the flotilla as German and asking permission to enter the harbor as they had just been engaged by a British force. This deception and the ship's appearance worked for a short time, until they were challenged again. This time, Commander Ryder signaled with a flare gun, buying them more time. The Germans soon got edgy and some forces opened fire on the *Campbeltown*. The same Commando signaled them to cease fire, that they had engaged friendly forces. This again stopped the Germans, every second enabling the British to get closer to their target. By the time the Germans finally opened fire, it was too late; within seconds, the *Campbeltown* crashed into the gate of the Normandy dry dock at 0134; only four minutes later than had been planned.

The Commandos disembarked, but had problems getting the *Campbeltown's* motor launches into the water. The pier at the Old Mole and the dock near the old entrance were so constricted that they could take only one or two boats in at a time to disembark the Commandos. The rest of the small, lightly armored boats had to loiter in the middle of the bay, nearly defenseless before the German arsenal of artillery and antiaircraft pieces. Many launches were sunk even before they could get their precious cargo to shore, drowning Commandos in their heavy gear amid the fire and oil from the wrecks.

The Commandos who got ashore fought hard and destroyed five of their targets—both winding houses, the pump house, the fuel storage tanks, and the swing bridge at the old entrance. Despite massive confusion and a total breakdown in command and control, at the designated exfiltration time, the Commandos began to make their way back to the piers. Some troops were evacuated, but by that time (two hours after they arrived) all but six launches had been sunk. Although six boats had left the port, two were caught and destroyed by German naval destroyers, and two more were scuttled on the way to England (transferring their Commandos to larger ships).

Results

The remaining British fought on, but were captured when they ran out of ammunition. British casualties numbered 169



Map 3

killed and 200 prisoners of war. Five Commandos were able to make it into the French Resistance-assisted escape and recovery network, eventually making their way to neutral Spain in care of the French Underground. The *Campbeltown* blew up at approximately 1030 on the 28th (an hour later than the time for which its eight-hour time-delay fuse had been set), with many engineers, soldiers, and German souvenir hunters aboard. The blast completely destroyed the gate to the dry dock, allowing water from the Loire River to pour in. Then, at 1600 the time-delay torpedoes exploded, destroying the gates to the old entrance. Following both blasts, the Germans—believing raids were still in the area—opened fire on anything that moved, thereby inflicting extensive casualties on their own personnel. The damage caused during the raid was extensive, and the dry dock would not reopen until after the war was over. Although no accurate numbers exist as to German casualties, reasonable sources place them between 200 and 600 killed.

Lessons Learned

The positive lessons from this raid are its use of creativity, intelligence, and mission completion.

Creativity. The most unorthodox portion of this mission—the use of the *Campbeltown*—was also its most successful. The ingenuity of disguising an old destroyer, secretly filling it with explosives, and then ramming it into the dry dock for later detonation cannot go understated. Without it, the entire mission could have failed.

Intelligence. Intelligence was a strong point of the mission, as the intelligence collectors had extensive information confirmed through both human intelligence and other intelligence sources. This intelligence proved crucial to the raid because it allowed the *Campbeltown* to bypass the channel, cross the shoals, and make it to the port itself. Additionally, it provided enough targeting data to ensure that the Commandos would be able to destroy their target when they actually got to it.

Target Analysis. The bottom line of the St. Nazaire raid is that, although it was a costly victory for the British assault force, they did accomplish their mission. Their target analysis ensured that they would accomplish their commander's intent. In terms of the criticality of the target selected, denying the enemy use of a critical dry dock for a period of three years was outstanding.

Complexity. The success of the St. Nazaire raid was overshadowed by the large number of avoidable casualties; for that reason, the raid offers lessons that will help commanders charged with similar missions carry them out at less cost in men and materiel. Mission complexity was the root weakness for the St. Nazaire raid, and mistakes there had a domino effect, causing the planners to need more raiders and more time on target, and fracturing an already overstretched command and control system.

Time on Target (TOT). When the British planners expanded the scope of the raid from three targets to 11, they caused an increase in the amount of time they would need on target. This decision during the planning process was the critical error. For direct-action missions such as this, time is the most critical element. The longer an attacking force spends on the mission, the more time the enemy has to muster reinforcements. To make matters worse, SOF units (such as the Commandos in St. Nazaire) do not get reinforcements and react. So the longer an attacking force spends on the ground, the more the enemy combat power can increase, while the combat power of the assault force decreases through losses. A prudent force should therefore plan to spend as little time as possible in enemy territory. The time planned for the attack was two hours, a totally exorbitant amount of time. If planners had looked at how fast the Germans could mass their reinforcements and how fast they themselves were apt to take casualties, they should have decreased their TOT.

Surprise. Another consequence of a longer TOT is the loss of surprise. Special operations forces can sometimes overcome stronger conventional forces through the benefit of surprise. But in a direct-action mission, the longer an SOF unit stays in the battle area the more this benefit bleeds away. SOF units simply cannot engage in long-term protracted battles against conventional forces, because they do not have the depth of force or logistical means to sustain power. There is a limited window of opportunity when the enemy is surprised and cannot organize a proper defense. Exactly this situation occurred at St. Nazaire. British forces, constrained by multiple missions, spent two hours in France and completely lost the element of surprise. They stayed so

long that the Germans were able to regain their footing and attack from a position of strength.

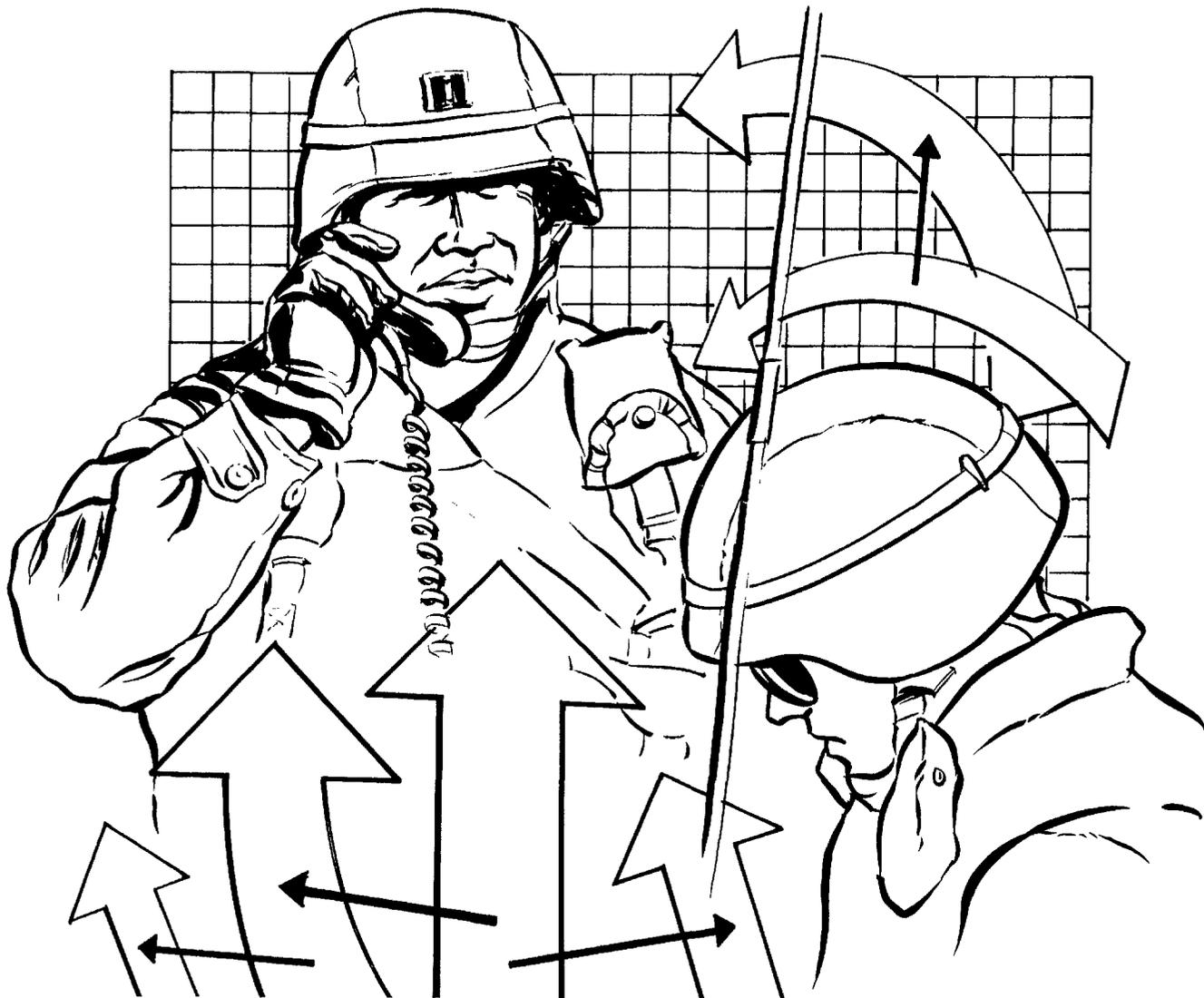
Command and Control. When the raid went from three targets to 11, the personnel required went from 200 to 600. This increase in personnel critically damaged an already strained command and control structure. As many as 50 separate elements (16 motor launches, 33 Commando elements, and one headquarters element) could have been required to act independently during the engagement and then reassemble for extraction. For all this, the British Commandos had a headquarters of eight personnel (who were ultimately forced to do more fighting than controlling) and not a single radio. The only signal planned was pyrotechnics to signal the extraction of the force. When the situation on the ground changed because of enemy pressure, the force was not able to adjust its plans because it lacked the means of command and control.

Exfiltration. The exfiltration plan presented difficulties. The planners had assumed that the motor launches could land the commandos and then loiter on site until extraction time. Even they estimated that their time on target would be two hours. It was unrealistic to expect wooden boats to survive six miles up an enemy-controlled river—which was covered by more than 80 guns of various calibers on both sides for more than two hours—once the element of surprise had been lost. As somber proof of this is the fact that the only motor launches that did escape left well under an hour after the start of the battle. Further evidence of poor planning exists in the withdrawal signal. When Colonel Newman finally decided to signal the withdrawal, he could not because the only flare gun used to give the signal had sunk with the Regimental Sergeant Major. (Ironically, by that time, there were no boats left on which to exfiltrate in any case.)

Finally, the raid on St. Nazaire shows why aircraft should not be used in deception or demonstration operations. As in the Son Tay raid and the U.S. invasion of Panama, the aircraft only serve to alert the defenders. An appropriate use of aircraft is to cordon off or isolate an objective but not as a demonstration.

In conclusion, the British raid on St. Nazaire was a costly victory. Poor planning led to a mission that was simply unrealistic. The Commandos' modified plan took too long, was too complex, suffered from poor command and control, and did not have a good exfiltration concept. If they had stuck with the original three-objective plan, they could have accomplished the mission in a shorter time and escaped with far fewer casualties. St. Nazaire will always remain an example of the importance of detailed, realistic planning for missions involving special operations forces.

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Achieving Unity of Purpose Cascading and Nesting Concepts

MAJOR JAMES C. LARSEN

Unity of effort . . . requires coordination and cooperation among all forces—even though they may not be part of the same command structure—toward a commonly recognized objective. Collateral and main force operations might go on simultaneously, united by intent and purpose, if not command. The means to achieve unity of purpose is a nested concept whereby each succeeding echelon's concept is nested in the other. Unity of effort—coordination through cooperation and common interests—is an essential complement to unity of command. (Field Manual 100-5, Operations)

Every leader in the Army has learned that a mission statement contains the *who, what, where, when, and why*—the

five Ws. FM 101-5-1, *Operational Terms and Graphics*, defines the *why* of the mission statement as the purpose for the mission, and provides one example. Aside from the passage above, there is little in U.S. Army doctrine to help leaders articulate clear, meaningful purpose—the *why*—in the mission statement they assign to their subordinate units, or in many cases, determine for themselves during mission analysis as their unique contribution to the fight. The purpose of this article is to help leaders at all levels develop concepts of operation and articulate to their subordinates their purpose—their unique contribution—to ensure that unity of effort is achieved on the battlefield.

Why can't the *why* in the mission statement be simply

because you told them to do so? Perhaps you have given your subordinates the task to “destroy the enemy,” with the purpose as something akin to “deny the pass” and thought that was perfectly acceptable. Or you’ve said, “Seize the hill in order to destroy the enemy.” Are these not tasks and purposes within the spirit of mission orders? After all, the task you said you wanted to accomplish was to seize the hill, therefore the enemy could be destroyed; or destroy the enemy to deny the pass. So what do you want done: destroy the enemy or deny the pass; seize the hill or destroy the enemy—are these mutually exclusive?

Too often, in the middle of course-of-action development or wargaming, I have asked, or heard someone else ask, “Tell me again, what is it they (higher headquarters) want us to do?” Or worse, found myself in the middle of execution, or even during the after-action review, realizing that an enormous number of casualties were taken and resources were expended on a task that contributed little to the overall accomplishment of my mission, or that of the higher headquarters. Should mission analysis answer the question of true purpose?

Before exploring how to effectively articulate purpose, it is important to understand the concept of mission orders and why subordinates must have a clear understanding of their *purpose*, even more so than their *task*.

FM 101-5-1 defines a mission-type order as an order that “specifies what subordinate commanders are to do without prescribing how they must do it.” The manual goes on to say, “Mission-type orders enable the command to seize and maintain initiative and to set the terms of battle. [They] allow subordinate leaders to exercise independent judgment and exploit hanging situations.”

The concept of mission orders is not new. The 1982 version of FM 100-5, then titled *AirLand Battle*, was, in many ways, essentially a rebirth of the German offensive World War II concepts of which the centerpieces were *Auftragstaktik* (mission tactics; directives) and *Schwerpunkt* (focus of effort). Actually, the idea of *Auftragstaktik* can be traced to the Prussian experience during the Napoleonic Wars, whereby high-level leaders briefly told subordinates what was expected of them and then let them do it. The concept of *Schwerpunkt*, originally coined by Clausewitz, translated literally, means center of gravity. As John English points out, however, “a more militarily correct translation would be ‘thrust-point,’ to indicate the principal effort or concentration of force aimed at seeking out the weakest point of enemy resistance.” (From *On Infantry*, Praeger Publishers, 1984).

In today’s U.S. Army, we recognize the concept of *Schwerpunkt* as the relationship of the main and supporting efforts directed toward the decisive point. A supporting effort is assigned a purpose that either directly or indirectly supports the main effort and creates the conditions for the main effort to succeed. The main effort has the most important task and purpose at that time, and its success will contribute the most toward the accomplishment of the higher

commander’s overall mission or objective. The commander at each level should designate a main effort, along with supporting efforts. This focus helps him and his staff allocate resources accordingly, providing direction to the operation while setting priorities and determining risks, promoting unity of effort, and facilitating an understanding of the commander’s intent. As with *Schwerpunkt*, the idea is to be able to shift the main effort during execution as the situation requires. During planning, we articulate the interrelationship of main and supporting effort tasks and purposes in the concept of operations, which “describes how the commander sees the actions of each of his units fitting together to accomplish the mission” (FM 100-5-1).

The late General William E. DePuy—veteran of World War II and Vietnam and the principal author of the “Active Defense” doctrine in the 1970s—truly understood the art of writing concepts of operations that promoted unity of effort. He wrote that “the Army actually consists of *parallel, echeloned, vertically integrated and individually controlled* functional systems. For the purposes of execution they are echeloned vertically. For the purposes of synchronization, they are sliced horizontally at the level of each major tactical and operational echelon. Because maneuver is the key to which all functions relate, those horizontal slices are the familiar armies, corps, divisions, brigades, battalions, companies, and elements of the maneuver force.” What General

DePuy is stating is that directives flow downward (vertically) during execution, but synchronization is accomplished through an understanding of the horizontal interrelationships between units. “This means that a commander

should construct a mental model for the subordinates to act within the vertical and horizontal planes the higher commander has created within the concept of operation. This implies a shift in the focus of mission analysis from the discovery of specified, implied, and essential tasks to the discovery of the unit’s unique contribution to the higher commander’s concept.” (From *Selected Papers of General William E. DePuy*, Combat Studies Institute, Fort Leavenworth, Kansas, 1994.)

General DePuy called this mental model “nested concepts.” In “Concepts of Operation: The Heart of Command, The Tool of Doctrine” (*Army*, August 1988, page 31), he wrote:

When the top commander develops and disseminates his concept . . . , he obliges his subordinates to conform and execute. Each successive subordinate is expected to articulate and elaborate that concept in accordance with the particular conditions of the enemy, terrain and resources at his level; thus the higher concepts are progressively tuned to local reality. This is the genius of the system—a centralization of concept, a decentralization of execution and a full exploitation of forces and opportunities. Cascading concepts carry the top commander’s intentions to the lowest levels, and the nesting of those concepts traces the critical path of concentration and priorities. This is the phenomenon

the Germans call the *schwerpunkt*. . . . **The reason** [emphasis added] *the platoon is advancing upon the nose of hill 101 is because A Company must seize that prominence to protect* [emphasis added] *B Company, which will attack past it to the battalion objective, which in turn will enable* [emphasis added] *the brigade reserve to seize the key terrain on the objective of the division making the corps' main effort.*

General DePuy was addressing the importance of articulating to subordinates their purpose—their unique contribution to the fight. He was adamant about this for two reasons. First, it is the only feasible way a large, complex organization can prevail in a chaotic environment—where the planned tasks may or may not be executed. Second, it is the only way soldiers and leaders can exercise disciplined initiative (within the commander's intent), which is necessary when opportunities requiring immediate action present themselves, the planned concept is no longer feasible, or communication is lost. It is for these reasons that every soldier must absolutely understand his unit's purpose, and that purpose takes priority over task.

To further illustrate that purpose takes priority over task, consider that your unit has been assigned as a supporting effort with a task and a purpose. For instance, during mission analysis, you derived your restated mission as *Team A attacks to destroy enemy platoon (task—the What) on Hill 481 no later than (NLT) 0700 to prevent the enemy from massing direct fires against the main effort (purpose—the Why).* You

may have derived this from the higher headquarters' concept and from tasks to maneuver units in the operations order. The information you had during planning indicated the enemy that threatened the main effort was on Hill 481. You were task organized and resourced to accomplish that task of *destroy*. As the battle unfolds, let us say that the task of *destroy* proves to be meaningless in accomplishing the purpose. Perhaps the enemy is no longer on Hill 481; perhaps the enemy counterattacks from an unexpected direction in your zone; perhaps the enemy has only begun to move some of his forces to Hill 481 and you believe that waiting until 0715 would best accomplish the purpose; or perhaps you realize that you can best accomplish your purpose by executing a completely different task (such as *suppress* or *support by fire*) that is within the commander's intent. If all you are thinking about is accomplishing the task of destroying the enemy on Hill 481 by means of fire and maneuver, then you have not realized the essence of *purpose*—or of General DePuy's message. The "what, where, and when" of your mission may change based on the enemy, terrain, and other circumstances out of your control; only your purpose remains constant. *Meaningful purpose gives the mission statement durability and longevity.* A commander's ability to clearly understand and subsequently articulate purpose has a direct impact on unleashing initiative on the battlefield and tapping into the talent of your subordinates. Of course, it would be prudent to inform your higher headquarters, but in so doing,

can you still take advantage of the opportunity if you know it in your heart to be the right thing to do? Yes, there is risk; there is risk in all decisions we make in this business of war-fighting. The critical questions to ask yourself are, "Do you truly understand your relationship—your purpose, as it relates horizontally—with the other supporting efforts and the main effort?" "Is your proposed action within the commander's intent?"

With an understanding of mission orders and General DePuy's "cascading concepts," consider the following example of a mission statement and the concept of operations. Note the interrelationship of purposes:

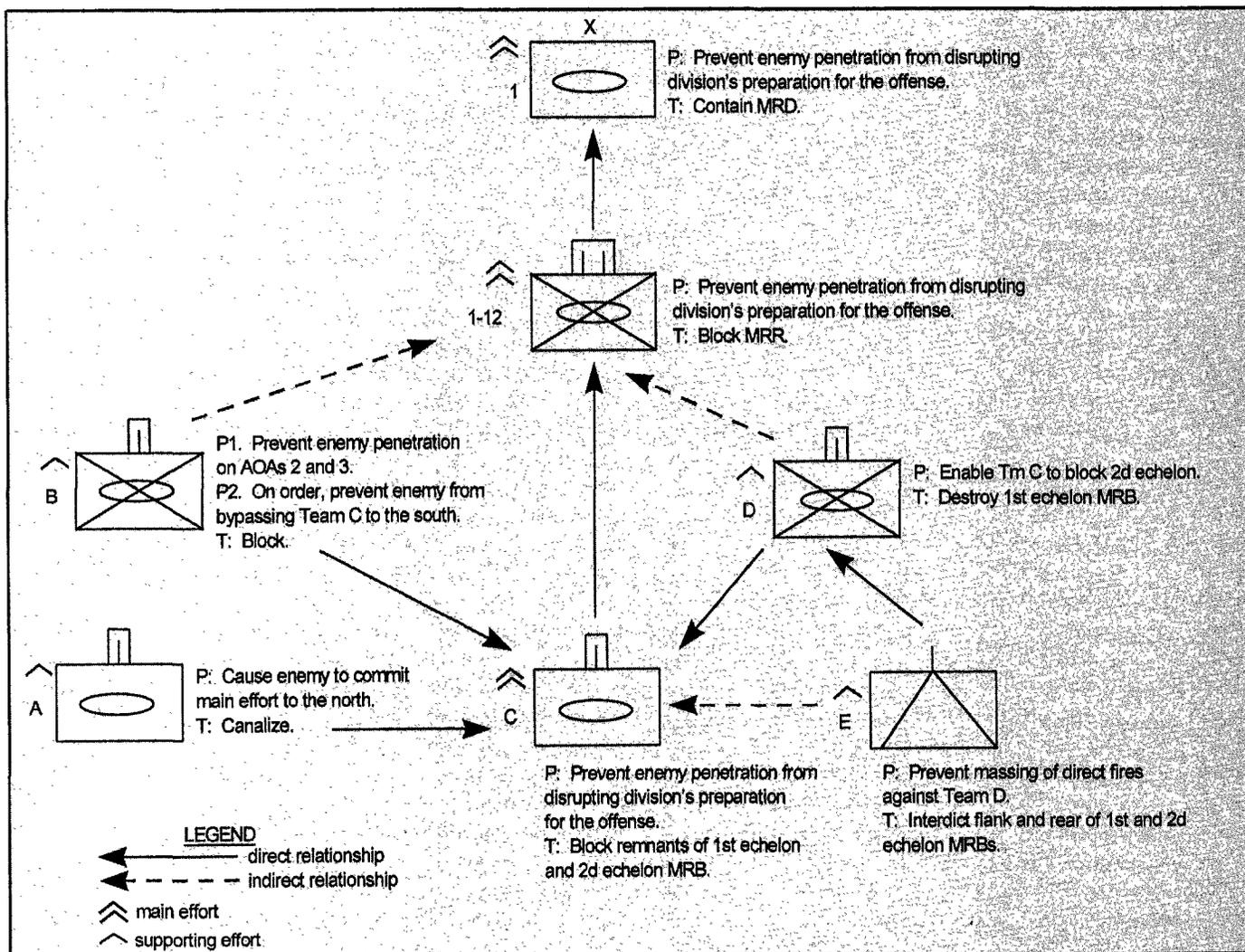
Mission. *Task Force (TF) 1-12 [brigade main effort] blocks from ALLIGATOR RIDGE to ALPINE VALLEY NLT 210001 JUL 91 in order to prevent an enemy penetration from disrupting the division's preparation for the offense.*

Concept of the Operation (Scheme of Maneuver). *TF 1-12 blocks NLT 210001 JUL 91 with Team D (supporting effort) vic. northeast of CRASH HILL, destroying the first echelon motorized rifle battalion (MRB) on Avenue of Approach (AOA) 1 in order to enable Team C (main effort) to block the enemy's second echelon MRB. Team B (supporting effort), vic. south of CRASH HILL, blocks in order to prevent an enemy penetration along AOA 2 and AOA 3; on order, displaces vic. south of ALLIGATOR RIDGE and blocks in order to prevent the enemy from bypassing Team C to the south. E Co. (supporting effort), vic. NORTH WALL interdicts the*

flanks and rear of the first and second echelon MRBs on AOA 1 in order to prevent the massing of direct fires on Team D. Team A (supporting effort), vic. west of DEBMAN PASS, canalizes the first echelon MRB on AOA 3 in order to cause the enemy to commit his main effort in the north. Team C, vic. north of ALLIGATOR RIDGE, blocks remaining first echelon units and the second echelon MRB in order to prevent an enemy penetration of ALLIGATOR RIDGE and ALPINE VALLEY from disrupting the division's preparation for the offense. (From "The Green Team Guide to Teaching Tactical Decision Making," by Edward J. Brennan, U.S. Army Command and General Staff College.)

In this example, you should be able to identify the vertical and horizontal linkage, or "nesting." The purpose in the task force's mission statement clearly states why the operation is being conducted and how it relates to the higher headquarters' mission. In the concept of operations, we can see the scheme of interlocking subordinate purposes built around the main effort. The main effort company team's purpose directly relates to the task force's purpose (vertical nesting). Each supporting unit's purpose either directly or indirectly supports the purpose of the main effort (horizontal nesting). From this paragraph, each company team can clearly understand how it fits into the plan.

A technique that helps you understand how your unit fits into the higher headquarters' concept is a "nesting diagram." This should be done during step one (Analyze the Higher



Headquarters' Order) of mission analysis. The purpose of this step is to "establish horizontal and vertical nesting, not just for maneuver, but also for all combat support and combat service support [units]." Using the above example of a task force concept of operations, a company commander's nesting diagram would show the following, as depicted in the accompanying figure. This essence of this figure would become paragraph 1.b. (Friendly Forces). For brevity, I will illustrate only the maneuver forces:

Using the nesting diagram, you should be able to see clearly the indirect and direct relationships of units—both vertically and horizontally. This technique is especially helpful when the staff and commanders are tired from continuous operations. Further illustration with combat support and combat service support units greatly aids in the unit's situational awareness and understanding of each other's complementary roles and missions. The remaining ingredient subordinates must have to exercise disciplined initiative is an understanding of the commander's intent.

The commander's intent is, of course, a vital and inseparable component to setting the conditions for initiative. Unfortunately, there are those who believe that all of this task and purpose discussion is largely rhetorical and subordinates need only to understand the commander's intent two levels up if conditions are to be set for subordinate initiative. I

agree that an understanding of the commander's intent is crucial to success on a chaotic battlefield. After all, it is what General DePuy referred to as vertical nesting. By strictly adhering to the commander's intent, however, we miss the idea of horizontal nesting and what is also referred to as *collective intentionality*. This is the idea that each soldier belongs and contributes to something much larger than himself; he is only a cog in the wheel. The commander's intent addresses the single intention of the commander as it relates to the force as a whole. It does not address the relationship of the subordinate units to each other. Only a properly written concept of operations, with clearly articulated purposes, can enable the commanders to achieve the horizontal and vertical nesting—collective intentionality—which sets the conditions for initiative on the chaotic battlefield.

For instance, the commander's intent should elaborate on the purpose of the mission (if required), state key tasks to be performed by the force, and express the end state of the mission in relation to friendly forces, the enemy, and the terrain. It provides the link between the mission and the concept of operations. The key tasks are not specific to courses of action and are intended to demonstrate to the subordinates what is required for overall mission accomplishment—regardless of what happens after the first contact. An example of the theory of commander's intent is that the unit must accom-

plish a key task as stated in this intent. In the concept of operations, this task was assigned to a specific unit, but during the course of the battle, when that unit is no longer capable of accomplishing the task, another unit can quickly react. Relying solely upon the commander's intent as the basis for subordinate initiative causes two potential problems:

First, if subordinates do not understand what effect or result was intended (purpose of the key task), they may fail in accomplishing that task; second, if they do not understand their relationship to other units (horizontal nesting), then the unit is risking further collapse of the concept, not to mention fratricide and other problems associated with a lack of situational awareness. These are the reasons the commander's intent serves as a bridge between the mission statement and the concept of operations. It complements horizontal nesting of purpose, but it does not replace the need for a each unit to have a thorough understanding of the other units' missions.

Returning to the original questions posed early in this article: Why can't the "why" in the mission statement be because you told them to do so? Or, you have given your subordinates the task to "destroy the enemy," with the purpose as something akin to "deny the pass" and thought that was perfectly acceptable. Perhaps you've said, "seize the hill in order to destroy the enemy." Are these not tasks and purposes within the spirit of mission orders? The simple answer is that the purposes are ambiguous and meaningless. They are ambiguous because *seize* and *destroy* are both tactical tasks, so which one is mission essential—which one truly accomplishes the purpose of the mission? They are meaningless because they do not answer the "why" in the mission statement and do not demonstrate any linkage, either vertical or horizontal.

I have three basic rules of thumb for articulating meaningful purpose in mission orders:

- The purpose must be in plain English—no military jargon that can be misinterpreted.
- The purpose must be nested. The purpose of supporting efforts must directly or indirectly relate to the purpose of the main effort. The purpose of the main effort must relate to the purpose of the higher headquarters.

- I should not have to ask why I have that purpose. If I do, then it is probably a *task*. In other words, the *purpose* should stand on its own. If you tell a unit that it has the purpose of denying the pass or protecting a flank, then go the extra step and explain why they are doing it. Why leave it up to the commander to articulate the expanded purpose in his intent statement?

In conclusion, the purpose—the "Why"—in the mission statement, and the accompaniment of every task assigned in the concept of the operation, must be meaningful. The main effort's purpose must relate to the higher headquarters' purpose (be vertically nested). The purpose assigned to each supporting effort must relate either directly or indirectly to that of the main effort (be horizontally nested).

Only through a clear and thorough understanding of the interrelationship of purposes can large, complex organizations prosper in a chaotic environment, exploiting the talent of leaders, and setting the conditions for subordinate initiative. We must understand that the mission essential tasks that we derive during mission analysis (*seize, secure, destroy, etc.*) may change during execution. We determined these tasks with the best information we had at the time, but the situation changed in execution. Only a clear understanding of the purpose will usually prevail in the fight against a willing and able enemy.

Finally, an understanding of the commander's intent is vital to mission accomplishment, but only insofar as it relates to the purpose of the whole organization—it serves as the link between the mission statement and the concept. For soldiers and leaders to act boldly and decisively in a chaotic environment, they must also understand their unit's true purpose—their unit's unique contribution to the fight.

Major James C. Larsen served as a tactics instructor at the Center for Army Tactics, Fort Leavenworth, and is now assigned to the 3d Battalion, 187th Infantry, at Fort Campbell. He previously served in the 75th Ranger Regiment and in the 5th Battalion, 20th Infantry, in Korea. He holds a master's degree from St. Mary College, Leavenworth, Kansas.



TRAINING NOTES



Advanced Infantry Marksmanship Shooting Better Day and Night

LIEUTENANT COLONEL MICHAEL E. BOATNER

Infantry riflemen—assigned to the rifle platoons of rifle companies—ought to be the Army's best shooters, both day and night. But are they? When the Chief of Infantry, Major General Carl Ernst, asked this question more than a year ago, the Infantry School's 29th Infantry Regiment set out to answer it. When we assessed the effect of new small arms sights and scopes already arriving in field units, we realized that existing standards were no longer challenging enough for infantrymen.

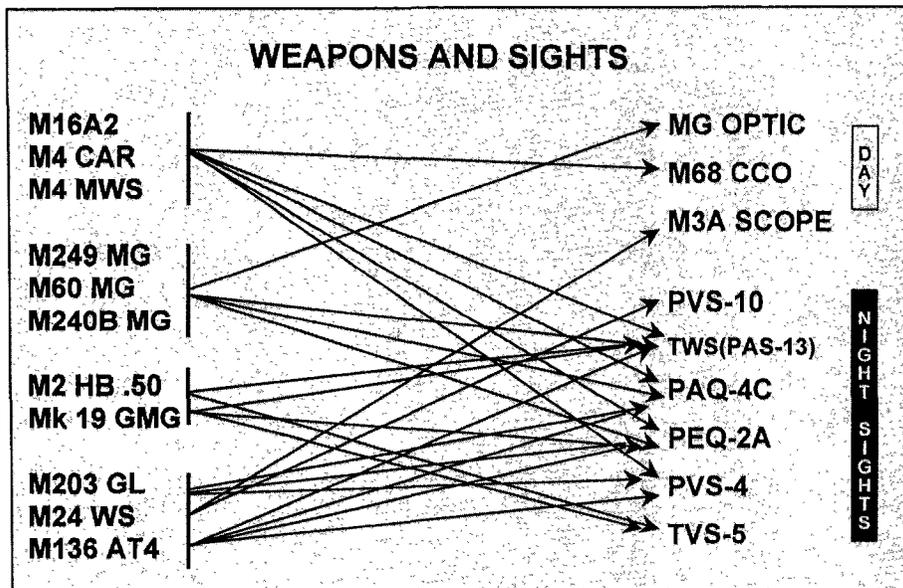
Given the infantry mission to close with and destroy the enemy, combined with the Army's "Own the Night" objectives, we began a program to define new, higher marksmanship standards. Our objective in this program is to provide advanced infantry marksmanship (AIM) training strategies, techniques, and standards that will help infantry trainers and training managers project and resource realistic training requirements.

Individual marksmanship and crew gunnery training programs give infantrymen the technical skills they need to employ their basic weapons. This individual and crew level lethality is an important and measurable prerequisite for collective or unit tactical proficiency. Ideally, trainers establish this technical skill base through training that progresses from classroom instruction

and training devices, through blank and subcaliber fire, to both day and night live fire. Bradley fighting vehicle gunnery has long reflected this approach, including realistic night qualification requirements that are comparable to the day standard. In the mechanized infantry world, with state-of-the-art night vision and engagement systems, units may already be executing gunnery to the day standard at night. The technology gives these units near daytime agility as well as the ability to acquire and engage targets. We routinely integrate, resource, and test this night ability in our gunnery programs.

In contrast, advances in target acquisition and night vision with *light* infantry weapons have not kept pace with the mounted systems. Thus, small arms marksmanship training and formal qualification programs are well structured, but they are primarily daytime requirements with a mix of partially resourced night familiarization training.

This situation is changing, however, and many infantry units are rapidly receiving a variety of optical and aiming devices that improve the infantryman's lethality, both day and night. These include new day optics for rifles and machineguns, laser pointers and illumi-



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nators, improved image intensification scopes and goggles, and thermal weapon sights. These new scopes and laser pointers push the capability of small arms almost to their maximum effective ranges at night. This increased potential demands that we elevate the standards of our technical marksmanship training accordingly. *The increasingly attainable goal is to demonstrate that infantrymen can shoot to a higher standard during the day and to the current day standard at night.*

The collective efforts of the Infantry School and Fort Benning units are testing and developing marksmanship training strategies and standards for night marksmanship and new small arms technology. The 29th Infantry Regiment, which is responsible for technical weapons training and marksmanship instruction, sponsored this initiative but incorporated essential contributions of the Basic Combat Training Brigade, the 75th Ranger Regiment, the Dismounted Battlespace Battle Lab, the Directorate of Combat Developments, and the Directorate of Training.

The mission given to the 29th Infantry was based on newly available day sights, night sights, and laser pointers: *Propose day and night training strategies and qualification standards for*

infantry weapon systems based on current and emerging sighting systems.

The goal is to exploit small arms technology to the same degree we have exploited mounted systems. Over the past year, we have tested and captured techniques and procedures for employing this technology in local Fort Benning instruction and also in a draft training circular. The first draft of

The increasingly attainable goal is to demonstrate that infantrymen can shoot to a higher standard during the day and to the current day standard at night.

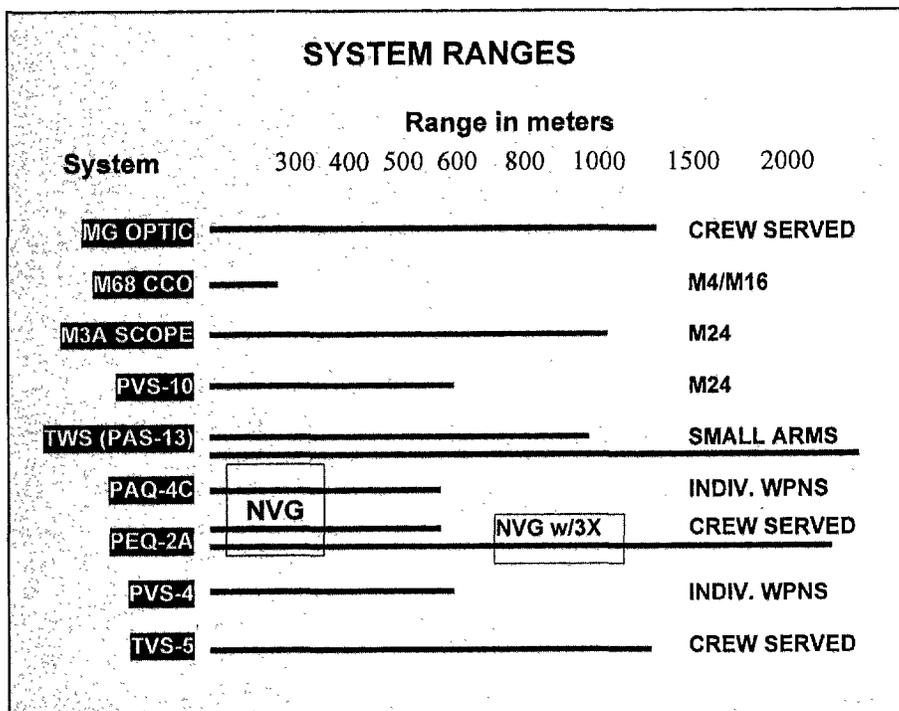
Training Circular (TC) 23, *Advanced Infantry Marksmanship Strategies and Standards (AIMSS)*, was distributed during the 1998 Infantry Conference to all attending senior commanders and command sergeants major.

Currently, the Infantry School includes the four fundamentals of marksmanship—aiming, steady position, breath control, and trigger squeeze—on every system, stressing repetition and consistency. This establishes each soldier's ability to combine the funda-

mentals in the integrated act of firing for his assigned weapon. These marksmanship programs for each weapon are captured in our Field Manual (FM) 23 series as the Army-wide standard. At the qualification range or marksmanship test, we evaluate the soldier's ability, as an individual, to detect and engage targets at tactically appropriate ranges. We do this in the most likely firing positions, with significant time pressure but with fully visible targets in daylight. Thus, technical marksmanship programs establish whether a soldier can hit what he can see. Our current marksmanship programs do this well for the daylight, static employment of small arms. For more advanced marksmanship skills, however, we lack the strategies, standards, and resources. The Infantry School's goal is to address this shortcoming as quickly as possible for limited visibility engagements. We are also developing training strategies for close quarters engagement (less than 50 meters), and ultimately for integrated small arms engagements at the fire team, squad, and platoon levels.

As we looked at the primary variable that affects performance, we focused on maximizing the potential of the weapons themselves and the soldier training program, using proven techniques of preliminary marksmanship instruction (PMI).

One of the challenges of AIM is that wearing one of these devices, or attaching it to a weapon, clearly affects the fundamentals of marksmanship. Generally, the new sights and laser pointers are night enhancements being fielded to help the infantryman "own the night" by improving his ability to align his sight accurately on a discernible target. This improves the fundamental of *aiming* by a single-point of focus, thus relieving eyestrain and in some cases providing magnification. But scopes and night sights generally hamper target acquisition due to tunnel vision. Also, adding these devices universally changes the conditioned fundamental of *steady position*, sometimes to something less compact and inherently less steady. Although *trigger squeeze* and *breath control* are less af-



fects, they are still important. Training programs must also efficiently train the individual firer to maintain, bore-sight, and configure his assigned equipment, and sustain his proficiency as well.

The challenge of the primary AIM stems from the large number of possible weapon and sight combinations within the squad and platoon. The infantry squad leader of the near future will have several distinct capabilities using thermal, image intensification, and laser technologies. We looked at individual weapons, platoon machineguns, heavy machineguns, and special purpose weapons (SPWs) in the platoon. The maximum ranges of the sighting systems generally match the weapon systems they support under highly favorable light and heat conditions; actual conditions on the range, however, are often variable and hard to predict. For heavy machineguns, especially, the ranges of the PEQ 2A laser pointer/illuminator and the heavy version of the thermal weapons sight (TWS) are more than 2,000 meters. These devices offer tremendous potential for light infantry crew-served weapons and snipers. But across-the-board night vision goggle (NVG) capability (with or without the 3-power extender magnifying lens) limits the employment of laser pointers.

The good news is that we have generally concluded that the primary goal of achieving the day standard at night is feasible. With each system, we developed an initial training strategy to be used when units first receive the equipment, and then a sustainment strategy for subsequent marksmanship and qualification training. Most units, however, will combine these strategies for the indefinite future to meet the needs of newly assigned personnel and gunners with mixed experience in each qualification cycle.

Clearly, the first step is to train and certify leaders with the new equipment. Leaders must thoroughly understand the technical requirements of the training and also assess the adequacy of local training resources to execute advanced infantry marksmanship. Range orientation, weather, target systems, available

ammunition, and training aids will all dramatically affect the execution of this training. Fully resourced leader training, including live fire, will identify any problem areas before unit training begins.

Although few of these systems will include dedicated new equipment training teams (NETT), the Infantry School will continually update training support through doctrinal development, E-mail, and mobile training teams.

Each of our AIM strategies starts with soldiers who are qualified on their assigned weapons during the day with iron sights. This establishes the basic marksmanship fundamentals and each soldier's confidence in his weapon and his own ability.

As with any good weapon training, the preliminary marksmanship instruc-

Each of our AIM strategies starts with soldiers who are qualified on their assigned weapons during the day with iron sights.

tion will make or break the effort. With new sighting devices, PMI will have several components. These include configuring the sight to the weapon, methods of boresighting, adjustments to the marksmanship fundamentals, safety procedures, and in some cases confidence training with night vision goggles. When training the fundamentals, all available training aids, devices, simulators, and simulations should be incorporated, as in all PMI. Just as with the art of manipulating the traversing and elevating mechanism on a machinegun, a soldier's facility with knobs, switch adjustments, and immediate action on the new sights must become second nature.

The transition step between PMI and live fire is a careful, accurate boresight procedure. This is not only key to accuracy but a way to improve a soldier's confidence with his weapon. We found the new boresight device a tremendously effective aid to boresighting the large variety of weapon and sight com-

binations. Although manual methods are adequate, this alignment method greatly simplifies and standardizes the process with most systems. It comes with 5.56mm, 7.62mm, and .50-caliber mandrels to align a visible laser light with a weapon's bore. Then the firer can align his point of aim with his muzzle orientation, using a predetermined offset at a range of 10 meters. For scopes, confirmation of this boresight requires zeroing with bullets, but with laser pointers we have found the boresight allows full accuracy without zeroing. Working with the Dismounted Battlespace Battle Lab, we have confirmed a complete set of boresight offsets for infantry weapons. The device will be available early in Fiscal Year 1999.

The first live fire event for soldiers is normally to zero weapons to their sights. This not only confirms accuracy but also increases confidence and provides the first feedback on the effectiveness of the PMI. In subsequent AIM live fire, target acquisition is the most challenging skill. Each course of fire should build PMI and dry fire exercises that reinforce the modified fundamentals. We found that starting with basic known distance or field fire scenarios, where there is less time pressure, allowed soldiers to adapt thoroughly to new sights and night firing. With practice record fire, we started with extended target exposure times, then reduced them as proficiency increased—leading ultimately to the goal of night qualification to the daylight standard. The AIMSS TC shows our proposals for the minimum course of fire required to achieve a challenging night standard.

For example, with the M16A2 rifle the AIM strategy for the AN/PAQ-4C will require two days for a platoon and three days for a company. The first day consists of extensive PMI to introduce the PAQ-4C and reinforce NVG skills. Optimum fit and adjustment of the goggles is key, and soldiers must be completely comfortable with both goggles and weapon configuration. With goggles on, a soldier's immediate action must be done virtually blind, because adjusting goggles for near vision during firing is not practical. (The new

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PVS 14 monocular alleviates this problem.) Extensive, structured dry fire exercises on the range at night will most effectively solidify these skills.

We strongly recommend that all live fires start on the second day; this will ensure that leaders do not curtail PMI and that they also thoroughly confirm resources. Soldiers should prepare to qualify by shooting both known distance and field fire scenarios (36 rounds each), which will establish good target acquisition skills at night. Soldiers should then execute a practice record fire with target exposure times extended by two seconds. Most soldiers will achieve 23 of 40 the first attempt (Marksman) and be ready to move on to record fire to the day standard at night. All soldiers who do not achieve a Marksman skill level should retrain and re-fire to that standard before moving on and ultimately achieve the standard of Marksman using the day exposure times at night.

With detailed preparation and available ranges, platoons can conduct this live fire training in a single night, but companies should schedule it for at least two nights.

With platoon machineguns (M249 and M60/M240), the proposed training strategy is similar to the day transition fire. After an initial day and night of

detailed PMI and structured dry fire, units should begin with field firing tables that incorporate extended target exposure times. Unfortunately, we found that the limitation of night vision technology affected performance most for these systems. Realistically, soldiers need an additional five seconds of exposure over the day standard to engage targets at appropriate ranges, and then can acquire targets only out to 600 meters. Relatively small targets (E-type and multi-E type) at 400 to 800 meters are extremely hard to discern with goggles and low magnification sights, even when enhanced. Also, laser dots and reticle lines effectively expand to obscure the target at these ranges. Thus, we recommend a machinegun night standard with five seconds of additional exposure time and out to only 600 meters for 7.62mm systems.

In conclusion, we used the AIMSS training circular to propose standards, based on our live fire experience for validation in the field. Infantry units should adopt challenging standards for these systems as they are fielded and provide feedback to the School for inclusion in the FM 23 series of manuals. In the interim, we recommend that for readiness reporting, infantry units require at least 90 percent of assigned infantrymen to qualify as Sharpshooters

in the day and Marksmen to the day standard at night. Eighty percent of the crew-served weapon and special purpose gunners should attain a challenging, day comparable standard at night.

We acknowledge that initially this will require up to 50 percent more STRAC authorizations, but we are taking actions to validate these legitimate requirements in subsequent STRAC updates. In the meantime, our infantrymen need to be our Army's most proficient shooters and masters of the technological tools, which will give them a decided advantage in the next conflict.

For more information or TC 23-AIMSS, contact Commander, 2d Battalion, 29th Infantry Regiment, ATTN: S-3, CPT Sonner, Bldg. 74, Fort Benning, GA 31905. E-mail SonnerM@benning.army.mil or RonneyL@benning-emh2.army.mil.

Lieutenant Colonel Michael E. Boatner commanded the 2d Battalion, 29th Infantry Regiment, which is responsible for small arms technical training and marksmanship for individual through heavy crew-served weapons. He is now assigned to the Center for Land Warfare, Office of the Chief of Staff of the Army. He is a 1979 graduate of the United States Military Academy.

Air Volcano

In the Light Fighter's Toughest Scenario

MAJOR CHARLES A. JARNOT

The scene was familiar to many 25th Infantry Division soldiers from the 3d Brigade Combat Team (BCT) as they prepared to defend in a scenario that is played out monthly at the Joint Readiness Training Center (JRTC), with light infantry forces pitted against an opposing force (OPFOR) combined arms mechanized assault. This time, how-

ever, the light fighters had a surprise for the OPFOR, with the division's first deployment of the Air Volcano scatterable mine system.

The 3d BCT was organized with three light infantry battalions (one notional and two actual), a light 105mm howitzer battalion, and a robust aviation task force (TF) with attack, assault, and

medium helicopters with a tank and light infantry team attached. The BCT also enjoyed the support of an air defense artillery (ADA) battery, a light engineer company, and a reinforced forward support battalion (FSB). A quick analysis of the combat systems employed reveals the relatively low firepower and mobility associated with

light forces. While light units are excellent in forested and built-up terrain, they need the effects of the combined arms team to gain the edge on the faster moving armored forces. The 3d Brigade commander tapped his aviation TF for mobile firepower from the Cobra attack helicopter and the Black Hawk assault helicopter equipped with the new mine-laying Volcano system.

The Plan

The 3d BCT was deployed in an area defense with three infantry battalions on line and the aviation TF screening forward in the security zone. The concept was to identify the enemy's main attack and concentrate artillery, close air support, and attack helicopters to defeat it. The OPFOR soldiers, of course, were well aware of their strengths and weaknesses and fully realized that speed was essential as they strove to cross 3d BCT's no penetration line and wreak havoc in the division's rear area.

Slowing or delaying the advance of armor was the mission of Air Volcano. The U.S. Army has had scatterable mines in its inventory for more than 20 years. Before Volcano, however, these mines were normally emplaced by hand or delivered by 155mm artillery shells. Each method is fairly time consuming; it may take an artillery battery 15 minutes or more of continuous firing to deliver a single minefield 400 meters square. Artillery survivability is also reduced, due to possible detection by enemy counterbattery radar. Besides the time problem, light force 105mm artillery is not capable of delivering mines, and the light engineers do not normally have the trucks and personnel needed to hand emplace large minefields.

The brigade commander counted on the speed, flexibility, and responsiveness of the division's Volcano mine system to be the decisive factor in delaying the enemy armored attack and facilitating its destruction from artillery, close air support, and attack helicopters.

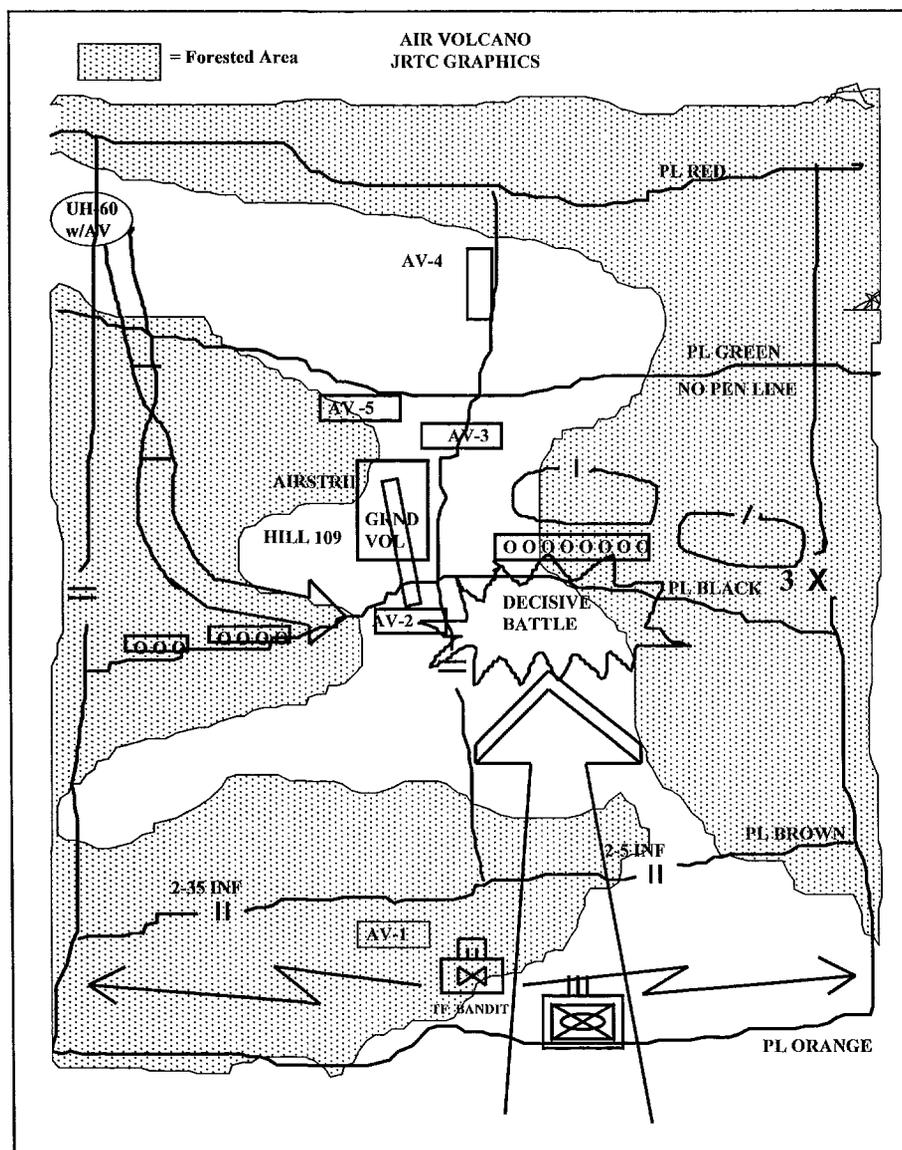
The plan was to equip a UH-60 Black Hawk helicopter with Air Volcano scatterable mines, set for four-hour duration. Several presurveyed mine insertion sites were reconnoitered along

expected avenues of approach. The aircraft was displaced to a remote area and remained on a short alert notice through the secure single-channel ground and airborne radio system (SINCGARS). Once committed, the Volcano Black Hawk would fly at nap-of-the-earth altitudes and quickly seed its long 1,100-meter double-band minefield in seconds. The intended effects would be to turn or delay the enemy armored commander and ultimately disrupt his attack as he suddenly faced a minefield in an area that his reconnaissance elements had earlier reported as clear.

The Battle

The night before the attack, enemy regimental reconnaissance elements

infiltrated the 3d BCT sector. They drove light armored cars and dismounted numerous reconnaissance teams. Their goal was to identify the 3d BCT's defenses and begin to dismantle minefields and obstacles to clear a path for the armored columns. Despite the best security efforts, it was apparent as dawn approached that the enemy reconnaissance had been successful in infiltrating the unit's defenses. The first signs of the enemy armored thrust were detected, and by first light enemy tanks were seen racing at maximum speed toward the 3d BCT's no penetration line. The Volcano-equipped UH-60 crew was alerted and committed to one of the predetermined sites. A few minutes later, the enemy commander faced a significant obstacle that caused him to



shift his drive toward a decisive battle with the center entrenched infantry battalion, instead of splitting the gap between battalions as he had intended.

The Air Volcano System

Air Volcano consists of an aircraft kit that fits only on a UH-60 Black Hawk helicopter, and 160 mine-dispenser canisters, each with six antipersonnel and antitank mines. The M-87 dispenser is identical to the ones used on the truck-mounted Ground Volcano system. An Air Volcano-equipped Black Hawk can insert an 1,100-meter long minefield made up of two bands 35 meters wide. A total of 960 mines make this medium-density minefield a challenge for any armored force.

The aircraft kit requires a crew of eight to mount the side panels and the associated control boxes. We took about six hours mounting and dismounting it, but with practice may come closer to the book estimated time of four hours. Once mounted with the side panels, which block access to the side cargo doors, the aircraft essentially becomes committed to flying the Volcano system. In emergencies, the aircraft could load personnel through the restricted access of the small crew-chief window.

The Volcano system with mines mounted weighs 6,400 pounds, which is approximately the maximum practical payload for a UH-60A helicopter. The Lima model Black Hawk payload would be slightly higher. Unfortunately, the aircraft loses about 25 percent of its range due to the extra drag caused by the externally mounted canisters. Since the external wings must be removed and there is no excess payload available for internal fuel tanks, the Volcano-equipped Black Hawk has a combat radius of about 150 kilometers. But this still greatly exceeds the range associated with artillery or missile delivered mines.

Employment Considerations

At first glance, the employment of air volcano seems straightforward, but the 3d BCT experienced a tough challenge in synchronizing this new combat multiplier. The system pairs two members

of the combat arms that have not worked together much, the combat engineers and Army aviation. Aviation is the delivery method in the case of Air Volcano just as artillery is for the family of scatterable mines (FASCAM). The engineers remain the key players in determining the location and design of a minefield that supports the commander's intent. In addition, the engineers work with the aircrews to mount the ordnance on the aircraft, much the same as they do to assist in mounting the Ground Volcano system on five-ton trucks.

The method we adopted was to form an Air Volcano team (AVT) and assign the mission to the assault helicopter

Several presurveyed mine insertion sites were reconnoitered along expected avenues of approach.

company commander, the team leader charged with executing the pre-planned Air Volcano sites. The 3d BCT engineer designed the minefields to support the commander's intent of delaying the enemy advance and channeling him toward the more open areas. We discovered that a 24-hour time line worked best in planning the execution of Air Volcano. While the actual insertion of the minefield takes only minutes, numerous time-consuming actions must be accomplished before execution.

The Aviation TF commander designates the AVT, which will normally draw upon assets of the assault helicopter company. Specific aircraft and crews are identified, trained, and removed from the mission flow of aerial resupply and air assaults to ensure their availability. An engineer element works with the team to help load the ordnance and plan the minefields themselves. This coordination is necessary to preclude a minefield that may look desirable on the ground but may not be practical for Air Volcano execution because of trees, power lines, and enemy ADA threat. Multiple crews may

be designated to achieve 24-hour capability. The aviation TF staff plans the AVT staging location and works with the brigade staff to refine Air Volcano decision points on the decision support template (DST). The goal is to emplace the minefield where it will influence the enemy avenues of approach and be timed so that it is not so early that it will be detected by enemy reconnaissance.

Air Volcano Checklist

The following checklist lays out responsibilities:

The Brigade's Aviation Liaison Officer (AVLNO). Sends planning information to the aviation TF outlining the brigade commander's intended use of Air Volcano. Provides an initial planning time line and, as a member of the Army Airspace Command and Control cell, assists in the deconfliction of airspace with artillery and air defense assets during execution.

Aviation TF Staff. Issues a warning order that activates the Air Volcano Team, designates the staging area, synchronizes the engineer and assault aircraft linkup, develops courses of action (COAs) for delivery, establishes a time line, and coordinates for airspace use with supporting fires, electronic warfare, and suppression of enemy air defense for ingress and egress routes. Coordinates with the brigade staff for decision points embedded within the brigade's DST that ensure timely execution of the minefields.

Assault Company Commander. Designates aircraft for Volcano mounting, designates aircrews, and coordinates external support to assist in mounting the Volcano kits.

Brigade Engineer Officer. Nominates Air Volcano areas and conducts detailed site surveys that support the commander's obstacle plan. Provides detailed dimensions of the Air Volcano targets with start and release points for the minefields. Coordinates with the assault helicopter commanders to provide expertise and assistance in mounting the ordnance.

Aircrews. Perform pre-combat checks, pre-flight inspections, and detailed air mission planning that analyze the effects that temperature, wind, visi-

bility, and pressure altitude will have on the mission.

The Air Volcano truly gives the light fighter a responsive and long ranging combat multiplier against enemy armored forces. It further demonstrates the versatility of Army aviation and its modern workhorse, the UH-60 Black

Hawk helicopter. Air Volcano now adds another role to the aircraft's missions of air assault, C3I (command, control, communications, and intelligence), medical evacuation, and electronic warfare, and makes available to the commander yet another combat multiplier.

Major Charles A. Jarnot, when he wrote this article, was S-3 of the 1st Battalion, 25th Aviation Regiment (Attack) at Wheeler Army Airfield in Hawaii. He is now contingency plans officer for U.S. Army Pacific. He is a 1980 graduate of Western Michigan University and holds a master's degree from Embry Riddle Aeronautical University.

Task Organize Light AT Company For Light Cavalry Missions

CAPTAIN O. KENT STRADER

Several years ago, while serving as an antitank (AT) platoon leader in an airborne battalion, I realized the effectiveness of a scouting element, preferably mobile, with an attached AT element. Although light battalion scouts can effectively carry out security operations in heavily forested terrain, their lack of high mobility against armor cannot be compared with the effectiveness of an AT company that is task organized as a light cavalry troop.

Antitank companies are ideally suited for cavalry troop missions—*conduct reconnaissance and security (R&S), execute an attack, defend, and delay*—as part of the battalion (squadron) or brigade (regiment). But this would require a temporary reorganization of the company to conduct security operations.

Typically, light cavalry troops are organized with two platoons of ten M1025 or 1026 HMMWVs (high-mobility multipurpose wheeled vehicles) armed with five .50 caliber heavy machineguns and five Mk 19 automatic grenade launchers. Each of the scout platoons has a habitual relationship with an AT platoon consisting of four M996 HMMWVs armed with four TOW systems. The scout platoon deploys a screen line and conducts reconnaissance and security operations to locate the enemy and ascertain his strength and

direction of march, while simultaneously vectoring the AT platoon toward a preplanned attack-by-fire (ABF) position to destroy the enemy.

Although this cavalry troop task organization may not be feasible for the antitank company, a variant of this configuration—two six-vehicle scout platoons and two four-vehicle antitank platoons—could achieve similar results. Some antitank companies still have their platoon leaders mounted in M996 hardshells, as opposed to M998 cargo HMMWVs. This gives a platoon leader a greater level of protection and allows him to mount a weapon system. Twenty to twenty-five weapons platforms enable commanders to achieve great flexibility in the employment of their platoons.

Each scout platoon would consist of three 2-vehicle sections or two 3-vehicle sections plus a platoon leader and platoon sergeant, each in an M998, or an M998 and an M996. Each section would be under a staff sergeant section leader. The platoon leader would command one section and the platoon sergeant would command the other. In a cavalry troop, senior platoon leaders operate as scout platoon leaders because their operations are more decentralized than those of an AT platoon. The scout platoon leader would serve first as an

antitank platoon leader but move up to a scout platoon as he gained experience. This would give platoon leaders in AT companies a wide range of experience and leadership. Antitank platoons would task organize in accordance with their normal modified tables of organization and equipment (MTOE).

The light division ground troop task organization gives AT company commanders more flexibility in task organizing their platoons. A scout AT team, known as a SCAT, places four M1025/1026 HMMWV-mounted scout squads and a section of M996 TOW-mounted HMMWVs in each platoon. Antitank companies can achieve this same task organization, as the situation dictates, and still have a company reserve of section strength. The tactical employment of these platoons is the same as separate scout and AT platoons. The four scout vehicles locate and report, while the AT section moves to an ABF position to destroy the enemy.

Dismounted operations for the cavalry troop consist of hasty dismounting, local security, observation posts (OPs), and patrolling. Dismount drills are a standing operating procedure used frequently and in several situations, including establishing local security or a hasty OP, conducting a hasty reconnaissance, and clearing a danger area. Pla-

toons can determine which of these hasty dismount tasks they most frequently accomplish and develop a chart that standardizes hasty dismount loads (personal equipment, weapons, and dismounted radio). Leadership for the dismounted element operating as a section or platoon would be provided by the platoon leader or a designated section leader. The platoon leader's wing man should be the dismount team leader for the section, if the platoon is operating in two 3-vehicle sections. The platoon leader would become the gunner for his vehicle (if he is mounted in an M966) and send his gunner to become the vehicle commander for the absent section leader. The three-man crew of a M996 HMMWV would provide one dismount per vehicle and either two or three per section. According to AT platoon tactics, the driver is supposed to dismount to provide local security while the vehicle is stationary. Therefore, during R&S operations the driver would remain with the vehicle while the gunner would dismount and the vehicle commander would move to the weapon system. Subsequently, with screening operations, a section can dismount two or three of its crew members to act as a dismounted observation post. When personnel shortages are a problem, the AT company can still fulfill the role of cavalry, if only in a mounted role. Field Manual 17-98, *Scout Platoon*, provides further information on dismounted operations.

An AT company configured as a cavalry troop can operate effectively in a high-, middle-, or low-intensity conflict. In a high-intensity operation, AT platoons are best suited for covering force area (CFA) operations. Once they collapse the CFA, they withdraw to their battle positions along pre-planned routes. The AT company or part of it can participate in stay-behind operations to provide the task force commander with real-time intelligence on the approaching enemy forces.

Typically, a ground troop commander has a habitual relationship with an air troop in the divisional cavalry squadron or armored cavalry regiment. Although the commanders own their individual battle space, the air troop commander is

responsible for coordinating his efforts with those of the ground troop commander. Air and ground units work together to make an effective team in conducting cavalry operations. Air troops can conduct area reconnaissance while the ground troop conducts a detailed route, area, or zone reconnaissance. The air scouts can provide flank security, and when the ground troop disengages from their screen line, the air troop can maintain contact with the enemy. Therefore, AT company commanders should become experts in operating with air scout platoons from the light cavalry squadron. Handing over the air battle to ground forces is a delicate operation that requires cooperation, habitual relationships, and detailed rehearsals. Antitank company external evaluations should include a covering force operation. Battalion aviation liaisons should evaluate the air/ground coordination between the AT company

An AT company configured as a cavalry troop can operate effectively in a high-, middle-, or low-intensity conflict.

commander and the air scout platoon leader or troop commander. Some might argue that this is the mission of the division cavalry ground troop, but the division battle space is significantly larger than the troop's available assets can effectively cover. When participating as part of a brigade, one or more AT companies can be detailed to augment the cavalry platoon in the CFA under the division cavalry squadron commander. This is where the AT platoon can expand its operations and provide more flexibility for the battalion and brigade commanders.

A low intensity or stability and support environment does not preclude the use of the AT company in its role as a cavalry troop. Antitank companies can conduct route reconnaissance, perform area or zone reconnaissance and check-point operations, establish a buffer zone between belligerents, conduct patrols to maintain law and order, escort nongovernmental organization personnel, and

provide convoy security and border surveillance and security. The light infantry division combat training center rotations emphasize forced entry into a regional conflict. Antitank companies organized as cavalry troops and augmented by air scouts could aid commanders in entering the combat zone by saturating the area with air and mounted reconnaissance elements in advance of the main body. As they infiltrate the combat zone they can dismount the battalion scouts.

During the search and attack phase of a movement to contact, AT companies task organized as cavalry troops can be augmented with dismounted rifle squads. The mission of the AT platoons would be to operate as a ready reaction force once the motorized scout platoons locate the enemy. Scout platoons would saturate the most active area of operations with surveillance assets, while their habitual AT platoons would remain in covered and concealed positions within easy response distance.

The cargo HMMWVs from the scout platoon and AT platoon could be consolidated to carry a rifle platoon. The mounted scout platoon would then vector the AT platoon with the rifle squads or platoon to ambush enemy infiltrators. The antitank company's thermal sight could be used in a handheld mode without the rest of the TOW system. This would help the company make the most of its surveillance assets. An ideal set-up is the current configuration used by mechanized scouts, in which the thermal sight is mounted on a bracket next to the .50 caliber machinegun on the stacking swivel. This mount would be a welcome addition to the MTOE of AT companies. It would give them the same capability with the TOW night sight mounted or the M2 heavy machinegun or mounted Mk 19 automatic grenade launcher.

During noncombatant evacuation operations (NEOs), the AT company could provide commanders with economy of force by placing the company in a screen line around the extraction site to provide early warning or clearing. This would free at least a rifle company on perimeter security. An air landed AT company offers high mobility, fire-

power, and surveillance capabilities. Subsequently, the AT company could clear the route to the NEO location and transport dismounts, or provide transport to the extraction site. Antitank companies would also be ideally suited for border interdiction missions. They would need no transportation assets to move to their OPs, and their thermal sights, which can be mounted on the traversing units without mounting the weapon systems, would provide stable platforms for conducting long-term observation. In addition, the vehicles could operate for at least three days before requiring Class I and III resupply.

Training

Antitank companies do not have their own field manual prescribing their employment as cavalry scouts, but Field Manual (FM) 17-97, *The Cavalry Troop*, could provide commanders with tactics, techniques, and procedures. The skills required of soldiers in the 19D and 11B military occupational specialties (MOSs) would also be required of those in 11H, but these skills are familiar to many AT platoon personnel.

FM 17-98-1, *Scout Leaders Handbook*, outlines the skills 19D scout leaders must know to shoot, move, and communicate: Command and control of a scout platoon or section; intelligence preparation of the battlefield; combat vehicle identification; call for and adjust

indirect fire; conduct air/ground coordination, implement scouting techniques (recon, security, dismounted operations, battle drills); utilize demolitions and classify obstacles; and survive in a hostile environment (escape and evasion).

The AT company leaders could be sent to the Scout Platoon Leaders Course at Fort Knox. This three-week course focuses on intelligence preparation of the battlefield, the orders process, combat vehicle identification, scouting tactics, techniques, and procedures, zone and area reconnaissance, and security operations. Subsequently, a TOE change should be submitted to reflect the diverse missions and the new skills required of AT company personnel. For junior enlisted personnel the battalion scouts can provide a modified train-up in scouting techniques.

In the absence of an AT company gunnery manual for their heavy weapons, commanders could use FM 17-12-8, *Light Cavalry Gunnery*, published by the Armor Center, which focuses on scout section gunnery. AT company commanders need to become familiar with formations: troop column, troop line, troop vee, and troop split-vee, all of which are explained in detail in FM 17-97. ARTEP 17-487-30-MTP, *Mission Training Plan for the Regimental Armored Cavalry Troop*, will give commanders a descriptive, performance-oriented training guide for evaluating their units.

In an AT company organized as a cavalry troop, the commander also becomes the battalion's reconnaissance commander. He coordinates the efforts of the dismounted and mounted scouts, as well as those of air cavalry assets operating in his battle space. The executive officer can help the commander by passing information to higher headquarters, tracking the battle from the company tactical operations center, and monitoring and coordinating the efforts of the air troop. Each AT company has the unique ability to operate multiple long range communications, which makes it ideal for this role. Redundancy is achieved because each platoon leader has a radio in his vehicle for long range communications.

Operating as a cavalry troop, the AT company gives a battalion commander a flexible asset to augment forces executing his reconnaissance and security operations in any battlefield environment. It can also provide the commander protection in the defense and the elements of speed and surprise in the attack.

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Mountain Infantry Company

Winter Raid

CAPTAIN JAMES D. CAMPBELL

Not many soldiers would argue with the need for an infantry unit to maneuver and sustain itself during combat in extreme cold weather conditions. But few infantry units regularly train for combat in a cold weather environment,

and even fewer are capable of executing that kind of training using only their organic assets.

The Army National Guard's 3d Battalion, 172d Infantry (Mountain), is one unit that trains regularly for combat in

extreme cold. In fact, it is the Army's only unit organized by MTOE (modified tables of organization and equipment) for both mission execution and sustainment operations in the cold and the mountains.

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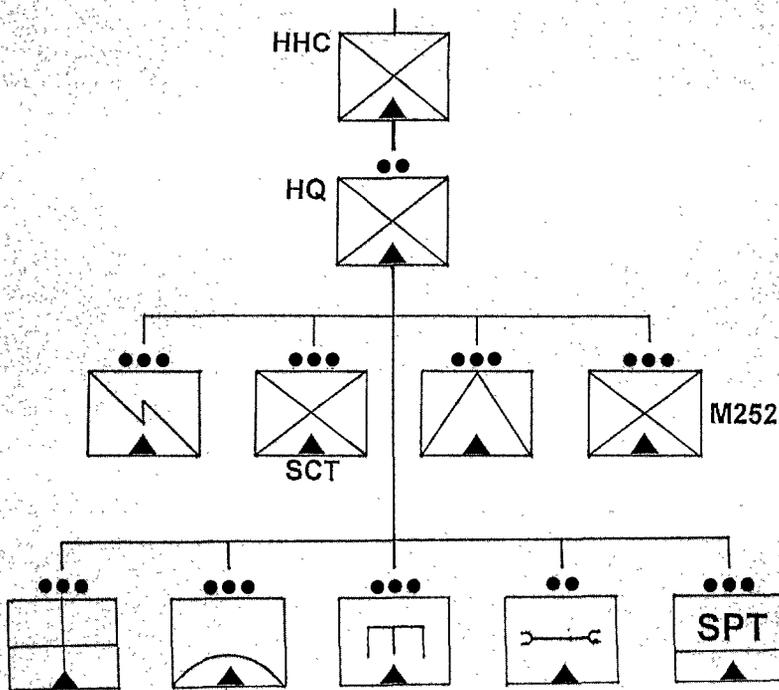
In March 1997 the battalion spent two weeks at Canadian Forces Base Val Cartier, in the mountains north of Quebec City, Canada, training in various infantry and specialized mountaineering tasks. The culminating event of this situational training exercise (STX) was a two-day company raid conducted in mountainous terrain covered with an average of 8 to 12 feet of snow, in temperatures that rarely exceeded minus 20 degrees Fahrenheit. I want to share the techniques my company, Company B, used in this STX, along with some training considerations for this kind of mission and the lessons the company learned.

The company used two primary means of movement over the snow—snowshoes and skis—and moved large items of equipment, Class I supplies, and ammunition either by ahkio sled or small unit support vehicle (SUSV), a small, tracked vehicle capable of transporting two squads of soldiers and their equipment through deep snow. All of the battalion's organic direct and indirect fire weapons were integrated into the STX scenario, and the battalion was supported by a composite UH-1 helicopter detachment from National Guard units around New England.

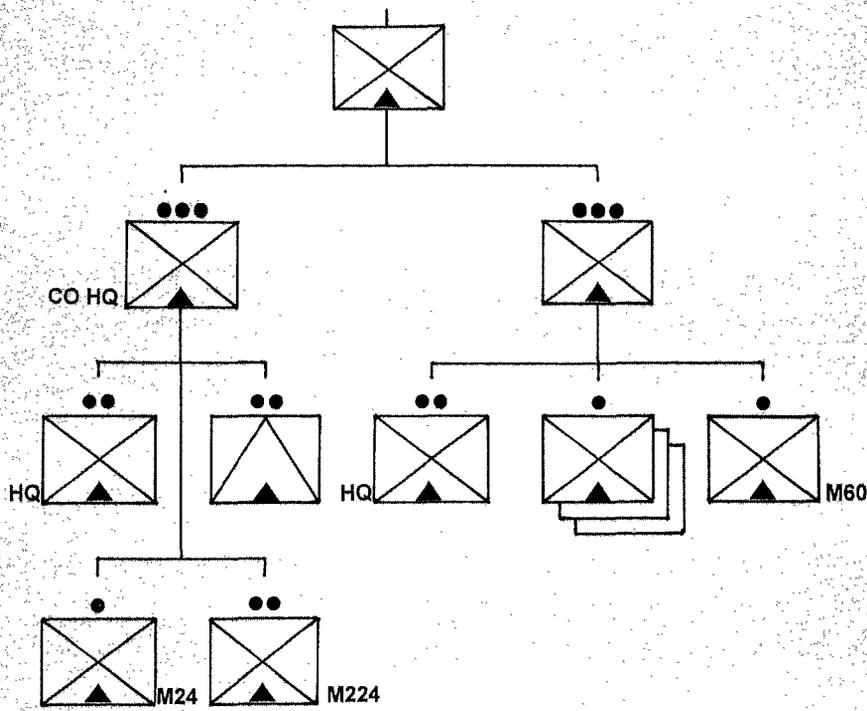
The battalion's organization differs from the standard light infantry MTOE in several ways, all of them designed to improve the battalion's ability to operate in alpine conditions. The battalion headquarters is located with the Army National Guard Mountain Warfare School at Ethan Allen Firing Range in Jericho, Vermont, with a headquarters and headquarters company (HHC) and three rifle companies located in Vermont, New Hampshire, Maine, and Rhode Island. The HHC contains the standard staff sections and specialty platoons, along with several nonstandard additions.

One of these additions is an organic platoon of mountain engineers, equipped with four HMMWVs (high-mobility multipurpose wheeled vehicles), one SUSV, and a range of equipment that enables them to conduct mobility, countermobility, and survivability missions in the mountains.

MOUNTAIN INFANTRY BATTALION HEADQUARTERS AND HEADQUARTERS COMPANY 25 OFFICERS AND 256 ENLISTED MEN



MOUNTAIN INFANTRY RIFLE COMPANY 5 OFFICERS AND 155 ENLISTED MEN



In addition to standard combat engineer tasks, the platoon trains on demolitions and building combat roads or

trails and small buildings or shelters. It has also regularly executed such tasks as building expedient suspension

bridges and mortar firing points in deep snow. This platoon's unique capabilities make it a major combat multiplier for the battalion.

The battalion's HHC also contains an organic Stinger section, and an enlarged medical platoon that can run two complete aid stations. The support platoon is equipped with both 2.5-ton trucks and SUSVs, which enable the battalion to conduct logistical package operations under normal conditions and over deep snow.

Members of the enlarged scout/sniper platoon are trained as lead/assault climbers, allowing them to establish assault climbing lanes and fixed-rope ascents for the battalion in addition to conducting normal scout platoon missions. Each rifle company is equipped with the standard range of light infantry weapons and equipment, but with three 60mm mortars instead of the normal two, and each rifle platoon has three three-man M60 machinegun teams organized into a ten-man weapons squad. Additionally, each company has an organic six-man scout/sniper section, allowing for extended reconnaissance missions independent of the battalion, a full range of assault climber missions, and a long-range precision fire capability at the company level. Each company has three HMMWVs and two SUSVs, and each rifle squad and section in the company has its own ahkio sled and 10-man arctic tent. All soldiers in the battalion are issued the full extreme cold weather clothing system (ECWCS), along with skis and snowshoes. Most of the leadership positions in the rifle companies are coded with the additional specialty indicator (ASI) E, Military Mountaineer.

STX Scenario

The scenario for the STX required the company to destroy a roadblock on a bridge held by a 20-man group of paramilitary militia. The bridge crossed a deep, fast-moving stream that had not frozen over, in spite of the cold. The opposing force (OPFOR) element had small arms and one medium machinegun and could be reinforced in 15 to 20 minutes. The snowdrifts on either side of the road and bridge reached up to 12

feet high, making the road itself resemble a deep trenchline. The OPFOR had dug tunnels and constructed frozen-snow fighting positions in the snowbanks along the roadblock, which consisted of a wire obstacle and some surface-laid mines. The OPFOR was expected to provide resistance, and the bridge had to remain intact to allow for civilian relief operations.

Concept of the Operation

Company B would be transported by SUSV to a point approximately three kilometers from the objective and would then move on foot to establish a patrol base. The tentative location for this patrol base was approximately two kilometers from the objective and was masked by a major hill mass. After conducting a complete reconnaissance of the objective using both maneuver elements and the scout/sniper section, the company would attack the roadblock at first light, and be extracted by helicopter after destroying the roadblock and either killing, capturing, or driving off the OPFOR.

Insertion Phase

The company was inserted by SUSVs during a driving snow and began moving to the patrol base on snowshoes. The heavy snowfall served to silence our movement and obscure our tracks as well. The headquarters section pulled one ahkio tent group to be used as an emergency warming tent. The company occupied the patrol base, and the platoons began digging snow caves for each buddy team; at each two-man position on the perimeter, one man would provide security while the other stayed warm in the snow cave. The headquarters element dug in and set up the ten-man arctic tent and Yukon stove, making sure it was camouflaged. The depth of the snow enabled us to dig the tent down far enough to be almost completely obscured.

Reconnaissance

On reaching the patrol base, the company scout/sniper section moved to an observation/firing position that had been tentatively identified during the

map reconnaissance. Because of the lack of leaf cover, the section's soldiers were forced to move with extreme caution. Despite their overwhite garments, the relative lack of concealment offered by the open hillsides—coupled with their track signature—significantly increased the possibility of compromise. Once the snipers were set in their observation post, a leader's recon left the patrol base, approaching the objective on a route chosen with the lack of leaf cover and the track signature in mind. Because of the snow, we were able to observe the objective at a distance and did not have to get close in to accomplish our mission. The reconnaissance element confirmed the basic plan and then returned to the patrol base using the trail that had been broken on the approach march to minimize the track signature.

The Raid

After returning to the patrol base, we completed our troop-leading procedures and continued to receive reports from the snipers, who maintained continuous surveillance on the objective. During the night before leaving the patrol base, the company's noncommissioned officers (NCOs) executed a plan for rotating the soldiers through the warming tent to see that they did not suffer from the extreme cold temperatures. At H-5 hours the support element of two machinegun squads, under the control of the executive officer, moved to link up and consolidate with the sniper section; then the entire element occupied a support-by-fire position on the mountain-side overlooking the objective 800 meters away.

At H-4 hours the assault element left the patrol base with half of the security element, while the other half, consisting of one squad with a Dragon team, moved to a position approximately 100 meters from the patrol base to seal off the objective from the north. The assault element moved to an objective rally point (ORP) 400 meters from the objective, while the other security element continued on and set in, sealing the objective from the south. Once security was established, a final leader's recon confirmed that the enemy dispo-

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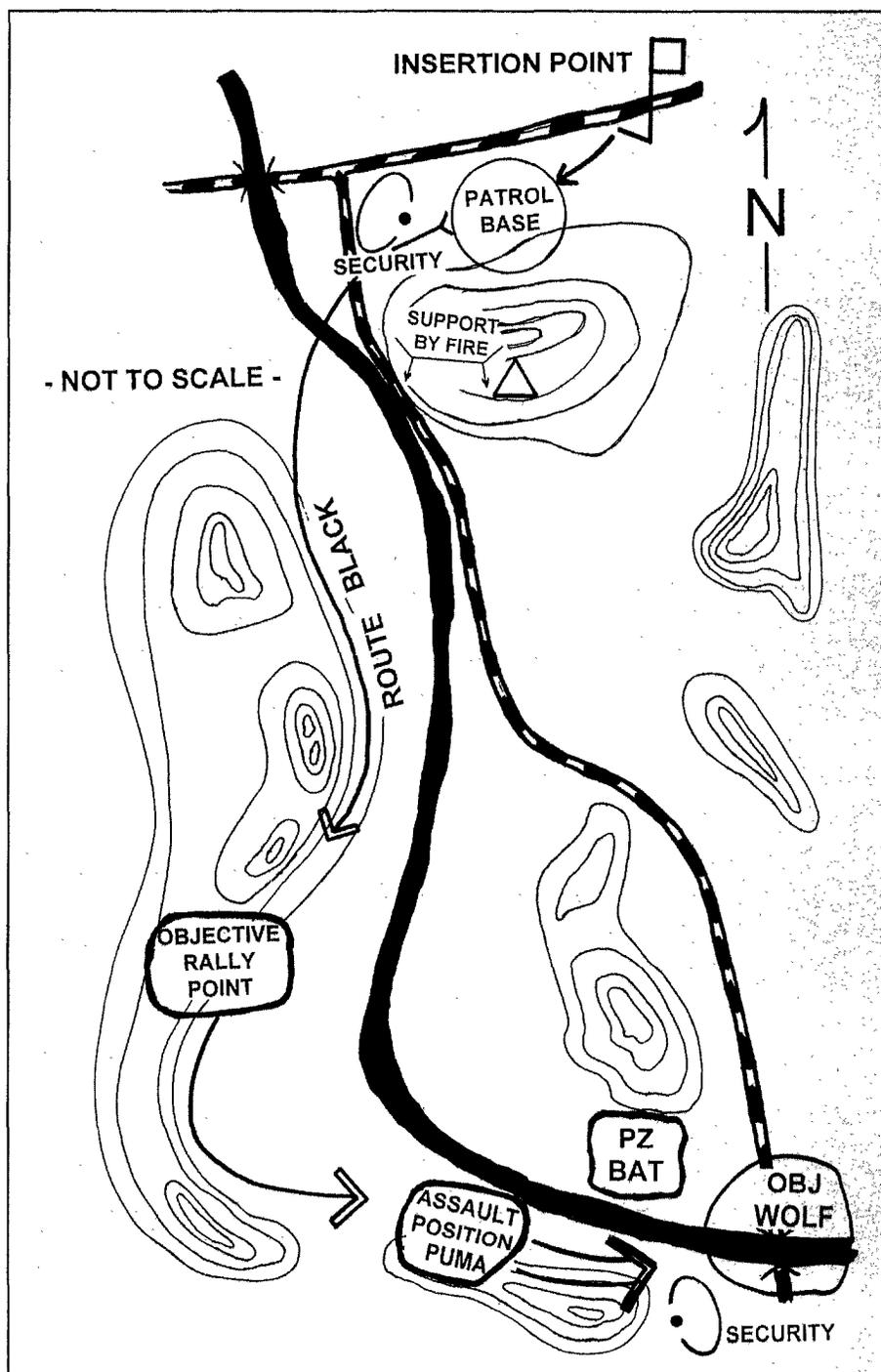
sitions had not changed, and the assault element of one rifle platoon with an attached engineer squad moved to an assault position. At H-5 minutes the mortar preparation began, fired by 60mm and 81mm mortars that were co-located and live-firing into an impact area while exercise observer-controllers simulated effects on the objective. Mortar fires on the objective were planned to be air bursts so as not to cause structural damage to the bridge.

At H-2 minutes the support element opened fire on the objective, initiating fires with shots from the snipers at targets identified during their observation the previous day. At H-hour the assault element moved out of the assault position while the support element shifted fires to targets on the eastern side of the objective. One squad from the assault element entered the road, followed by the engineers, and began clearing up to the obstacle while one squad provided suppressive fires from the tops of the snowbanks on either side of the road. The engineers breached the obstacle, and the assaulting squad continued up the road, clearing snow caves and fighting positions on the way. One squad followed in support while the third remained in reserve at the entry point to the road. After the obstacle was breached, the support element ceased fire and remained ready to help seal off the objective from the north. During the assault, the northern security element engaged an OPFOR vehicle attempting to get to the objective.

After clearing the objective, the company began to consolidate and reorganize, transporting casualties to the helicopter extraction point approximately 100 meters from the objective. The engineers inspected the bridge and disarmed demolition charges that the OPFOR had placed on it. The company was extracted by UH-1, with the assault element, support element, and security elements departing, in that order, and a small detachment left behind to secure the patrol base was extracted by SUSV.

Training

Companies in the mountain battalion follow a standard National Guard inactive duty training (IDT) and annual



training (AT) schedule, with a total of 48 unit training assembly (UTA) days and 15 AT days during the year. The battalion conducts its annual training in the summer one year and in the winter the next to remain proficient in its METL tasks in both temperate and extreme cold environments. The battalion's training focus is generally at the platoon level and below, emphasizing platoon and squad battle drills, and critical leader and soldier training tasks.

The battalion's units must also retain

their proficiency in mountain skill tasks such as *cross a vertical obstacle* (fixed rope ascent or assault climb), *conduct cliff assault*, and various oversnow mobility tasks such as snowshoe/ski movement, ice climbing, and skijoring. (Skijoring is a method of rapidly moving a group of soldiers on skis over snow by pulling them on a tow rope behind a SUSV). The battalion's soldiers also must train to retain expertise in fieldcraft and survivability tasks in an arctic/alpine environment.

Company B is better able to accomplish these mountain-specific tasks because of its core of experienced NCOs and soldiers who have attended the summer and winter phases of the Army National Guard Mountain Warfare School, and have therefore earned the military mountaineering ASI. Additionally, the company spends four of its IDT weekends (in November, January, February, and March) in the field in Maine to maintain unit proficiency in cold weather survivability. All collective training events, including squad and platoon STXs, include the requirement to execute a mountaineering task such as crossing a mountain stream, conducting a fixed rope ascent, and constructing suspension traverse or vertical-haul-lines. By regularly building training lanes that include cliffs, streams, and other natural obstacles, we ensure that leaders and soldiers remain proficient in specialized mountaineering tasks, along with regular infantry skills and collective tasks.

To ensure that the unit remains able to conduct operations in the cold and over deep snow, we regularly conduct STX training in the winter months. Additionally, we dedicate an IDT weekend, normally in January, to oversnow mobility training. This drill focuses on ski training—both cross-country and downhill—ice climbing, snowshoeing, and skijoring. The battalion's units often spend a weekend at a downhill ski area, training not only in basic techniques but also in rapid descents wearing full equipment and carrying rucksacks. The two-week exercise in Quebec included a squad-level biathlon competition, in which the squads conduct a timed cross-country ski movement to a range two to three kilometers away, and then fire a graded Alternate Course C M16 qualification on arrival.

As a method of training for snowshoe movement, Company B also includes in its training regimen physical training on snowshoes, including a yearly snowshoe football tournament. Aside from the obvious physical conditioning and morale gains, this tournament is an excellent way to get soldiers accustomed to running, falling, quickly recovering,

and rapidly changing direction on snowshoes. The result is soldiers who can conduct IMT to standard in deep snow conditions. This training paid great dividends during the raid STX, when the company stayed on snowshoes for almost 48 hours continuously, even during actions on the objective.

Lessons Learned

Clearly, extreme cold weather presents significant challenges to a unit attempting to conduct a raid or any other infantry mission. Cold weather affects operations in a variety of ways, and there are several considerations a commander must incorporate into any mission planning for that type of environment:

Time: Cold and deep snow add a considerable amount of time to everything a unit attempts to accomplish, from movement to maintenance. Since soldiers tire faster during all operations, with potentially life-threatening consequences, extra time must be allowed for adequate rest. Breaking a trail in snow while carrying a soldier's combat load can be exhausting, and frequent changes of point men must be planned. Manipulating equipment, particularly weapons, radios, and night vision goggles, is difficult in the cold because of heavy clothing and cold fingers. Tasks conducted in the extreme cold may take more than three times the normal amount of time.

Cover and Concealment: In cold weather operations, the lack of leaf cover above and below the treeline significantly affects all phases of an operation, from movement to reconnaissance and actions on the objective. Because of the increased danger of aerial and ground observation, leaders must carefully plan soldier and equipment camouflage and route selection, as well as the tactical placement of support-by-fire and other key positions. In addition, deep snow may obliterate normal folds in the ground and cover such obstacles as rocks and ditches.

Track Discipline: Any movement in snow causes a long-lasting and obvious track signature that may cause a unit to be detected. Leaders must plan routes so that track signatures are concealed

from the enemy as much as possible; approaching an objective from behind a major terrain feature, or even using previously packed trails and roads must be considered. Unit movement techniques should be altered to reduce the number of trails that must be broken. Two possible techniques are moving a company in a file or in platoon files. When planning movement, the factors of track discipline, leaders must weigh concealment and difficulties in breaking trails against the need for speed and security. Reconnaissance must be from a vantage point whenever possible, as tracks left while moving close to an objective are likely to be discovered. In a static position such as a patrol base or a defensive position, specified trails must be broken and their use rigidly enforced to reduce the unit's signature in the snow.

Weapon Maintenance: The soldiers' weapons must be kept dry and free of snow. Even the slightest moisture in a weapon can cause it to freeze up and be useless. Soldiers must keep their weapons out of warming tents and snow caves to reduce the possibility of condensation forming and then freezing on them. Break Free lubricant and lightweight weapon oils do not work well in extreme cold. Units should order extreme cold LSA (lubricant, small arms) before beginning a cold weather training cycle. At every halt, leaders must check weapons for snow and moisture; soldiers often fall in the snow and use their weapons as a means of recovery or balance, thereby increasing the chance that bolts will freeze and magazines will stick. Pre-combat checks in an ORP or assault position should always include weapon functions checks, and this requirement is doubly important in the cold.

Communications: Leaders must plan for radio batteries to drain much faster in the cold. Lithium batteries should be used whenever possible to reduce the chance of weak batteries causing communication failures. Like weapons, radios should also be left out of warming tents and snow caves, whenever possible, to prevent condensation.

Discipline: The danger of cold weather injury requires leaders at all

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levels to be especially conscious of their soldiers' condition and whereabouts. This awareness is fundamentally an NCO responsibility. Proper training and rigorous discipline are the only ways to prevent needless injury in the cold; the experience, discipline, and training of our NCOs enabled the entire mountain battalion to remain in the field continuously for two weeks—in snows 8 to 12 feet deep and with average temperatures never exceeding minus 20 degrees—without sustaining a single cold weather injury.

Physical Training: Because of the added rigors of operations in the cold and mountains, soldiers must be at a high state of physical readiness. This requirement is the same for infantry units of all types, and must be enforced. Acclimating soldiers to cold weather

should include physical training in heavy clothing, so soldiers can become accustomed to keeping the correct level of dress for their level of activity. Heavy clothing, boots, snowshoes, an increased load of food to carry, all conspire to drain the soldier's energy. Leaders must enforce hydration; activity in higher elevations and the increased physical demands of the cold weather environment all increase water consumption. Leaders must also plan for a way to keep water from freezing. One technique is to keep canteens inside a layer of clothing instead of on the load-carrying equipment.

Conducting cold weather and mountain operations is only one of the many challenges we face as infantrymen. Like operations in other environments, however, we can overcome those chal-

lenges through training, discipline, and detailed planning. The experiences of the 3d Battalion, 172d Infantry, in the cold and mountains have reinforced for us the importance of these timeless requirements, along with our belief in the Army's absolute reliance on the ability of our NCOs and junior officers to execute these tasks.

Captain James D. Campbell commands Company B and a detachment of the HHC in the 3d Battalion, 172d Infantry (Mountain), in the Maine Army National Guard. He previously served on active duty as an assistant professor of military science at the Massachusetts Institute of Technology and commanded a company in the 1st Battalion, 15th Infantry. He is a 1986 ROTC graduate of Colby College and currently a doctoral candidate at the University of Maine.

Company Initial Training Program Integrating Newly Assigned Soldiers

LIEUTENANT LAWRENCE O. BASHA

A crucial task of any group or culture is the initial socialization of its new members. Many units underrate the initial reception and conditioning of soldiers at their duty station and thus may fail to properly integrate them. As a result, these units suffer unnecessary attrition and spend too much time reviewing basic Skill Level 1 tasks. I propose the institution of a company-level initial training program to help overcome some of these problems.

All leaders would like to have newly assigned personnel arrive with experience and knowledge of the unit's weapons, equipment, and tactics. But what they usually get is about one experienced soldier out of 20. The rest are privates, fresh out of basic and advanced individual training (AIT). Al-

though the Infantry's initial training does a fine job of teaching a new recruit basic soldier skills and giving him a basic understanding of the "culture" he is about to enter, this training does not give him enough knowledge and experience to be a successful soldier.

A new soldier receives little formal training on equipment and tactics. The lack of resources and funding now precludes assigning every basic trainee his own set of night observation devices (NODs), laser designator, and optical rifle scope. His only experience with NODs in basic training or AIT is putting one on his head and firing a weapon equipped with an AN/PAQ-2 aiming light. His knowledge of urban tactics consists of how to put down covering fire when crossing a street, how to

throw a grenade into a room, and perhaps how to climb into a second-story window. His first solid mission-oriented training comes after he arrives at his first duty station.

The Infantry as a whole must acknowledge that we are not likely to see any fundamental changes in the length or content of basic training and AIT. We should therefore embrace the idea that infantry leaders are responsible for the integration and education of new soldiers. If we properly teach newly assigned personnel the basic Skill Level 1 tasks and apply these skills during training, we will have a more solid foundation for mission success. Various programs, such as more selective recruiting, can improve the quality of the soldiers coming into the Army

and then to the company. But whatever the quality of the recruits and the process of basic training and AIT, it is the battalion's or the company's responsibility to train its new soldiers to operate as members of the infantry squad.

One example of such training is the Ranger Indoctrination Program (RIP)—the initial integration, training, and testing that recruits receive in the process of becoming Rangers. RIP was designed to give a soldier the basic skills to deploy immediately with a Ranger company. Although not all the new personnel in a Ranger battalion are Rangers qualified, they are supposed to be trained and sufficiently qualified to deploy with the battalion on any mission. The changing technology and techniques used by the Ranger Regiment today make it increasingly difficult to guarantee that new soldiers will be ready to join their platoons on a mission. The same is true of other infantry units.

An infantry battalion, and preferably the company as well, must share the burden of indoctrination training with the Infantry Training Brigade, where initial entry training takes place. In the Ranger Regiment, for example, it is the companies' responsibility to integrate new soldiers so that they not only survive their first year but are quickly prepared to deploy with a full understanding of all Ranger missions, tactics,

techniques, and procedures (TTPs), and a rudimentary knowledge of how to maintain mission-critical equipment. In conventional units the situation is very similar if one compares basic training and AIT with RIP. A new soldier must be ready to pick up a \$10,000 piece of equipment and use it to accomplish his—and hence his unit's—mission.

The concept of a "created culture" can help the command indoctrinate and integrate new soldiers into the infantry unit, thus expediting the process of initial qualification, the soldiers' participation in all aspects of training, and their ability to perform necessary details such as driver and range support functions. Currently, most companies have mixed success in teaching and instilling basic knowledge about techniques and maintenance. The initial qualification training a new soldier receives at the unit may take months, or require that the company change the training schedule to get him qualified, certified, or initially trained on equipment. The unrealized potential of the concept of a created culture is that leaders—who created the culture of the infantry in the first place—can modify and reinvent it to suit the changing conditions in which our soldiers must operate. As with most theories, this is not easily confirmed by quantitative measurements. It is best judged qualitatively, by our dedication to a unit and its mission, by the pride

we feel in being infantry soldiers, the respect given those who wear the blue cord or the Combat Infantryman's Badge, and by the esprit de corps we share.

For example, all Rangers must learn Ranger history in RIP. This gives them an idea of what they can expect when the unit is deployed in combat, and what is expected of them. This information and the Ranger Creed are the foundation of the Ranger Regiment's effectiveness. All infantry units have distinguished histories of which its members should be proud. The individual actions that earned each unit its recognition reflect characteristics (teamwork, dedication, proficiency, courage) that all good units share. We can capitalize on this concept so that new soldiers will have a model for their actions and a goal to strive for during training and war. Additional training concurrent with the socialization process would provide even more benefits.

Unfortunately, expectations of new personnel are low; the general model for their initial development in many units is, "Follow me and keep your mouth shut." A systematic integration and inprocessing program would set higher expectations for them and teach them information and doctrine in the basic areas we all must master: maintenance, tactics, regulations, and policies (from army level to company), and military history. Proper initial training in these areas would enable the command to conduct tasks and collective training beyond Skill Level 1. Given the time and turbulence involved in transferring individuals from unit to unit, conducting company-level initial inprocessing and training would allow leaders to assess and evaluate the new soldier's knowledge, skills (both military and non-military), and potential.

Just as basic training and AIT do not totally prepare new soldiers for what they may need at their first duty station, experienced soldiers going to a unit with a rapid deployment mission, or to another specialized unit need education on that specific unit's TTPs, formations, and tactical, maintenance, and administrative procedures. If a newly-arrived soldier hears only that he will "pick up



Newly assigned soldiers receive instruction in squad tactical training.

TRAINING NOTES

this information in time," his morale, confidence, and effectiveness suffer. Although many NCOs transfer from similar units, many (especially the most important fighting leaders, the staff sergeants) do not adjust quickly to a new unit's equipment and missions.

The ideal solution is a company-level initial training program (ITP). The company's NCOs should develop the training plan, institute the instruction, and monitor the new soldiers' progress. A company level program would help socialize newly assigned personnel into their infantry unit, reinforce their identification with the company, and let them get to know the various leaders; it would also give experienced company NCOs an opportunity to develop their leadership and training skills.

Five principles should guide the development of a company ITP:

- The purpose should be to see that new personnel are fully processed and integrated into the company, the battalion, and the post. This would include the completion of paperwork, familiarization with the major post facilities, including family service organizations, and the complete issue of all equipment and gear.

- The program should cover the basics of equipment and equipment maintenance. All new soldiers should learn to operate and maintain such items as radios and global positioning system (GPS) receivers and the procedures to follow if they lose or damage something. Early instruction on the optics and lasers would let squad leaders spend less time reviewing these basics and more time developing the soldiers' shooting, movement, communication, and marksmanship skills. Additional instruction could be scheduled as time permits, and a monitored study hall could give the soldiers time to read and

understand policy letters, excerpts from manuals, and standing operating procedures (SOPs), and other important references.

- The program should cover all the basic training and qualification necessary for integrating the soldiers into the unit's mission. They should receive initial training qualifications, bus or stake bed driver training, and unit-specific licensing.

- The instructors should be designated by the First Sergeant and the platoon sergeants. Since all company NCOs have been through at least one NCO education system course, they should be able to teach any of the basic classes to the new soldiers. The company ITP duty could be treated as a standard duty rotation. The NCOs could be put on a DA-6 duty roster and rotated like the charge of quarters (CQ) or staff duty NCO. The First Sergeant would design a duty roster with blank dates and give the NCOs two or three days' notice of their teaching responsibilities. Since it takes a day or two to get new soldiers settled in and to coordinate resources for the ITP, the NCOs should have ample preparation time. (Senior specialists might also be considered instructors or assistant instructors.) If new soldiers arrived the day before a major exercise or deployment, it would be up to the top NCOs and the company commander to determine the program schedule. The training NCO should control and maintain the ITP.

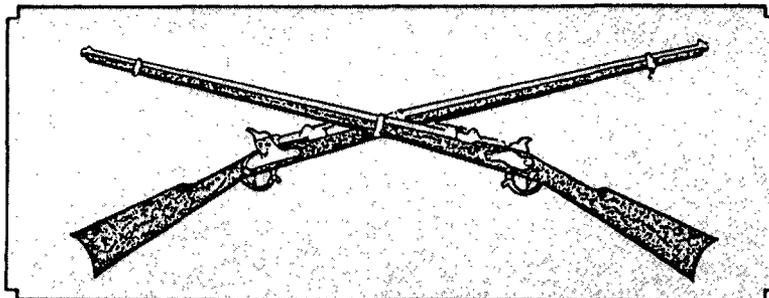
- The course should last no longer than one week. Time permitting, additional days could be used to zero weapons and conduct a full or alternate qualification, and for familiarization fire with all the company's light weapons and sighting systems. The emphasis should be on getting the most critical training done first. Soldiers in positions

requiring particular aptitudes, such as sniper or computer operator, could be identified to receive further skill training later.

In the future, infantry units will have more technologically sophisticated equipment (an optic, a laser, and some form of NOD as standard items), more specialized and varied missions, and more operations other than war. Infantry companies need to reexamine their initial inprocessing. This will entail a thorough review of what the command wants from a soldier when he goes to a platoon: What administrative and maintenance information should he know? What initial qualifications and training does he need? How much mission information and TTPs are necessary for new personnel to become assets to their elements instead of training burdens?

Infantry leaders should deliberately and systematically train and socialize new soldiers to contribute to their company's mission within their first two or three weeks at a new assignment. Such prompt initial training will increase the soldiers' competence, confidence, and commitment to their companies. Second only to defeating the enemies of our country on the field of battle, our duty as leaders is to insure that those who wear the crossed rifles are mentored and challenged to join the Infantry's long line of distinguished soldiers.

Lieutenant Lawrence O. Basha is now attending the Infantry Captains Career Course. He previously served in the 3d Battalion, 75th Ranger Regiment, at Fort Benning, and as a senior engineer sergeant in a Special Forces detachment. He is a 1988 graduate of the University of New Mexico and was commissioned through the Officer Candidate School in 1995.



SWAP SHOP



The Claymore mine, as issued, is not ready to be employed efficiently in a tactical situation. It comes tightly rolled around a spool, and it takes too much time to unravel from the spool. The most common problem is that the wire gets caught on the mine or entangled in itself.

The following technique combines various methods and proved effective during a CALFEX conducted by the 4th Battalion, 31st Infantry, 10th Mountain Division, in August 1997.

- After testing the mine, take everything out of the bag. Make it one large pouch by removing the stitching from the middle. Put the mine into the bag; cutting holes so the legs of the mine can stick through it when extended (Figure 1). Extend the legs through the holes and fold them under the bag.

- Unwrap the wire from the spool. Remove the green instruction sheet that comes under the cover of the bag (tearing along the perforated edge), and use it to form a protective cover for the blasting cap. Tie the blasting cap end of the wire to the left handle of the bag (use an overhand knot), leaving 10 inches from the knot to the blasting cap. Place the now-protected blasting cap in the bag behind the mine (Figure 2).

- Take the wire 10 inches from the blasting cap end, make a loop by twisting the wire, then reach through the loop and pull the running end of the wire through it. Reach through this bite and pull the running end of the wire through it. Continue in this manner, forming the entire length of the wire into a daisy chain (Figure 3). End the daisy chain roll 10 inches from the connector.

- Tie the connector side of the wire 10 inches back from the connector to the right side of the bag's carrying handle with an

overhand knot (Figure 4), and then place the connector inside the bag behind the mine. Place the looped wire in the bag in front of the mine. Close the bag cover and button it. Ensure that the M57 firing device is not in the bag but in the firer's possession.

- When ready to employ the mine, grab the overhand knot on the right side of the carrying handle; pull out the connector and some slack from the wire. Tie the connector to a stake or tree branch and then place the bag under your right arm with the right side of the bag pointing back to the firing position. As you move to the mine emplacement location, the daisy chained wire will unravel without tangling.

- At the mine emplacement location, extend the legs of the claymore (which are folded under the bag) and emplace them in the ground. Open the bag cover. Remove the protective covering from the blasting cap, then place the cap in the cap well.

- Aim the mine and put the bag cover back over it. The bag camouflages the mine and will be destroyed when the mine is detonated.

- Return to the firing position and attach the connector to the M57 firing device. Fire when ready.

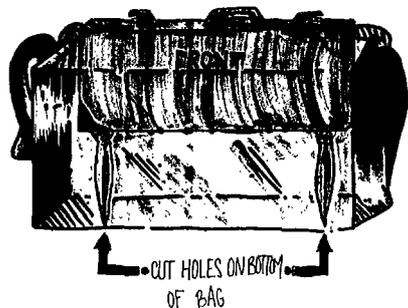


Figure 1



Figure 2

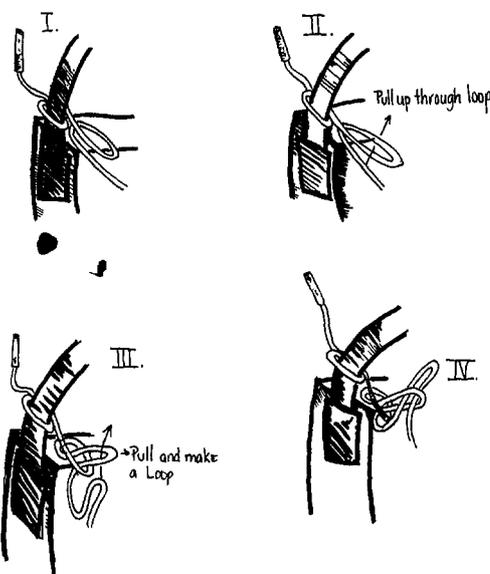


Figure 3

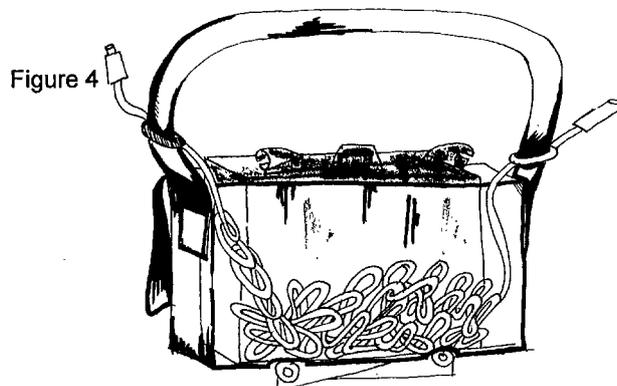


Figure 4

(Submitted by Platoon Sergeant Robert M. O'Donnell, 4th Battalion, 31st Infantry, 10th Mountain Division, Fort Drum, New York.)

INFANTRY CAREER NOTES



RECONNAISSANCE TRAINING FOR SCOUTS, SPECIAL FORCES, RANGERS, AND LONG RANGE SURVEILLANCE UNITS

One of the most difficult tasks facing reconnaissance units is the train-up and sustainment training of personnel. Operational tempo, personnel turbulence, doctrinal and equipment changes, and varied geographic areas of interest all contribute to this challenge.

To meet this need, the Long Range Surveillance Leaders Course (LRSLC) provides the Army's premier training resources and environment for reconnaissance personnel. The course focuses on the four main METL tasks common to reconnaissance units: reconnaissance, surveillance, target acquisition, and battle damage assessment (BDA). The LRSLC is a challenging course designed to produce highly skilled reconnaissance leaders and to provide field commanders with a credible reconnaissance force.

Located within the Ranger Training Brigade at Fort Benning, the LRSLC develops the technical, tactical, and leadership skills of selected officer, noncommissioned officer, and enlisted personnel assigned to scout, Special Forces, Ranger, LRS, and other military reconnaissance units.

A student in the course performs as a team member in a realistic tactical environment under mental and physical stress approaching that of actual combat. It gives the student an opportunity to refine his leadership and tactical skills to a high degree of proficiency so that he may then return to his unit and train his subordinates.

The LRSLC is 33 days in length with an average of 16 hours of training each day, 7 days a week. It is divided into major instructional blocks consisting of communications, intelligence, vehicle

recognition, survival, and operational techniques.

The communications training is primarily conducted using the HF, VHF, and FM frequency spectrums with emphasis on communications procedures, wave propagation, antenna theory and construction, and the construction and use of field expedient antennas.

During vehicle recognition, students learn to identify 139 pieces of key signature equipment, including tanks, fighting vehicles, personnel carriers, scout and reconnaissance vehicles, artillery, air defense systems, and associated radar.

Intelligence training includes instruction on enemy rear area operations, photo imagery, reconnaissance in stability and support operations, opposing force order of battle, tactics, and capabilities, and a heavy emphasis on the intelligence preparation of the battlefield.

Instruction in the operational techniques phase addresses core skills with an emphasis on planning, evasion, and recovery, hide/surveillance, field craft, and patrolling skills. This phase also provides in-depth training on insertion and extraction techniques to include airborne, airmobile, FRIES, SPIES, and water operations.

Students participate in nongraded and graded field training exercises (FTXs) culminating in a tactical insertion into Eglin AFB, in Florida. During the deployment and graded FTXs, students apply the tactical skills learned in the course by conducting reconnaissance and surveillance operations on various named areas of interest. Additionally, the students must demonstrate their

proficiency in communications by reporting their observations back to the company operations base at Fort Benning using long-range radio transmissions.

Physical training is emphasized throughout the course. PT is conducted every duty day and includes such events as 5-mile and 8-mile runs, ruck marches, land navigation with combat load, casualty evacuation runs, interval training, circuit training, and muscular strength and endurance training.

LRSLC allocations are managed at Department of the Army through the Army Training Requirements Resource System (ATTRS). Ranger and Special Forces qualified officers and noncommissioned officers may apply by submitting a DA Form 4187 through their parent units. Non-Ranger/Special Forces qualified personnel (officer, noncommissioned officer), as well as enlisted applicants (E1-E4) require waivers signed by the first lieutenant colonel in the unit chain of command. Approved waivers must accompany application for quotas to LRSLC.

Additional information on the Long Range Surveillance Leaders Course is available on the web at: <http://www.benning.army.mil/RTB/RTBWEB/LRSLC.htm>. Points of contact at LRSLC are as follows:

Commander, CPT Rob Keith, DSN 784-6216 or commercial (706) 544-6216, or keithr@benning.army.mil.

First Sergeant, 1SG William Bunnell, DSN 784-6831, commercial (706) 544-6831, or bunnellw@benning.army.mil.

Operations, SSG Ritchie Huffaker, DSN 784-6047, commercial (706) 544-6047, or huffakm@benning.army.mil.

BOOK REVIEWS



The Lions of July: Prelude to War, 1914. By William Jannen, Jr. Presidio, 1996. 456 Pages. \$18.95, Soft-bound. Reviewed by Colonel Christopher B. Timmers, U.S. Army, Retired.

For a book that purports to explain in detail the steps that led to the outbreak of World War I, *Lions of July* does not disappoint. Indeed, it goes well beyond that ambitious goal and offers an excellent overview of European power relations that, in some cases, extended back over several centuries.

It is not a simple task to understand why the assassination of Archduke Ferdinand (heir-presumptive to the Austro-Hungarian throne) in Sarajevo (Bosnia) by Serbian radicals plunged dozens of countries into what would become the bloodiest conflict of history up to that point. Even with Jannen's fine book, it still is not a simple task, but his narrative and day-by-day, in some cases hour-by-hour, accounts of what followed the assassination gives the reader a perspective that puts understanding within his grasp.

Most helpful, interestingly enough, is Jannen's discourse on the Balkans. This discussion is timely for those of us who follow events in the former Yugoslavia, and it should be mandatory reading for members of the press who cover this area of the world.

With chapters entitled "The View from Paris," "The View from Nish," and "The Kaiser Sees No Reason for War," the reader can almost believe that world war was unnecessary, unwanted, and totally avoidable. Perhaps it was, but the author explains why he thinks it was inevitable. Personalities, nationalism, mistrust, and infantile pride would hurl millions to their deaths and result in a war expected to end all wars. In the last chapter, Jannen recounts how, in the aftermath of the armistice, the map of Europe had been changed, how monarchies fell, and how the groundwork had been laid for a conflict just over 20 years later—another world war that would be even more costly, alter the map of Europe again, enslave millions under Communist regimes, and result in the introduction of nuclear weapons.

Lloyd George, Prime Minister of Great Britain, later remarked that war was too important a matter to be left to generals. But

then to whom is peace to be left? Generals did not issue ultimatums after the Archduke's assassination, did not give the orders for mobilization, did not declare war, and did not send young men to die. If war cannot be left to generals, it is even more obvious that it should not be left to politicians.

Public Affairs: The Military and the Media, 1968-1973. By William M. Hammond. U.S. Army Center of Military History, 1996. 659 Pages. \$43.00. Reviewed by Dr. Joe P. Dunn, Converse College.

The actions of the news media during the Vietnam War have been the subjects of controversy that has inspired a large literature, including important interpretations by Peter Braestrup, Daniel Hallin, and Clarence Wyatt. William Hammond's first volume, *Public Affairs: The Military and the Media, 1962-1968* (published in 1988) was a significant contribution to that debate. This sequel, which focuses on the Nixon Presidency and Creighton Abrams' command as it brings the story forward, is an equally important work.

Drawing heavily upon the Nixon national security files and many other sources, Hammond looks at such high-profile issues as the Military Assistance Command Vietnam's (MACV's) handling of My Lai and the Calley Trial, the Cambodian Incursion, Lam Son 719, the 1972 Spring Offensive, and the Christmas Bombing, as well as slightly lower profile events such as Hamburger Hill, the Green Beret murder case, Firebase Mary Ann, and the NCO Club scandals. He also treats the issues of drug abuse, race relations, combat refusals, herbicides, and allegations of press censorship.

Balanced, objective, and thorough, this volume, like Hammond's earlier contribution, is among the best in the U.S. Army Center of Military History's Vietnam series. The book provides valuable perspective for the inevitable issue, in any war, of the relationship between the media and the military.

Blue Helmets: The Strategy of UN Military Operations. By John Hillen.

Brassey's, 1998. 320 Pages. \$26.95. Reviewed by Colonel George G. Eddy, U.S. Army, Retired.

Author John Hillen sets out to answer the basic question, "What is the UN's proper role in world peace, especially as regards applications of military force?" And he answers it well. He takes us through details of the UN Charter, the Secretary-General and the Secretariat, observation missions, traditional peacekeeping missions, second-generation peacekeeping missions, and finally enforcement actions. In the process, he examines command and control and chain of command matters as complicated by ever-changing political considerations and often infeasible mandates of the principal UN members. Without sovereign powers, such as political authority and military legitimacy, the UN has been forced to improvise and compromise.

The resources and dominion to mobilize, direct, and deploy international military forces must be provided by UN members, who often disagree significantly as to how missions are to be accomplished. This inherent weakness of the UN "encouraged some competition from national chains of command," Hillen observes, "and made for a UN chain of command that was at times unwieldy, unresponsive, ill-defined, and not very authoritative. It also gave rise to the practice of formulating ad hoc control procedures on the fly during field operations." Within this context the author reviews such principal UN operations as Iran and Iraq (1988-1991), Southern Lebanon (1978-1996), Somalia (1993), and enforcement actions in Korea and the Persian Gulf. By 1995, 80,000 personnel from scores of countries were deployed in some 20 peacekeeping operations, and UN expenditures for that year reached \$3.6 billion.

Those who point to some of the UN successes are countered by those who remain appalled by the death of 18 Americans in Mogadishu, Somalia—for what? There also remains a conviction that the efforts to establish enduring, real peace in Bosnia are futile. No matter how many troops are deployed to the former Yugoslavia, or how long they stay, the bitter hatreds, centuries old, are likely to remain untouched by the

presence of blue-helmeted units under the UN banner. The keys to success in circumstances such as those in Bosnia lie in obtaining local consent, cooperation, and support, and this is not happening on a scale large enough to make a difference. Iraq is another story, where Saddam Hussein remains in power and thumbs his nose at UN inspectors searching for weapons of mass destruction.

Consequently, says the author, simple military missions, such as observation and traditional peacekeeping with a political influence dominant over token military forces and involvement—all predicated on the belligerents' acceptance of a UN presence—are the core competence of the UN. The more dynamic military operations should be undertaken only by rehearsed military alliances or coalitions led by a major military power. The Gulf War comes quickly to mind. Most Americans, opposed to UN command and control of U.S. military forces, probably would agree with these conclusions of Mr. Hillen.

***The Warrior Generals: Combat Leadership in the Civil War.* By Thomas B. Buell. Crown Publishers, 1997. 494 Pages. \$35.00.**

***Civil War Generalship: The Art of Command.* By W.J. Wood. Praeger Publishers, 1997. 269 Pages. \$59.95.** Reviewed by Doctor Charles E. White, Infantry Branch Historian.

Why do we need more books on generals of the American Civil War? Indeed, why do we need more *books* on the American Civil War? The answer to these questions is simple: the more we study history, the more we understand ourselves. We are the one constant in history; we do not change.

Remember the news footage of American Army engineers trying desperately to build a pontoon bridge across the flooding Sava River in Bosnia in January 1996? Go back to December 1864, and you will see Federal engineers trying desperately to build a pontoon bridge across the raging Duke River in Tennessee. Had George Thomas emerged from the past and stood alongside the American general in Bosnia, he would have instantly recognized the circumstances, the challenges, and the timeless lessons of history.

Warrior Generals and *Civil War Generalship* are two fine studies of combat leadership during the American Civil War. The very titles of these engrossing books provide a glimpse of their contents. Thomas Buell and W.J. Wood examine the art of battle

command. Buell selects three pairs of "warrior" generals: Ulysses S. Grant and Robert E. Lee; George H. Thomas and John Bell Hood; and, Francis C. Barlow and John B. Gordon. Wood also selects three pairs of warrior generals: Stonewall Jackson and Nathaniel Banks; William Rosecrans and Braxton Bragg; and, George H. Thomas and John Bell Hood.

Buell's selection of Grant and Lee, Thomas and Hood, Barlow and Gordon as portraits of warrior generals is truly insightful. Grant "the Yeoman" and Lee "the Aristocrat" commanded at the highest echelons and symbolize both the citizen and the professional soldier, as do Thomas "the Roman" and Hood "the Knight-Errant," both of whom commanded at army level. Barlow "the Puritan" and Gordon "the Cavalier," who led regiments and divisions, represent the finest traditions of the citizen-soldier. The stories of these six men create a sweeping panorama of the American Civil War.

Wood, in choosing his six generals, selects mostly professionals who had to deal with the problems of operational command. In this regard, Buell's study is much more representative of the Civil War and its generals. Nevertheless, Wood's examination seeks to demonstrate that the tactical and strategical problems associated with operational command threatened to overwhelm untried generals, especially the professionals.

For the first time in American history, as Wood so aptly points out, commanders on both sides had to lead mass armies of untried citizen soldiers into battle, using outdated linear tactics and inapplicable strategic principles. Senior leaders were forced to create and develop a personal art of command on the job; that is, while actually on campaign and on the battlefield. The Army had no senior war college before the Civil War. Wood convincingly shows that these generals developed a pragmatic art of command that still provides examples for military leaders today.

Turning to some specifics, Buell challenges the conventional view that the South had the superior leaders. He argues that Union generals had the edge in strategic thinking, logistical preparation and sustainment, and the use of innovative tactics. In particular, Buell questions Lee's reputation as a military genius and suggests that Thomas, the "Rock of Chickamauga," was the greatest general of the war. Many will reel from Buell's assertions, but they are firmly rooted in fact.

Wood claims that *Civil War Generalship*

is the first study of Civil War command since Douglas Southall Freeman's *Lee's Lieutenants* (1944). This may be, but Wood's three case studies really offer nothing new by themselves. What makes his book worth reading is his superbly written study of the American Civil War in Western history. Here, Wood is at his best, placing the war firmly in the context of its time and providing one of the finest discussions of the decision-making process at the operational level of war. Wood also corrects some of the major misperceptions that have adversely influenced our ability to view the Civil War in its proper context.

In these two books, Buell and Wood treat their subjects with sympathy and insight. Both show us how these leaders—tested to the limits by a war of unparalleled ferocity—prevailed through strength of character that often existed side by side with flaws that would have undone lesser men. Both books are compelling and authoritative and provide delightful reading about Civil War generalship.

***Great Raids in History: From Drake to Desert One.* Edited by Samuel A. Southworth. Sarpedon, 1997. 384 Pages. \$27.50.** Reviewed by Lieutenant Colonel James H. Willbanks, U.S. Army, Retired.

This book is about daring actions by small units, not great campaigns or armies on the move. The editor describes the raid as "the second most primitive tactic in the history of warfare, after the ambush," but notes that "it has also become the most sophisticated type of operation in the modern era." While it is true that no raid ever won a major war, all 19 recorded here had a powerful effect on the conflicts of which they were a part.

The essays cover operations from Elizabethan times to the present and address such diverse actions as Drake at Cadiz, Custer at Washita, Mosby at Fairfax Courthouse, the Israelis at Green Island, the Green Berets at Son Tay, and the Desert One disaster in Iran. The common thread throughout is the bold commander with a daring plan. The essays chronicle undaunted courage and dynamic leadership under dire conditions. These actions, even the failures, point out the importance of the human factors in combat; the essays are eloquent reminders that the timeless requirements for initiative and courage still count for something in the impersonal forces of war.

Fritz Heinzen provides a thought-provoking conclusion that addresses the potential for such daring actions in future

warfare. While warning against the "dumping" of heavy conventional forces, Heinzen predicts that many future conflicts may well rely less on great battles than on operations carried out by small elite forces, particularly as the line between peace and war becomes more blurred. He concludes that "raids, whether in a wartime context or a peacetime setting, will be with us in the future....The actions of small groups of a nation's elite force...will no doubt echo the innovative courage and inspired leadership that have marked great raiders of every country and era."

The essays in this book are engagingly written and generally well researched. Stephen Tanner's essays on Custer and Skorzenny stand out as lively, reliable writing, and Richard Kiper's discussion of the Desert One debacle points out clearly what happens when the best-laid plans go wrong. The book includes photos, a bibliography, and an excellent index.

***Arrogant Armies: Great Military Disasters and the Generals Behind Them.* By James M. Perry. John Wiley & Sons, 1996. 314 Pages. \$27.95.** Reviewed by Lieutenant Colonel Harold E. Raugh, Jr., U.S. Army.

Armies frequently lose battles because of the timidity of their leaders, the use of obsolescent tactics or weapons, or confrontation by a numerically superior and overwhelming adversary, among other reasons. There are other occasions when larger forces with seemingly competent commanders using modern tactics and weapons are defeated, basically by their own feelings of superiority—their arrogance.

Journalist and author James M. Perry does not write about the larger and better known battles of war in this interesting book. Rather, he focuses on "military expeditions dispatched by imperial governments to crush native tribes or 'inferior' cultures in the raw pursuit of power, trade, land, or world status," what Kipling called the "savage wars of peace."

The first of 11 case studies is the campaign of British General Braddock during the French and Indian War. Braddock's ignominious 1755 defeat at the Monongahela, according to the author, was a "British blunder." Throughout this chapter (and others), the author seems to select undocumented evidence to reinforce his thesis on the alleged arrogance and incompetence of armies. His sensationalism, however, frequently targets the military leaders and verges on the libelous. Braddock, the com-

mander of "regimental troublemakers" and "misfits," is described as "stout in build, slightly dense in mental capacity, and extremely rude in social intercourse." To further vilify Braddock, the author condemns the general's "better known" sister: "Having run up heavy debts at the gambling tables in Bath, she hanged herself with her own girdle."

The remaining chapters (also full of irrelevant and unnecessary information) describe six British, one Italian, one Spanish, and two U.S. military "expeditions." The defeats of U.S. Generals Harmer and St. Clair at the hands of Indians in 1790-1791 are narrated in chapter 2, and chapter 9 consists of "Major General William R. Shafter and the Spanish-American War (1898)." The latter is an odd inclusion in this book since the U.S. won the campaign, despite initial problems with mobilization and organization. A short, but thought-provoking chapter, superficially recounting "American Mini-disaster in Somalia (1993)," concludes the book.

The dust jacket comments that the author used "contemporary newspaper accounts, military memoirs, diaries of soldiers who fought in the battles, and other firsthand letters and papers. Since there are no footnotes to document the many quotations, this claim is difficult to substantiate. The book does include 11 illustrations and a limited "annotated bibliography," but maps are conspicuously absent. The text is fast-paced and journalistic in nature, although at times it seems little more than a string of information from external sources, punctuated by the author's novice "insight" on military leadership and operations.

The defeats of the "Western" forces in the battles chronicled in *Arrogant Armies* were generally not due to such simple and clear-cut reasons of "arrogance" as the author would have readers believe. The fog and friction of war; the use and misuse of technology and tactics; and the myriad intangibles of the human element of leadership, all combine or conspire to defeat a force on the battlefield. Perhaps the value of this book is to stimulate thought and discussion on the role of "arrogance" in the military forces and operations.

***Vietnam Military Lore: Legends, Shadows and Heroes.* By Master Sergeant Ray A. Bows, U.S. Army, Retired. Bows and Sons Publishing (2055 Washington Street, Hanover, MA 02339), 1997. 1,180 Pages. \$39.95 (+\$4.95 shipping and handling).** Reviewed by Lieutenant Colonel Albert N.

Garland, U.S. Army, Retired.

If you served in Vietnam or are interested in knowing more about the Vietnam War, this is the book for you. Don't let its size scare you away. It offers days and weeks of interesting reading of the kind many military men savor.

The task Sergeant Bows set for himself sounds simple: Get a list of the various U.S. camps, billets, clubs, and the like in Vietnam and in the United States that were named for deceased individuals, and then dig out their stories and why their names were so honored. And throw in a bit of history along the way, explaining the historical context for the incident or incidents described. But this task was not simple, not in the least.

Bows, a Vietnam veteran in his own right, knows whereof he writes. He published a previous book in his Vietnam Lore series—unfortunately, now out of print.

Most of the individuals mentioned in this book served in and died in Vietnam between 1957 and 1965, before the arrival of the first U.S. combat troops. One man's story goes back to 26 September 1945, when Lieutenant Colonel A. Peter Dewey was killed outside Saigon in an ambush triggered by a small group of Viet Minh irregulars. To Bows, Dewey was the first of more than 58,000 Americans who lost their lives in post-World War II Vietnam. Bows is in the process of publishing a follow-on volume tentatively titled *Vietnam Military Lore: Heroes of Valor*.

Fortunately, Bows has included a separate chapter at the end of this volume in which he recaps the events surrounding the lives and deaths of most of the individuals he mentions. Bows also feels this chapter can be used as "a guide to many of the names listed in Panel 1E of the Vietnam Veterans Memorial" in Washington, D.C.

Bows has included a large number of photographs and an index, both of which add immeasurably to the book's value. One cannot help admiring the tremendous effort Bows has put into pulling together a mass of material—from official and unofficial sources, from families and friends—into a coherent whole. It is more than worth its price.

***Stalingrad: The Fateful Siege: 1942-1943.* By Antony Beevor. Viking Press, 1998. 494 Pages. \$35.00.** Reviewed by Colonel Cole C. Kingseed, U.S. Army.

To many historians, the battle of Stalingrad marked the turning point of the German-Soviet war. There, amidst the rubble of the once proud city that bore the name of the Soviet head of state, a titanic struggle

BOOK REVIEWS

emerged in the summer of 1942. By late January 1943, Hitler's Sixth Army, once the strongest in the *Wehrmacht*, surrendered to the Soviet victors and marched into captivity. It was a blow from which Hitler never fully recovered.

In the latest book examining this epic battle, British author Antony Beevor explores the political and military dimensions of the battle, and also provides the individual soldier's perspective of the street fighting that characterized the battle. According to Beevor, the battle defies comprehension through standard examination. Having access to the archives of the Russian ministry of defense and captured German documents, including war diaries and operational reports, Beevor has compiled a riveting narrative that conveys the unprecedented nature of the fighting and its effects on those caught up in it with little hope of escape. Of immense importance are the very detailed daily reports sent from the Stalingrad Front to Aleksandr Shchrbakov, the head of the political department of the Red Army in Moscow. Beevor's purpose is to demonstrate, within the framework of a conventional historical narrative, the experience of troops on both sides, using a wide range of new material.

What makes this particular account so fascinating is Beevor's willingness to question the traditional interpretation of the struggle along the Volga. He is particularly harsh with German commander Friedrich von Paulus. Paulus certainly failed to anticipate the pending Soviet counterattack despite intelligence reports that indicated a massive offensive. The Sixth Army's daily report on the eve of the Soviet offensive was brief: "Along the whole front, no major changes. Drift-ice on the Volga weaker than on the day before." Though Paulus has often been blamed for not disobeying Hitler's order to stand fast at Stalingrad once the scale of the impending disaster was clear, his real failure was his refusal to withdraw his armor from the wasteful battle in the city to prepare a strong mechanized force ready to react rapidly to face the threat. And once the Soviet offensive began, Paulus failed to comprehend the enormity of Soviet resources dedicated to the enterprise.

Beevor also sheds new light on the fate of some of Stalingrad's defenders. His description of the horrific conditions in the field hospitals is compelling. He alleges that the Soviets took particular delight in murdering captured *Hiwis*, Russians who had cast their fate with Germany. Beevor also charges that Soviet authorities executed

approximately 13,500 of their own soldiers during the campaign for such treasonous behavior as desertion, crossing over to the enemy, cowardice, incompetence, and self-inflicted wounds. These men joined the rolls of 1.1 million Red Army casualties, of which 485,751 were fatalities. Germany suffered the complete destruction of its Sixth Army, including 91,000 prisoners of war, though this total is still widely disputed. Half of these prisoners died by spring. Putting the victory into perspective, Beevor opines that the greatest propaganda success extended far beyond Soviet frontiers. The story of the Red Army's sacrifice had a powerful effect across the world, especially the resistance movements within occupied Europe.

In the final analysis, Beevor has produced an excellent reappraisal of the battle. As the historical events have been examined in the post-war years, there have been mutual recriminations over responsibility for the sacrifice of the Sixth Army at Stalingrad. By examining the battle from the perspective of the combatants, and with the benefit of recently declassified archives, Beevor has made a major contribution to our understanding of the climactic battle that altered the course of history.

CAP Môt: The Story of a Marine Special Forces Unit in Vietnam, 1968-1969. By Barry L. Goodson. University of North Texas Press, 1997. 306 Pages. \$32.50. Reviewed by Michael F. Dilley, Green Bay, Wisconsin.

Barry Goodson was an assistant leader of a Combined Action Program (CAP) team in Chu Lai, a village near the South China Sea in Vietnam's Quang Tin Province. Near the end of his tour, Goodson was wounded, evacuated to Japan and later home, and then discharged from the U.S. Marine Corps. His book about his experiences, *CAP Môt* is designed to serve a two-fold purpose: The first purpose, obviously, is to recount the activities of his squad-sized unit in its "Special Forces" mission. The second purpose, which does not come out until near the end of his story, is that he hopes that writing about his experiences will help him deal with his part in fighting a war overseas for his country and then coming home to vilification by his fellow countrymen for having performed his duty.

I believe that he is more successful in achieving the second goal than the first. Examining the book from that perspective, it is easy to see that he is able to use his writing to say what he may not have been able to

convey orally and that the act of remembering and writing probably has helped him more than anything else he has tried. His book is less successful than it could have been when it comes to talking about his unit's Special Forces mission. His writing style tends to be overly dramatic; what this does is to build up relatively minor actions at the beginning of the book so that, when he comes to the end of his tour and is suddenly wounded in an ambush, the reader has become lulled into just reading instead of being shocked, surprised, or even concerned.

The most serious failing of the book is that there is almost no explanation of what the Combined Action Program was, or what made it a "Special Forces" unit. This is a serious problem because not much has been written about this program, although those who know about it or who were in it are willing to talk freely about what it accomplished. Goodson spends less than a page talking about the specific training he received, and mentions what his unit did with the villagers only in a few passing comments. Since so little is generally available about the program, this should be the "hook" that would attract readers to the book. Without that, *CAP Môt* is too much like a lot of other books about war and even Vietnam, with no particular reason to select it over any of the others. The book's title, by the way, refers to Goodson's unit—*môt* is Vietnamese for "one." His unit's radio call-sign was "CAP One."

RECENT AND RECOMMENDED

The Colonizers: Early European Settlers and the Shaping of North America. Edited by T.J. Stiles. Berkley, 1998. 418 Pages. \$16.00, Soft-bound.

Black Brass: Black Generals and Admirals in the Armed Forces of the United States. Second Edition. By Henry Dabbs. (First published in 1984 by African-American Heritage House.) Howell Press, 1997. 231 Pages. \$12.95, Soft-bound.

A Marine's True Story of Duty and Heroism in Vietnam. By Michael C. Hodgins. Ballantine, 1997. 342 Pages. \$5.99.

Fighting in Hell: The German Ordeal on the Eastern Front. (Originally published in 1995.) Ballantine, 1998. 341 Pages. \$6.99.

Airpower and Ground Armies: Essays on the Evolution of Anglo-American Air Doctrine, 1940-1943. Edited by Daniel R. Mortensen. Air University Press, 1998. 206 Pages.

Foxholes & Color Lines: Desegregating the U.S. Armed Forces. By Sherie Merston and Stephen Schlossman. Johns Hopkins, 1998. 393 Pages.

The 90th Division in World War I: The Texas-Oklahoma Draft Division in the Great War. By Lonnie J. White. Originally published in 1996. Sunflower University Press, 1998.

From the Editor

Controlling the Flow

Military operations on urban terrain (MOUT) are getting a lot of attention lately. The logistical and tactical operational demands of MOUT combat are challenging enough by themselves, but if we do not plan for population movements—read crowd control—the most carefully thought-out scenarios may never be executed the way we intend. Even worse, they may be executed in a way that favors our adversaries. The most proficient unit and the best tactical plan will come to naught if that unit cannot be supported logistically. Our axes of advance, routes to the objective, main supply routes, and planned drop zones and landing zones may all be choked with crowds of people—few or none of whom speak English—all trying to escape the impending clash of armies.

Such conditions were common in World War II and during the Korean War. Not everyone we encounter will be simply a refugee, however. An adversary with little regard for refugees or the conventions of war will push a dislodged population ahead of his maneuver forces, or insinuate his own personnel into the stream of refugees, either to spring a surprise attack or simply to gather intelligence on our activities. The likelihood of casualties among these pawns is high. For these and other reasons, the separation of the refugees from our ground forces must rank high among our planning considerations.

This does not necessarily mean that we must accept a scheme of maneuver that offers less likelihood of success; on the contrary, by timely planning and coordination we can influence the actions of the displaced civilians, long before they can wander into harm's way and thereby impede operations. And we must accomplish this *without assigning the mission to our maneuver units*; this would degrade combat power at a time when we will need it the most. This is the challenge—and one of the wartime missions—of our civil affairs units and staffs.

Remember, the civil affairs officer is not some guy who doesn't have a real job, but is instead a trained professional who can make the maneuver unit commander's job a whole lot easier. He has access to the linguists, host nation assets—including logistical support—and psychological operations (PSYOPS) units that are proven combat multipliers, and can support the scheme of maneuver in a number of ways.

First, he can help by co-opting host nation agencies into the effort. They are best able to deal with the needs, motivations, and concerns of the refugees. They will also have access to at least some relief supplies, will be able to identify facilities that offer shelter and medical care, and will share a common language with the population. A second source of assistance lies in the international aid organizations that are drawn to threatened regions. While they obviously cannot involve themselves in any way that would imply partiality, they can influence the movement of the refugees into previously coordinated areas that are remote from the likely battlegrounds, and provide support for the relocated civilians within their capabilities.

Host nation police and armed forces personnel can also be useful in identifying potential threats and others whose separation from the general flow would be advisable, and the civil affairs officer can establish contact with these agencies. We have recently seen in Third World countries that armed individuals infiltrating and accompanying refugees all the way to temporary resettlement camps can wreak havoc once they arrive. The refugees will soon identify—and attempt to distance themselves from—such individuals, and provisions must be made to isolate these potential threats early on.

Psychological operations units and indigenous linguists can also assist in alerting refugees as to what assistance is available, and the routes that will get them to it. Properly handled, a movement of some or all of the civilian population will reflect positively upon U.S. and Allied forces, and will yield a windfall of information on the enemy. Unit commanders can help themselves in this regard by identifying the foreign language skills of soldiers within their own units.

The mission of infantry units is—as it has always been—to close with and destroy or capture the enemy, and maneuver units cannot be diverted from such purposes without jeopardizing the mission. As we have seen, uncontrolled population movements can turn into a nightmare of slowed military operations and interrupted logistical support. With proper planning, however, commanders can anticipate and avoid these problems and bring the fight home to the enemy, on his turf, but on our terms. That's how we win wars, and that's why we win wars. Watch your lane.

RAE

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