

Infantry



Infantry

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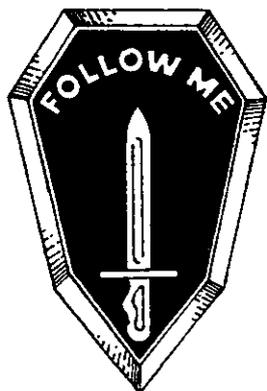
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A handwritten signature in black ink, appearing to read "Milton H. Hamilton".

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20 OPERATION DESERT STORM: Insights from a Brigade Perspective

Lieutenant Colonel G. Chesley Harris

26 CMTC: Company Operations

Major Daniel J. Klecker

Captain Jaime L. Bonano

DEPARTMENTS

1 COMMANDANT'S NOTE

3 LETTERS

4 INFANTRY NEWS

7 PROFESSIONAL FORUM

7 THE GERMAN INFANTRY: Headed for the Year 2000

Lieutenant Colonel Joerg Bahr, German Army

12 NORTH KOREAN INFANTRY BATTALIONS: Tactics

Michael R. Jacobson

18 THE COMPANY XO: A Commander's Letter of Welcome

Captain Brian D. Barham

33 TRAINING NOTES

33 MODERN DRAGOONS: Bradley Mechanized Infantry

Captain Christopher E. Lockhart

35 MOVING UNDER FIRE

Captain Michael C. Cloy

Colonel John W. May, Jr.

38 LIGHT INFANTRY BATTALION COUNTERRECONNAISSANCE

Lieutenant Robert L. Bateman

42 AERIAL RESUPPLY: The Blackstar Technique

Captain Mark Shankle

44 MILITARY OPERATIONS ON URBAN TERRAIN

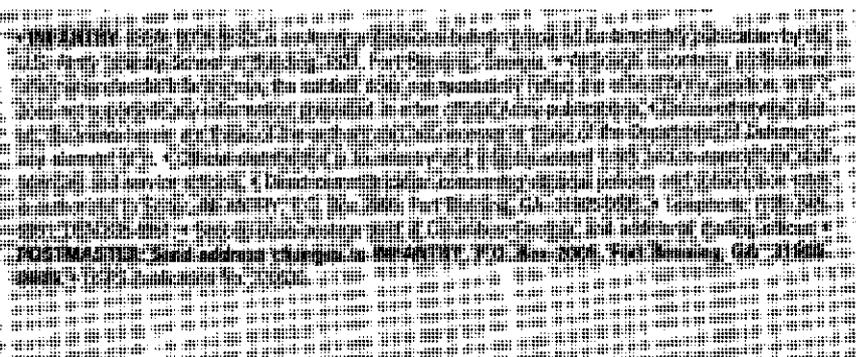
Captain John S. Zachau

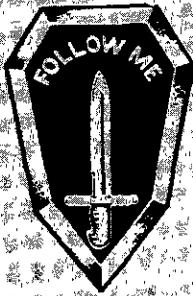
47 OFFICERS CAREER NOTES

49 BOOK REVIEWS

FRONT COVER: "Drop Zone Baker" Exercise FLASHBURN, 1954.

By Lieutenant Colonel Robert B. Rigg





Commandant's NOTE

MAJOR GENERAL JERRY A. WHITE Chief of Infantry

MECHANIZED INFANTRY—A BLUEPRINT FOR MODERNIZATION

Operation DESERT STORM validated much of our mechanized infantry doctrine, training, and equipment, but it also revealed the need for further research and refinement. The ultimate lesson is that today's state-of-the-art equipment can quickly become obsolete. Not long ago, our night vision capability was limited to the range of our infrared light sources, but we have seen in the past decade the beginnings of a proliferation of thermal technology that will make us the virtual owners of the night. Our thermal target acquisition systems have already limited the cloak of darkness our adversaries relied upon—a lesson that Iraqi tank and fighting vehicle crews learned at great cost.

As the proponent for mechanized infantry, I want to bring you up to date on the initiatives and programs we are developing to maintain the preeminence that our infantry currently enjoys.

The Bradley fighting vehicle (BFV) upgrade, the future infantry fighting vehicle (FIFV), the soldier enhancement program, the soldier modernization program, and the small arms master plan will all improve the ways in which our infantrymen travel into battle, engage the enemy, and survive in hostile environments. Improvements to the fire control system, rounds, and fuzes of the mechanized infantry's mortars, and the future introduction of a multipurpose individual munition will ensure far greater versatility, accuracy, and lethality.

Future improvements to our command and control systems—some of them to be fielded within two years—will ensure positive command and control that will greatly assist in decreasing the likelihood of fratricide. Although we dominated the night during DESERT STORM, we are working to further improve our target acquisition, marksmanship, and ability to discriminate between friend and foe.

These are general areas of interest; now let me discuss some specifics:

The system improvement plan (SIP) for the BFV draws upon deficiencies identified in DESERT STORM and envisions the completion of an M2/M3A2+ upgrade by FY 1995. This upgrade will include a laser range finder, the global positioning system (GPS) with compass, a driver's thermal viewer, a combat identification system, improved equipment storage, and a missile countermeasure device. A change to bench-type seats will accommodate a larger dismount rifle squad, and yet allow for storage of AT-4s and Javelins. Further improvements—envisioned as the M2/M3A3 for

FY 1998—include an improved target acquisition and fire control system, reduced vehicle signature, an intervehicular information system, a vehicle integrated defense system, a state-of-the-art GPS, a multi-salvo grenade launcher, and an integrated vehicle smoke system. Other capability enhancements are being examined for this major modernization of the Bradley. These improvements are necessary to enable the BFV to fight compatibly with the M1 tank well into the next century, and until the future infantry fighting vehicle (FIFV) is fielded.

The FIFV represents the next generation of infantry fighting vehicles, with its enhanced protection against antipersonnel and antitank mines, improved munitions, and the expected main gun on future BMPs. Its lethality will be increased with a rapid fire gun, an area suppression capability, and a state-of-the-art antitank guided missile system. A new, full-solution fire control system will permit target acquisition and engagement at ranges well beyond those possible today. The FIFV is expected to be operated by a two-man crew, carry a nine-man squad, and have mobility equal to that of our future main battle tank.

The soldier enhancement program and related initiatives focus on correcting deficiencies identified through field experience, including DESERT STORM, and advances in threat technology. Fielded products of this program have included the combat soldier-sleep system, a ballistic laser eye protection system, an individual load bearing vest, and intermediate cold/wet boots and gloves. The soldier modernization plan, developed at the Infantry School, addresses issues of command and control, mobility, sustainment, and survivability. The new lightweight overgarment—the first step of a progression—will provide greater protection than the present suit, in both chemical and biological environments. This progression in improvements will ultimately lead to the enhanced integrated soldier system, which will also include both a computer to enhance fire control and navigation, and an integrated helmet with a heads-up display. While initial development focuses on the dismounted soldier, the system will eventually be tied in with the future communications of the Bradley vehicle system.

Considerable effort has also gone into the infantryman's weapons. The small arms master plan capitalizes on state-of-the-art technology in weapons, sight systems, and ammunition. The M9 9mm pistol, the M249 squad automatic weapon, and the M24 sniper weapon system have already been fielded. Future plans to

improve the M249 (light), the M60 (medium), and the M2 (heavy) machineguns, along with the continued fielding of the MK-19 grenade machinegun, are on the drawing board.

A new, bunker defeating munition that can defeat earthen and timber fortifications will be fielded to complement the AT-4 light antiarmor weapon. When fielded, the Javelin advanced antiarmor weapon system (medium) will make our infantry the most lethal antitank force on the battlefield. We will increase the mobility, lethality, and survivability of the mechanized task force by replacing the Echo Company M901s with BFVs. This replacement will remain in effect until the line-of-sight antitank (LOSAT) weapon system is fielded. A non-line-of-sight combined arms (NLOS-CA) system, to be fielded in or around FY 2003, will give commanders the ability to engage high-payoff targets at extended ranges and thus shape the battlefield.

In addition to the small arms and antitank initiatives, the infantry's mortars are undergoing their own improvements. We are improving the mortar, its ammunition and fuzes, and its fire control system. The 120mm battalion mortar system will replace the 4.2-inch mortar. The 120mm mortar can fire its rounds out to 7,200 meters at a sustained rate of four rounds per minute, and it has a maximum rate of 16 rounds per minute. A turreted mortar system, rocket-assisted projectiles—similar to those already in the artillery inventory—an infrared illumination round compatible with our night vision devices, and guided and precision munitions are all planned for the future. A new precision time fuze is also under development, and it is expected to greatly improve the mortar munition capabilities. When an improved M23 mortar ballistic computer and an enhanced mortar fire control system are added to these improvements, the mechanized task force commander will have at his fingertips a flexible, immediately responsive indirect fire system.

The 120mm mortar carrier itself (M1064) will be an upgraded version of the combat-proven M106A2. External fuel tanks will reduce the danger of on-board fires and increase internal stowage space, and an improved ammunition rack will allow 62, 120mm mortar rounds to be carried on board. A larger RISE (reliability improvements of selected equipment) power engine will make this a safer, faster, more lethal weapon system that can keep up with the mechanized maneuver elements and provide rapid, accurate mortar support to the mechanized task force.

The ability of U.S. forces to dominate the night was graphically demonstrated in DESERT STORM, and we are working to ensure that we maintain that edge into the 21st Century. This year we will be conducting a test to examine the night fighting requirements of the infantry and other branches. The focus will be on materiel, tactics, training, and organization of the force, and will facilitate the synchronization of the entire combined arms team. The benefits will be many—some of the positive results expected are the reduction of fratricide, enhanced mobility, better target acquisition, greater lethality, and improved command and control.

In addition to developing programs to produce a better armed, more mobile, better protected infantryman with his own responsive indirect fire support, we are looking at the type of command and control systems we need to let him communicate with other combat units. We envision an improved AN/PRC-126 small unit radio which will let him communicate out to five kilometers. When

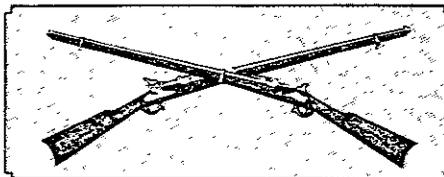
fielded, the radio will link our combat units with their combat support (CS) and combat service support (CSS) units. A lighter version of the precise-location global positioning system receiver will let the squad and team leaders more accurately pinpoint their positions. Long-range surveillance units are already using a secure tactical AM radio with improved long-range capability.

The combat power of the infantry can be no better than its training. We are developing, and in some cases already fielding, training device technology that will keep our soldiers' proficiency at the same high level they achieve with their weapon systems in live fire. Precision gunnery training systems (PGTS) have been fielded for both the TOW gunnery trainer and the TOW field tactical trainer. Fielding has also begun on the Dragon PGTS. Another program, the precision gunnery system (PGS) is being developed as a joint project of the Infantry School and the Armor School. PGS will offer an eyesafe, precision laser training capability for both tanks and Bradleys, and will allow combat vehicle crewmen to practice gunnery at actual ranges without live ammunition. The PGS system will be MILES-compatible, which will allow the vehicle crewmen to interact with the dismount element. This system can be used for force-on-force exercises at platoon level.

Simulations have reached the point where gunners can train with the effects of different light and weather conditions, obscuration, and simulated weapon effects. From bright sunlight to pitch black night, a gunner can engage an array of ground vehicles, and even attacking helicopters. MILES training has entered a new dimension; it is not only compatible with the TOW trainers but has also been expanded to include claymores, minefields, and even hand grenades. The infantryman's day and night marksmanship training is also under refinement. These are but some examples of what the future holds.

Other areas of concern to the mechanized force include engineer projects such as sturdy, easily constructed overhead cover and a combination ax/mattock for clearing and constructing fighting positions. We are also taking a hard look at MOUT doctrine and tactics, using experience gained in Grenada and Panama to validate our products. The MOUT facility at the IRTC will be the best we can offer, with detailed audio and visual feedback to units training there. We have not forgotten the soldier's load; even though mechanized forces may not have to contend with extended foot movements to contact, the combat load carried by the soldier still needs to be scrutinized and—where possible—lightened.

This has been a brief summary of the issues and initiatives the Infantry School is working to support both the mechanized force and the infantry as a whole. In this issue of INFANTRY, we present a number of articles that focus on mechanized infantry, discussing the operations, organization, training, and equipment of the mechanized forces of the United States and Germany. We do this to provide a perspective of where we and a major European ally stand in the development and readiness of our mechanized forces. Watch for related articles in future issues. You can help us by providing feedback on our articles, or—better still—by submitting articles for publication. Your experience is valuable, and you ought to consider sharing it with the infantry community. The address of INFANTRY is inside the front cover. With your help we can continue to train, equip, and field the finest infantry in the world.



INFANTRY LETTERS



TRAINING AS WE WILL DIE

This past summer, the National Guard—with some Active Army pressure—finally developed a training plan that lowers the level of unit training to squad and platoon, where it should have been all along. Gone are the days, at least for now, of large-scale exercises that train the few at the expense of the many.

MILES lanes last summer concentrated everyone's attention on an idea that has been around for a while but that has received scant application in the past. Someone deserves enormous credit for this initiative to redirect our training resources at a level that makes complete sense.

But, alas, there is a snag. If other units are conducting the MILES lanes as some units in this state are conducting them—and I fear there are many others—then we are seriously threatened with changing from “training as we will fight” to “training as we will die.” Our present methodology is too predictable, and it must be reevaluated and reconstructed. Our future combat soldiers have to be trained to expect the unexpected.

Not adhering to the rules of engagement on occasion pales in comparison to the sterile environment of lanes that offer little in the way of “initiative” training for the good guys as well as the bad guys.

Not only do the good guys know specifically the one or two tasks required of them before they reach the objective, but they also have the luxury of conducting a dry run over the terrain.

This method allows for the absorption of a great deal of intelligence that real combat soldiers are often deprived of.

The opposing force (OPFOR), on the other hand, is too restricted. They cannot practice virtually every standard for their ARTEP counter-tasks. They must remain in the same positions for both the dry run and the wet run.

The tragic consequence of such training is that soldiers will become conditioned and expect that real situations will offer the same step-by-step methodology. The good guys will meet their end when the bad guys aren't where they are supposed to be or aren't playing by the rules.

The great thing about MILES lanes, as my unit has experienced over the years, is the tremendous initiative the soldiers demonstrate. Having a primary objective is fine, but the training should not be so restrictive that the soldiers on neither side can choose to develop their own plans and then react to a variety of situations as they develop in a variety of ways.

Some years ago, when the 7th Infantry Division trained in the mountains of Korea, it didn't have the advantages of the ARTEP manuals. If it had,

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it surely would have been an even better unit. The Active Army soldiers overseeing the MILES lanes for the National Guard this summer did not go back to the days when the 7th Division trained in Korea. If they had, they would have understood the advantage the division's leadership had over the leadership of today. Despite the lack of good training manuals at that time, there was the development and free-play of initiative. That critical trait needs to be nurtured and not restricted by the conduct of today's training.

MARSHALL K. MADDOX
SSG, Nebraska Army
National Guard

VETERANS OF THE NORMANDY INVASION

I am calling on all veterans of the Normandy invasion, in whatever capacity, to contribute their own taped oral histories to the D-Day collection at the Eisenhower Center, where we are attempting to preserve the record of the common soldier, sailor, and airman. And, for the 50th Anniversary in 1994, we plan to publish a book titled *Voices of D-Day* which will be based on these oral histories.

Please write to me for details at The Eisenhower Center, University of New Orleans, Ed-128, Lakefront, New Orleans, LA 70148.

STEPHEN E. AMBROSE
Director
The Eisenhower Center

INFANTRY NEWS

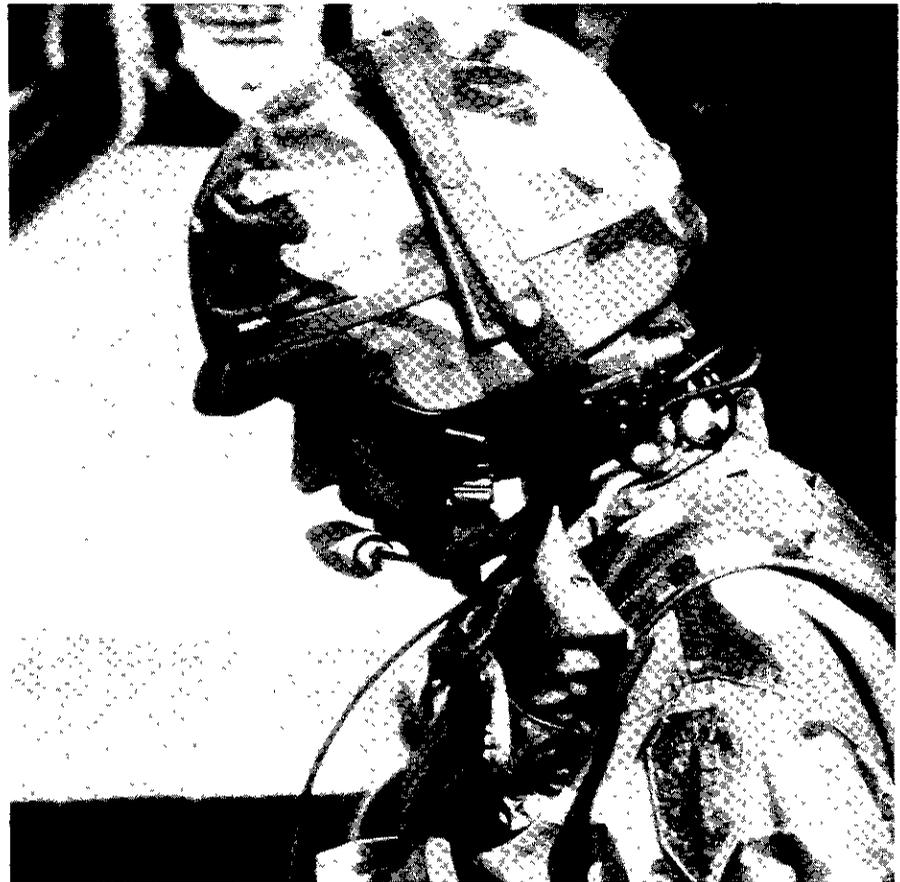


THE COMMUNICATIONS/AURAL-Protective System (CAPS), when worn with the PASGT (personnel armor system for ground troops) helmet, will provide a soldier with hearing protection, ballistic protection, and a mounted communications capability that will contribute to the operational effectiveness of the mechanized infantry force.

No single existing head-mounted communications system gives a soldier access to the combat vehicle radio and intercom system, maximum noise attenuation within the space of the PASGT, and maximum ballistic protection. The helmets currently in use deny dismounted soldiers the normal hearing that is essential for command, control, and target acquisition.

The CAPS weighs less than 20 ounces; can be detached from the PASGT helmet in five seconds; can be disconnected quickly in an emergency; is compatible with vehicle radio/intercom systems—AN/VRC-12 series, SINCGARS, AN/VIC-1—and also with the new vehicle intercom system (VIS) that is to be fielded in Bradley fighting vehicle (BFV) units in late 1993. The VIS will provide up to ten listen-and-talk or listen-only stations for crew members and passengers.

The CAPS will be issued as part of the components of end items (COEI) such as the Bradley and M113 families of vehicles in the mechanized infantry. Bradley passengers and selected M113



passengers will use the CAPS. Vehicle crew members, since they normally stay with the vehicle, will continue to use the combat vehicle commander (CVC) helmet.

Six hundred CAPS were tested in late-1991 under the soldier enhancement program with favorable results. The passengers liked being kept

informed of the external situation and being able to respond to orders before they dismounted.

CAPS is scheduled for fielding in late FY 1994. It will be an interim system until technology can produce the all-purpose enhanced integrated soldier system.

A COLLEGE SCHOLARSHIP PROGRAM for family members of active-duty military personnel is being offered by the USO (United Services Organization). To be eligible to apply, family members (including spouses) must have graduated from high school

within the past four years.

The 25 \$1,000 scholarships will be awarded to college-bound students on the basis of their scholastic records, test scores, and extracurricular activities. Applicants must submit narratives outlining their activities, particularly those

that highlight leadership, citizenship, teamwork, and dedication.

The USO offers these scholarships in recognition of the special hardships military families endure, and the extra effort made by the young people of these families. This is the fourth year

that scholarships are being made possible by a USO endowment.

For application forms and complete details, contact your local USO office, or write to USO World Headquarters, Budweiser/USO Scholarship Program, 601 Indiana Ave., NW, Washington, DC 20004. Applications must be completed and returned by 1 March 1993, and recipients will be announced in May 1993.

THE SOLDIER ENHANCEMENT Program (SEP), initiated in FY 1990, was initially intended to provide a general impetus for increasing the combat effectiveness of infantrymen through the development of lighter, more lethal infantry weapons and improved equipment. In FY 1992 the program was expanded to include other soldiers as well.

The aim of the program has been to procure and evaluate non-developmental items or to pursue short-term development programs that can be ready for type classification in three years or less.

To date, 73 projects have been initiated. These projects consist of items and equipment in four general areas: weapons and munitions, combat clothing and individual equipment, communication and navigation aids, and rations/water and shelter. Examples of these projects include 100-round ammunition assault packs for the M249 squad automatic weapon, a semi-automatic 30mm grenade launcher, a replacement for the sleeping mat, and ration improvements (in entree variety and menu selection).

Items and equipment that have been completed under SEP include intermediate cold/wet-weather gloves, laser/ballistic eye protection, unproved desert boots, lightweight flashlights, flameless MRE (meals, ready to eat) heaters, and the M4 carbine.

Other items and equipment were type-classified in FY 1992. These included a compact digging tool, an internal on-vehicle communication system for members of the BFV squad dismount element, enhanced hot weather battle dress uniform, a lighter PASGT

(personnel armor system for ground troops) helmet, and alternative materials for extreme cold weather clothing.

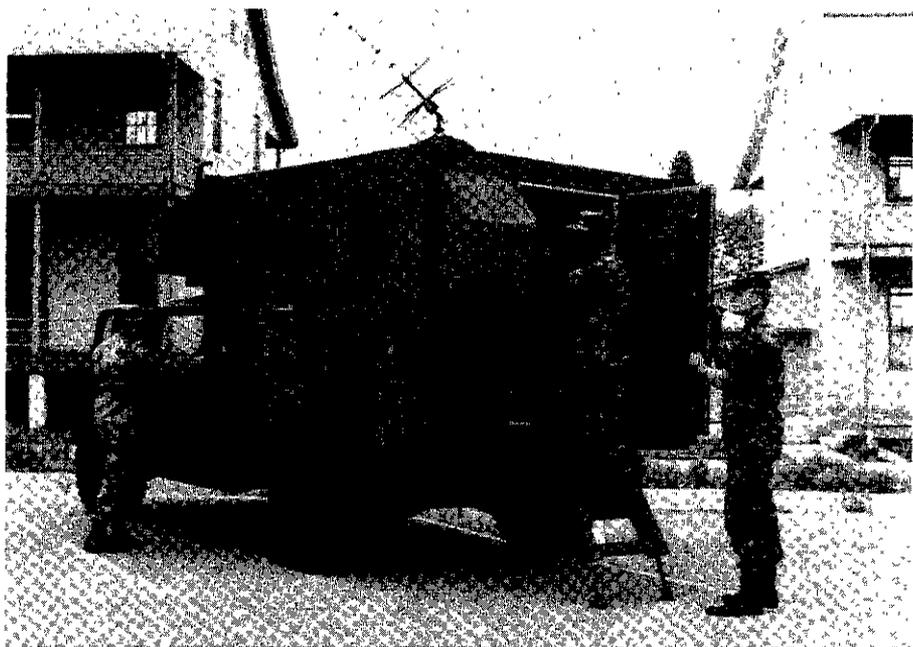
Projects that were begun in FY 1992 include the M249 lightweight tripod, a flip-up/flip-down bracket for the AN/PVS-7, an improved blank adapter for the M249, improvements to the combat vehicle commander (CVC) helmet, 5.56mm and 7.62mm armor-penetrating cartridges, and miniature binoculars.

The recommended project list for FY 1993 (depending upon the funds available) includes a collapsible butt stock for the M249, improved mechanics' coveralls, an extended range sight for the MK19, an M203 grenade launcher for the M4 carbine, a 40mm infrared illumination round, and multiple maga-

zine holders for the M16 rifle.

The Infantry School is constantly looking for good ideas, including any off-the-shelf items that may make the soldier's life easier. Recommendations for SEP proposals from commanders and soldiers in the field are highly encouraged. Participation by field commanders and soldiers increases the credibility of the program and ensures that SEP dollars will be used where they will do the most good.

Proposals should be submitted to the TRADOC System Manager-Soldier (ATSH-TS), Fort Benning, GA 31905-5405. All submissions must include a point of contact and a DSN telephone number.



A JOINT SURVEILLANCE TARGET Attack Radar System (Joint STARS) demonstration has shown that secure data can be transmitted by satellite and successfully received by a light ground station module.

The demonstration, held at Fort Huachuca, consisted of two mission scenarios: The ground station's reception of moving target indicator data while travelling both paved and off-road surfaces, and the fixed-site reception of synthetic aperture radar data. Both types of data are typical to Joint

STARS missions.

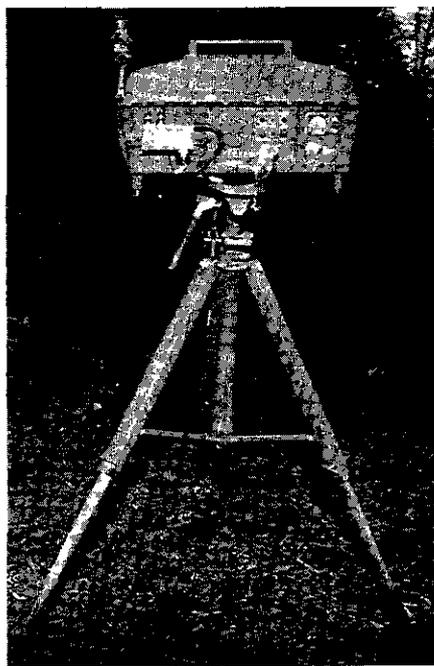
The demonstration was the first to prove the feasibility of providing current intelligence information to troops "on the move" on the battlefield or enroute to it.

The system required only off-the-shelf equipment that was already available in Army inventories. The transmission used existing satellite communications and encryption equipment, satellite antennas, and computer workstations.

THE REMOTE SENSING CHEMICAL agent alarm (RSCAAL), the world's most advanced early warning chemical agent detector, will be produced under a contract recently awarded by the Army.

This detector vastly improves warning of a chemical attack by detecting agents at distances far greater than those of any other detector. It will be used for the protection of soldiers in the field, fixed-site protection of bases, and short-halt reconnaissance from ground-based vehicles, including the "Fox" nuclear biological chemical reconnaissance system.

RSCAAL is a passive infrared device that can detect both nerve and blister agents at line-of-sight distances out to five kilometers. It uses a "spectroradiometer" to scan for the telltale infrared signatures of a wide range of chemical agents night and day, through dust, sand, and adverse weather. Troops simply turn it on and point it in the direction to be scanned; it then operates unattended, automatically and continually. If it detects an agent, it sounds an alarm and gives a



visual readout of the class of the agent and the direction from which it was detected.

Several RSCAAL prototype units were successfully deployed with U.S. Army and U.S. Marine Corps elements during Operation DESERT STORM.



BATTLEFIELD REALISM increased recently at the Joint Readiness Training Center (JRTC) with the use of

a Soviet-built MI-8 helicopter to insert two opposing force (OPFOR) infantry squads behind "enemy" lines during an

exercise. The helicopter, commonly known as the "HIP," has been used before in JRTC rotations for OPFOR resupply missions. But this is the first time it has been used to insert troops.

The HIP flew the OPFOR soldiers to a blue force command and control site, where they dismounted and conducted a raid to destroy equipment and gather intelligence. This replicates one of the threats the U.S. Army might face on the battlefield. The benefit is that the troops in the field get to see and hear the equipment and operate against it.

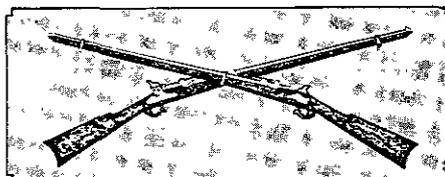
The HIP is not the first piece of Soviet equipment to be used at the JRTC, and it won't be the last. Later this year, another Soviet aircraft, the MI-24 HIND attack helicopter, will be used to increase realism and improve training during exercises.

This exercise gives U.S. rapid-deployment forces a chance to practice their skills in a realistic setting against a tough, aggressive enemy—the JRTC's OPFOR unit, the 1st Battalion, 509th Infantry.

THE GENERAL SERVICES Administration's SCIT catalog now includes 600 new precision hand tools. SCIT (Standardization Control of Industry Quality Tools) is the GSA's official tool-supply source for all government agencies, including the Department of Defense.

These new products were added when flight maintenance technicians reported the need for dependable precision-torque tools for aircraft-grade fasteners.

In the Army, some of these tools will be used in maintaining ground vehicles such as the Bradley fighting vehicle and the Abrams tank, as well as fixed-wing and rotary aircraft.



PROFESSIONAL FORUM



The German Infantry Headed for the Year 2000

Lieutenant Colonel Joerg Bahr, German Army

The history of the German infantry is a long and largely successful one. Such personalities as Field Marshal Irwin Rommel, Colonel General Heinz Guderian, and Field Marshal Erich von Manstein all played vital roles in making the infantry a highly efficient and capable force.

While it is true that the most spectacular successes were invariably achieved in interaction with other arms and services—notably with armored units in World War II—the German Army's chances of victory in future military conflicts will remain greatly contingent on the combat power and operational readiness of the infantry.

The following, in broad outline, are the developments the German infantry is scheduled to undergo by the year 2000 and the responsibilities it is intended to assume as part of the German Army.

New Mission

Following the reunification of Germany and the extensive changes affecting security policy conditions throughout the world, the Federal Armed Forces will be assigned the following tasks:

- The immediate protection of the

state and its citizens. In the future, the accomplishment of this mission under conditions requiring the employment of all the armed forces will be contingent on a lengthy period of preparation, given the reduced number of forces available and a national territory enlarged by 40 percent.

- Fulfilment of the crisis management and defense obligations Germany has as a member of the North Atlantic Treaty Organization (NATO) alliance. Deployment of the crisis reaction forces will ensure NATO-wide accomplishment of this part of our mission even after a comparatively short preparation and warning time.

- Deployments in environmental and disaster control missions.

- Worldwide deployments within the scope of United Nations peacekeeping missions.

In preparing for these new tasks, the Federal Armed Forces are currently adopting a new structure (Army Structure 5). In the Army, whose future peacetime strength will be 255,000 troops, the reorganization of combat units now in progress is scheduled to be largely completed by the end of 1992.

At the end of 1994, the Army will consist of three major subsystems: Reaction

forces, main defense forces, and a military base organization (Figure 1).

The New Infantry Structure

Whereas, until 1990, the German Army was mainly tailored to the defense of our national territory, its newly imposed mission now confronts it with the need to change its basic organizational structure and, at the same time, to bring its training and equipment in line with the newly defined mission requirements.

As far as the infantry is concerned, this implies, on the one hand, the need for establishing effective mechanized formations comprising armored units that are capable of forcing decisions in high-intensity battle and, on the other hand, an increased demand for light, mobile, and airmobile forces, which may assume a pre-eminent role as part of the reaction forces.

In this regard, the German "Chief of Infantry," Brigadier General Gero Koch, recently made the following remarks:

The progressive sophistication of reconnaissance and target location systems, as well as smart ammunition, will lead to a situation where combat action will increasingly shift to covered ter-

rain. In such an environment, however, weapon systems and all other types of equipment will come to rely to an ever greater extent on infantry protection. Frequently, the infantry will be called upon to assume the leading role in combined arms operations. In this process, advanced technology cannot replace troops fighting dismounted, but will rely upon them as a necessary complement.

In order to be able to meet these exacting requirements, the German infantry will provide the largest force contingent under the new force structure, with a total of 43,000 regular servicemen (19.5 percent of all Army forces). Its organization will be as shown in Table 1.

Following the adoption of its new structure, the German Army will include three corps (North, South, East), subdivided into eight divisions (two of them in the East) comprising a total of 28 brigades. Twenty-three of the 28 brigades will be mechanized brigades and thus will have a uniform basic organization (Figure 2) consisting of two mechanized infantry battalions, two armored battalions, and one artillery battalion each. Three of the remaining brigades are airborne, one is mountain, and one is a German/French light brigade.

In addition, the infantry will have eight independent light infantry regiments with four battalions each. The organizations outlined above will provide for differing degrees of operational readiness and availability (Table 2).

Thus, in peacetime the infantry will have 46 active battalions, seven partly active battalions, and 107 unmanned equipment-holding battalions. Following mobilization, there would be a total of 160 infantry battalions under arms.

The Mechanized Infantry

Colonel General Guderian, the father of the mechanized infantry force, not only developed the fundamental concepts of the mechanized infantry battle during World War II, but—being a brilliant military leader—he also crafted the principles for cooperation with armored forces. Ever since that time, the German Army has had superior

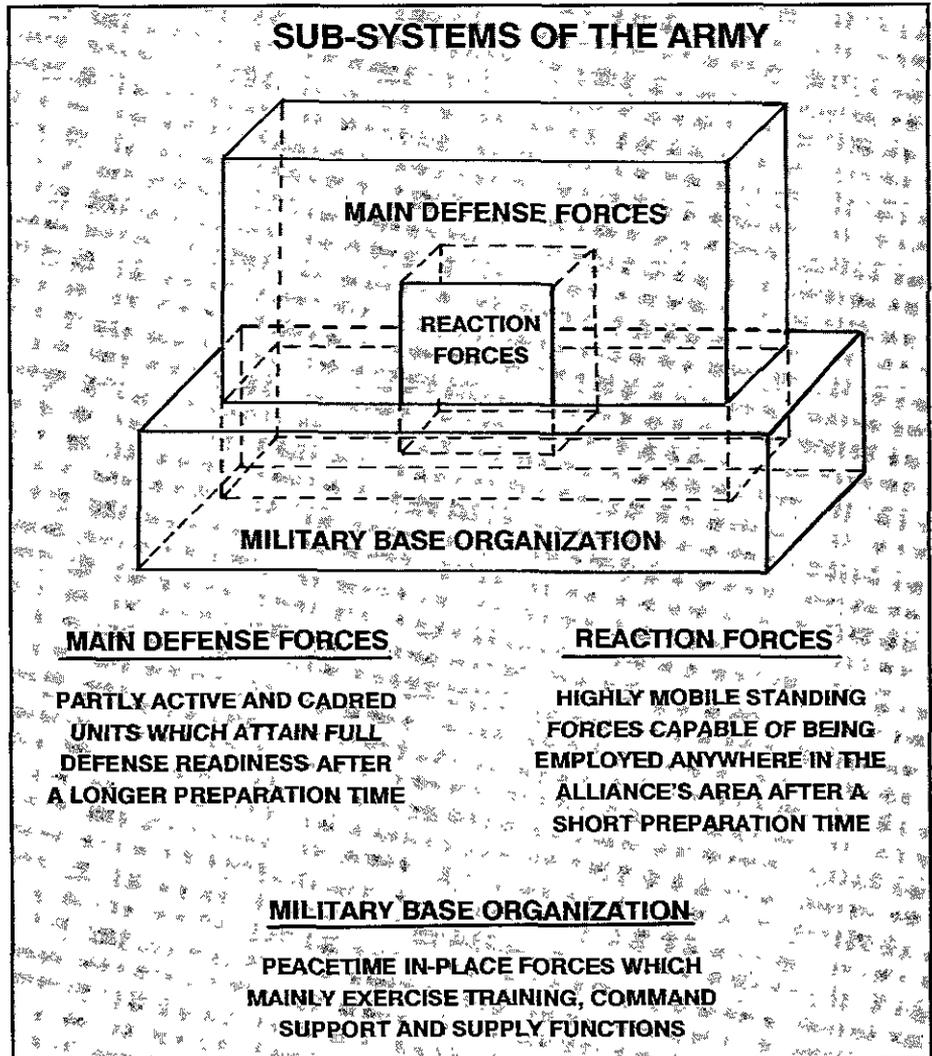


Figure 1

NEW INFANTRY STRUCTURE			
	PEACETIME	WARTIME	RATIOS
Mechanized Infantry	23,800	46,000	1:2
Light Infantry	11,000	92,000	1:8.4
Paratroops	5,300	7,000	1:1.3
Mountain Infantry	2,900	3,300	1:1.1
Totals	43,000	148,300	1:3.5

Table 1

OPERATIONAL READINESS AND AVAILABILITY			
	ACTIVE	PARTLY ACTIVE	EQUIPMENT HOLDING
Mechanized brigade	3	18	2
Airborne brigade	2	1	0
Mountain brigade	1	0	0
German/French brigade	1	0	0
Totals	7	19	2 = 28
Light infantry regiment	1	5	2 = 8

Table 2

MECHANIZED INFANTRY IN THE MECHANIZED BRIGADE

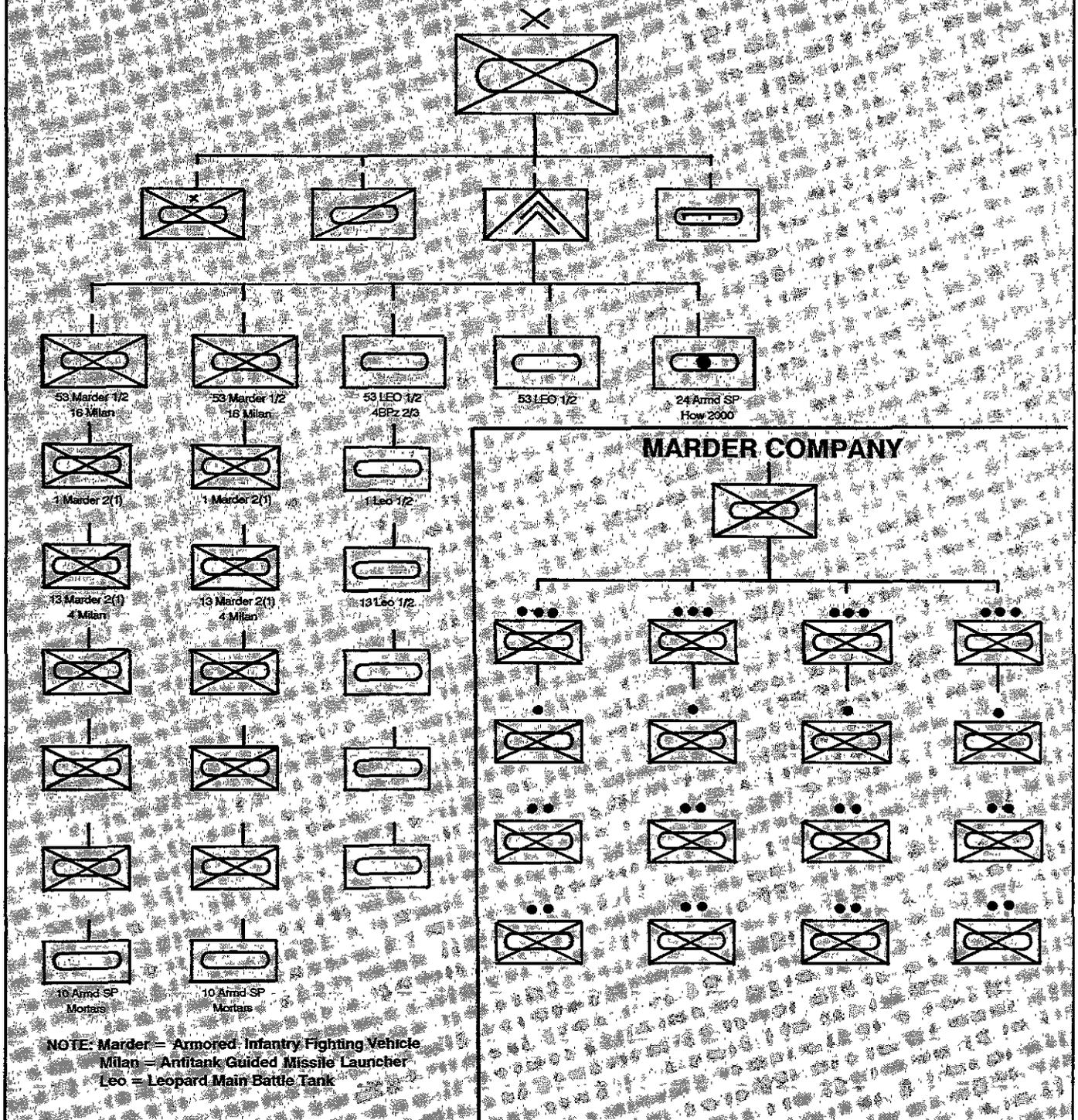


Figure 2

know-how and the most extensive experience with this branch of service, which today is still one of the decisive factors in combat.

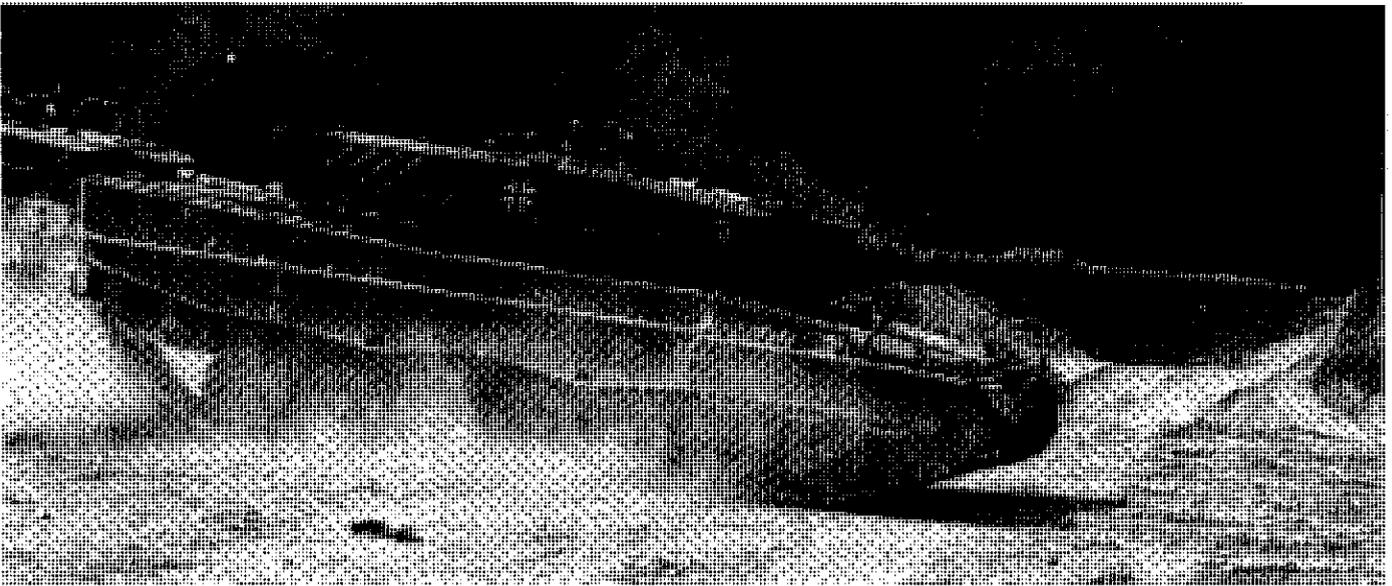
Based on such knowledge, the mechanized infantry will be organized, trained, and equipped under the new

structure to enable it to emphasize successful battle against enemy infantry; that is, against armored combat vehicles as much as against dismounted infantry. The mechanized infantry's ability to stage both mounted and dismounted combat in mobile battle operations, as

required by the situation, attests to the importance of this branch of service, notably in cooperation with armor.

The future mission of mechanized infantry within the context of the armored combat troops will be:

- In peacetime, to keep elements



Leopard 2 Tank

combat ready at any time for deployment in support of joint alliance operations.

• In a state of defense or in support of allied operations, to channel, intercept, and defeat the enemy, and in particular his armored assault forces. In doing so, it will be essential to engage enemy infantry and weapon systems, to hold key terrain, and to overwatch wide areas, if required.

Each of the 46 mechanized infantry battalions will consist of the following:

- Four mechanized infantry companies with four platoons each.
- One heavy mortar company with 10 120mm mortars.
- 53 armored infantry fighting vehicles (AIFVs), Marder 2.
- 32 antitank guided missile systems (ATGMs), Milan.
- A dismounted combat strength of approximately 320 infantrymen.

The mix of main battle tanks and infantry fighting vehicles planned for the mechanized brigade, the so-called 4x4 employment mix at battalion level, and the organization of mechanized infantry platoons into three AIFV each, will remain. This will permit close cooperation between battle tanks and AIFVs, will facilitate the establishing of reserves as well as command and control and coordination by smaller "operational elements" for infantry, and will ensure the necessary leadership density.

Smaller operational elements promote

clarity, permit command and control by visual contact, and help bring fire fully to bear on the enemy. Mechanized infantry can thus be employed in concert with the armored combat troops, even outside our territory.

German industry has been working on a highly sophisticated AIFV, the phased fielding of which is planned but which will not be initiated until 1998, owing to current budgetary constraints. The new Marder 2 AIFV meets all standards to be placed on a modern AIFV. Equipped with a 35/50mm gun, it will be the backbone of the German infantry well beyond the year 2000. The Marder 2 will initially replace about 760 AIFVs (BMP-1s) which, for cost saving reasons, were taken over from the East German Army upon reunification and, after having been upgraded, are now employed by formations in Eastern Germany as stopgap solutions only.

The remaining mechanized infantry units are, for the most part, equipped with the upgraded AIFV Marder 1A3 version that comes with a 20mm gun.

The Light Infantry

With its wartime strength projected at just over 100,000 troops, the light infantry—Jaeger (motorized infantry), airborne, and mountain infantry—will account for approximately 70 percent of the infantry forces.

The light infantry forces will increasingly assume—in addition to their pre-

vious Territorial Army tasks—typical tasks of the Army in the Field. These tasks include border security and surveillance operations; overwatching and protecting areas and installations including wide areas; defensive operations in armor-restrictive and very difficult terrain; engagement of air-landed enemy; and raid-type combat.

Generally, the essential elements of light infantry must be kept combat-ready in peacetime for deployment at any time and support of joint alliance operations.

It is for this reason that two paratroop brigades, the mountain infantry brigade, as well as the German/French brigade, and elements of the Jaeger force will maintain full operational readiness in peacetime.

Paratroop and Mountain Infantry

The new organizational structure and future equipment of the paratroop and mountain infantry are aimed at ensuring permanent operational readiness and the rapid availability of the reaction forces. Building up these forces is currently a matter of primary concern in Germany. Brigadier General Koch describes these formations as follows:

Paratroopers and mountain infantrymen are specialized infantry forces which are used for special tasks in special terrain. Due to their special capabilities, both types of infantry will be in particularly high demand in the future

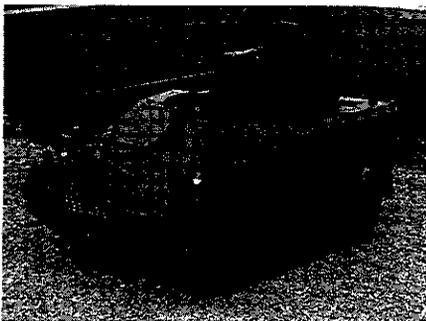
within the Army's widened range of responsibilities. Paratroop commandos and mountain infantry platoons (alpine) comprise infantry elite units for special deployments that call for toughness and excellent physical fitness on the part of personnel.

Each of the three airborne brigades will be composed of three battalions, with a total of 15 companies. Each airborne brigade will have the following main weapon systems available:

- 55 WIESEL (Weasel)-mounted TOW.
- 36 Weasel-mounted 20mm guns.
- 24 ATGM 3s.

The Weasel tracked armored weapon carrier was fielded in the German Army in 1990. Its excellent performance, versatility, and air transportability make it an important factor in enhancing the combat effectiveness of the paratroop force. (One CH-53 or CH-47 is capable of transporting two Weasels; one Boeing 747 may carry 24 Weasels.)

The mountain infantry brigade, with its alpine platoons, capable of fighting under extreme terrain and weather con-



Wiesel Weapon Carrier

ditions, will comprise, as chief components, three mountain infantry battalions with a total of 18 companies and one mountain field artillery battalion.

The brigade's battalions and independent companies will have the following equipment available:

- 55 FUCHS (Fox) armored transport vehicles.
- 122 two-ton trucks.
- 30 armored self-propelled mortars (120mm).
- 54 ATGM 3s.
- 18 Weasel-mounted 20mm guns.
- 15 Weasel-mounted TOWs.



Marder 2 Infantry Fighting Vehicle

Jaeger Troops (Motorized)

With a wartime strength of 92,000, the German Jaeger troops—a branch of longstanding tradition—will form an essential component of the infantry force.

To accomplish their manifold tasks (for example, area security and installation protection, security or overwatch of wide areas, engagement of airlanded enemy forces, defense in armor-inhibiting terrain, and the like), the Jaeger troops will be equipped with an armored combat vehicle such as the Fox armored transport vehicle. The introduction of such equipment is intended to eliminate the Jaeger troops' currently low tactical mobility and their vulnerability to enemy fire and, at the same time, to noticeably improve their combat power and momentum, also against armored enemy forces.

This is all the more important in view of the fact that Jaeger units, as a matter of principle, should be capable of performing missions outside Europe.

Following the reunification of Germany, much remains to be done in the armed forces. Drastic budget cuts notwithstanding, we will make every effort to build up viable and effective armed forces. Only if we succeed in this task will we be able to fully meet our commitments as a member of the NATO alliance and to satisfy the requirements imposed by the German constitution.

With the infantry as the centerpiece of the German combat forces, every effort should be made to speed up the adoption of the new structure, to proceed with the progressive introduction of advanced equipment—primarily the armored infantry fighting vehicle Marder 2—and eventually to place increased emphasis on the training of conscripts and leaders.

In this regard, it will be vitally important to provide for a smooth transition from a defense-oriented infantry to a mobile and effective infantry force that will be capable of accomplishing missions as a reaction force outside Germany.

For all our endeavors, we are fully aware that now—as in the past—we will remain dependent on our good cooperation with our Allies, notably our friends the United States. In the future, too, military success will be a matter of the proficiency of leaders, the spirit and motivation of forces, and friendship between allies rather than the availability of adequate arms or equipment.

Lieutenant Colonel Joerg Bahr is the German liaison officer to the U.S. Army Infantry Center and School. He has been a mechanized (Marder) company and battalion commander, an instructor at the German Combined Arms School, and a commander of the honor guard unit of the Federal Republic of Germany.

North Korean Infantry Battalions Tactics

MICHAEL R. JACOBSON

EDITOR'S NOTE: This is the second article in a two-part series on the organization, equipment, weapons, and tactics of North Korean infantry battalions. The first part, which appeared in INFANTRY's September-October 1992 issue, covered organization and equipment.

The doctrine of the North Korean Peoples Army (NKPA) combines the conventional military art used by the Soviet Union and the People's Republic of China with commando and unconventional warfare. While conventional forces make a Blitzkrieg attack on the front and flanks, special commando troops infiltrate and disrupt the rear area to provide combat in depth and to expand the combat zone. Battles are conducted on two fronts—one made up of a conventional force engaging the enemy along the forward line of troops and a second with a specially trained force operating in the enemy rear.

The NKPA's infantry operations are generally dismounted, but the infantry battalions are reinforced with tanks and extensive artillery support—usually a tank company or platoon, a 120mm mortar company, a 76.2mm field gun battery, one or two engineer platoons, flamethrowers, and a chemical and radioactive reconnaissance and scout unit.

The primary offensive maneuvers are the penetration, envelopment, by-pass, and pursuit. In the offense, the NKPA seeks force ratios between 4:1 and 6:1.

The North Koreans use two types of infiltration techniques—*pocho* and

Cheon Ib. In the *pocho* technique, teams of squad size or smaller infiltrate through gaps in the enemy's defense and sabotage targets in the enemy's rear. In the *Cheon Ib* technique, small elements of the supporting attack force create small gaps in the enemy's defenses to assist the main attack units as they try to penetrate or envelop the enemy defense.

Penetration operations are conducted when there are no exposed flanks to

exploit (Figure 1). Successful penetrations require surprise and strong firepower. Penetration operations would be required, for example, to get through the South Korean defensive positions near the Demilitarized Zone (DMZ). Under the cover of artillery, the infantry battalions assault the enemy's front line, with the attached tanks in front of the infantry. Tanks and artillery target the enemy, and engineers breach the obstacles. The immediate objective is

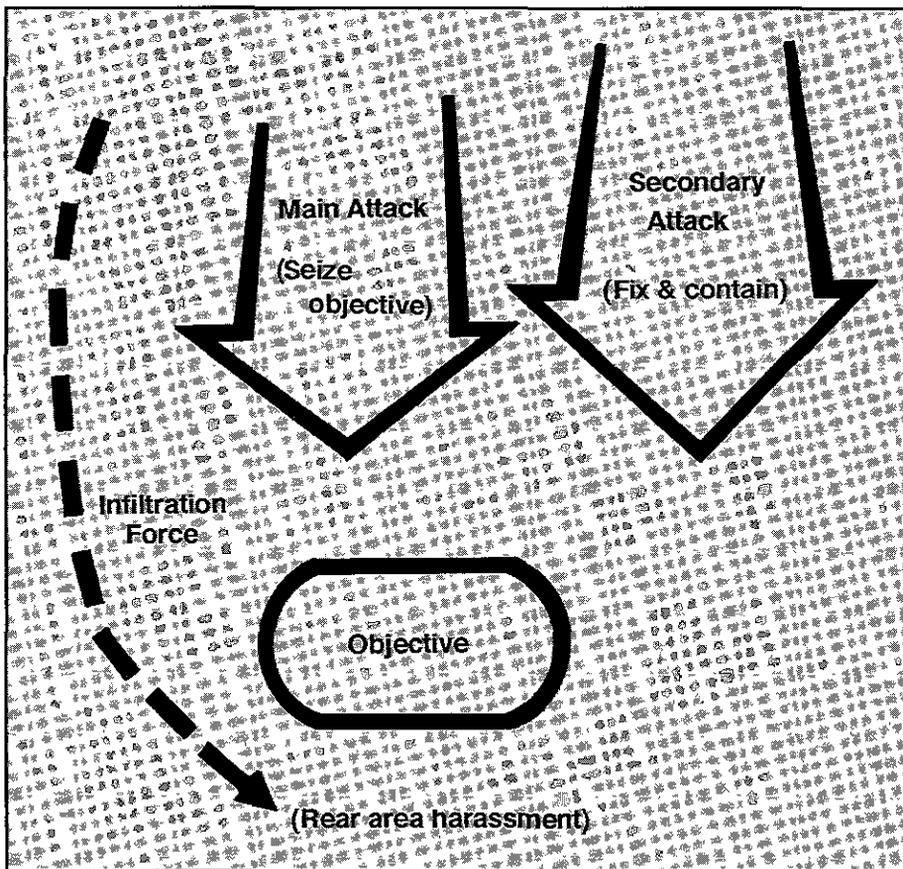


Figure 1. Penetration

to capture or destroy the enemy's lead company, and the subsequent objective is to destroy the enemy battalion's reserve.

The North Koreans consider the envelopment (Figure 2) the most successful offensive maneuver. The single envelopment uses a portion of the attacking force to pin the enemy against an obstacle or to fix him in place while a main attack force strikes deep in the enemy rear area. In a double envelopment, infantry or mechanized infantry units attack to fix the enemy, and armor or mechanized infantry units maneuver around the flanks of the enemy and use two main attacks against the enemy rear. An infantry battalion may attack across a front 700 to 2,000 meters wide. Frontages and depths, however, would be compressed against well-prepared enemy positions. An infantry battalion, for example, would be used to envelop an enemy company.

The bypass, a form of envelopment, is used to force the enemy to abandon or change his main positions (Figure 3). The main attacking force avoids contact with enemy strength, moves to surround the enemy, cuts off his escape routes, and forces him to abandon his prepared defensive positions.

The NKPA uses three types of pursuit—*frontal*, *parallel*, and *composite* (Figure 4). Motorized or mechanized infantry units often conduct parallel pursuits, using speed to cut the enemy's withdrawal routes and envelop his retreating forces.

During the offense, the infantry battalion is used as part of an infantry regiment's first or second echelon. The infantry battalion is the primary attack unit, and the attack positions are 800 to 1,000 meters from the enemy's defensive line. The infantry battalion normally attacks on a front of 1,000 to 1,500 meters, but the front could be as narrow as 600 meters, depending on the terrain. The depth of the attack is usually three kilometers.

Two infantry companies (the first echelon) are usually on line, each with a frontage of 500 to 700 meters. The second-echelon infantry company follows 400 to 1,000 meters behind and is com-

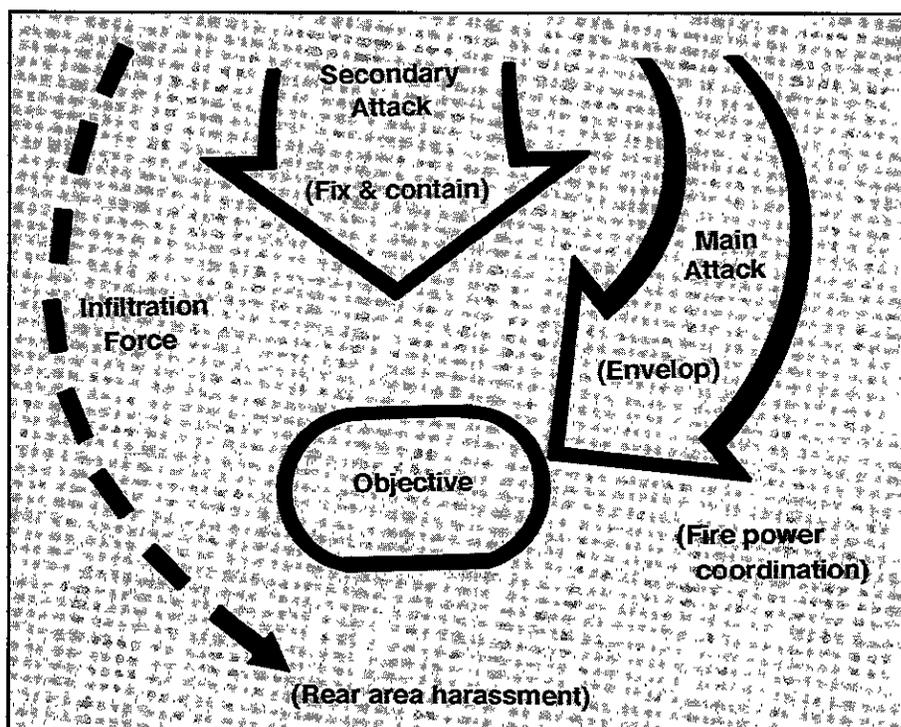


Figure 2. Envelopment

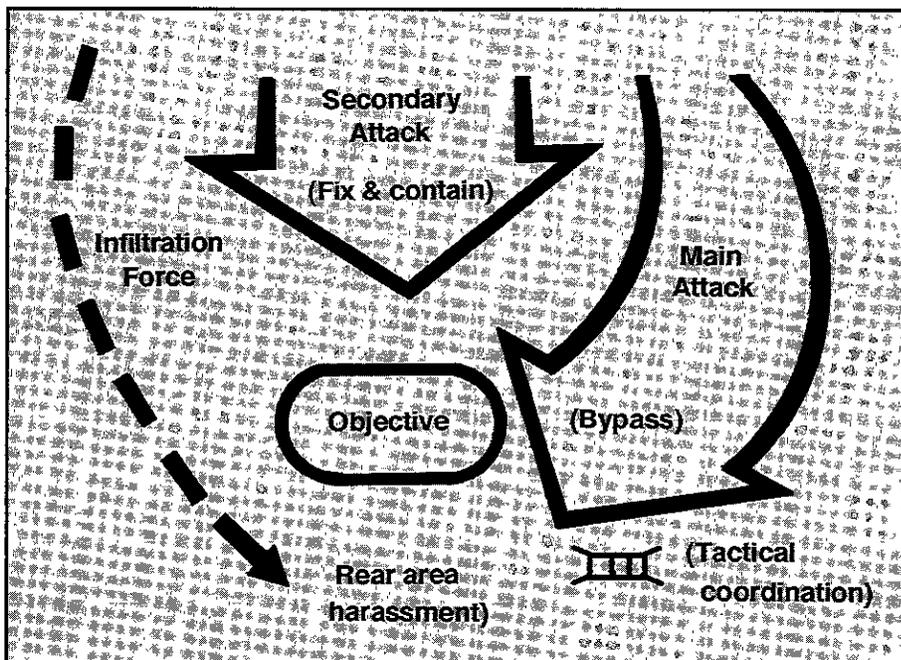


Figure 3. Bypass

mitted on order. However, the battalion may attack with one infantry company forward and two back, with the companies in echelon, or with all three on line. The battalion keeps a reinforced infantry platoon as the reserve. The 82mm mortars support the maneuver behind the lead company. The battalion's immediate objective is to pene-

trate initial enemy company positions and to annihilate mortar and antitank positions. Its subsequent objective is to destroy the enemy battalion's reserves.

Mechanized infantry units are normally employed in the breakthrough phase and the exploitation and pursuit phase. Mechanized infantry units fight as part of a combined arms team reinforced with tanks and artillery. The

tanks lead and the infantry armored vehicles follow 100 to 200 meters behind. Infantrymen normally remain mounted when passing through an NBC-contaminated area or an open area, when the enemy's antitank strength is light, or when making a breakthrough of a lightly armed enemy defensive position. Infantrymen normally dismount when faced with a strong antitank defense or a strongpoint defense, when passing through an obstacle field or a mine field, when attacking rugged terrain, or when maximum firepower is required to suppress the objective. Once dismounted, the infantrymen follow 50 meters behind the tanks and, after the assault, remount their vehicles.

Special operations forces have three primary roles in assisting the breakthrough: reconnaissance, sniper team actions, and larger unit assaults. Light infantry battalions conduct the assaults, using the same tactics as the standard infantry units of like size. Light infantry missions include supporting the ground forces, supporting the completion of an encirclement, and surprising and harassing the enemy in the rear area. Light infantry units, because of their lightweight equipment, are ideally suited for mountain and night operations.

DEFENSE

NKPA defensive tactics consist of area defense and area mobile defense. In the area defense, the army holds its ground unless relieved; in the mobile defense, the forces (usually mechanized infantry or tank units) trade space for time. The main defensive zone is made up of battalion strongpoints. Within these defenses, an infantry battalion occupies two sets of positions at the same time. Most of the forces are in the forward positions with the reserve in the secondary position and ambush teams with antitank weapons between the positions.

Standard infantry battalions can be used in the security zone or the main defense zone. The security zone is

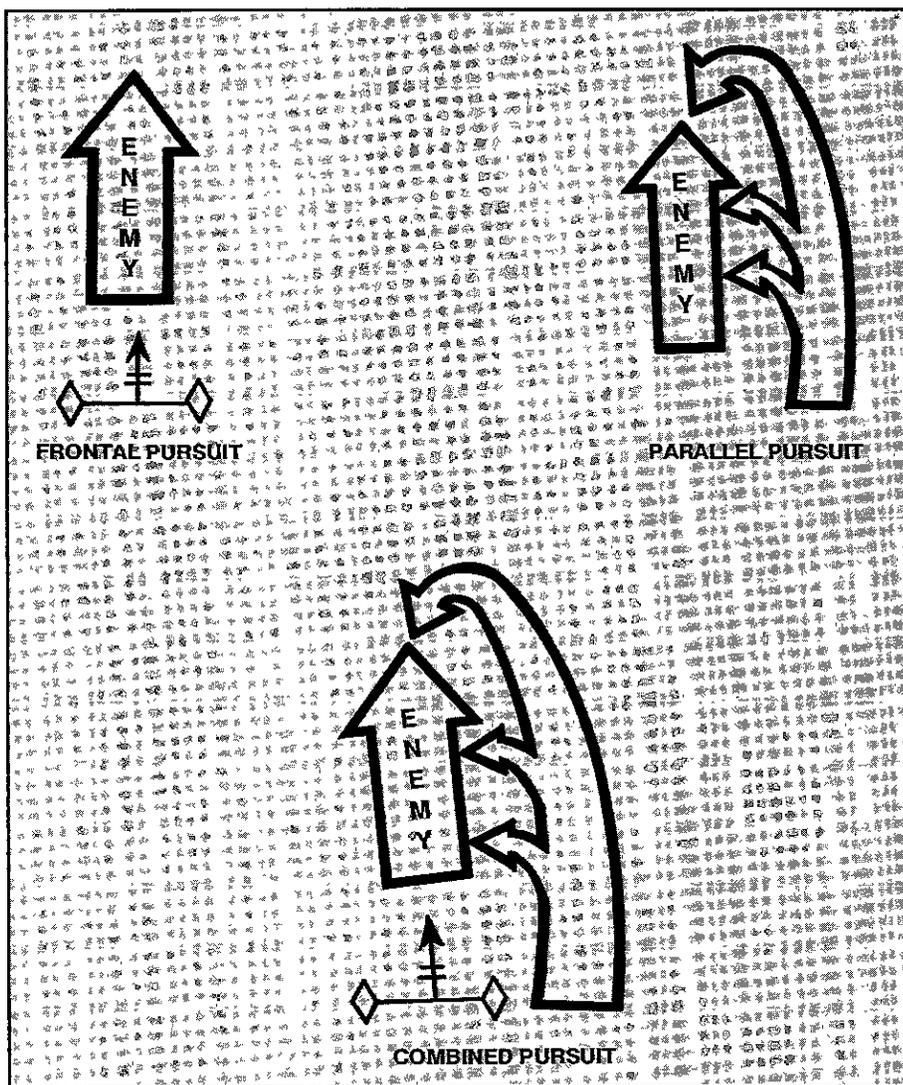


Figure 4. Types of Pursuit

divided into a general security zone 10 to 15 kilometers in front of the defense line and a combat security zone one to two kilometers in front of the defense line.

The battalion stronghold (Figure 5) is used as the basis of the main defense zone. The frontage and the depth of the battalion defense depend upon the factors of METT-T (mission, enemy, terrain, troops, and time). The company stronghold, usually part of the battalion stronghold, is located on a high point from which roads and approach routes can be covered with the available firepower. The company defensive position must be held.

The counterattack (Figure 6) is the basis of NKPA defensive combat. After taking positive steps to establish the best possible defense plan, units

rehearse their counterattack plan. North Korean doctrine states that the best time to counterattack is before the enemy unit can establish a defensive position. Counterattacks are directed against the enemy's flank or rear. In mountainous areas, the counterattack is usually conducted from higher ground to lower.

Antitank defenses are phased in three lines (Figure 7). The first line, in the combat security zone, is reinforced with antitank weapons and obstacles. The second line is a fixed barrier line where all firepower is coordinated. The third line is selected for important areas in the regiment's defense zone; it is on tank avenues of approach and is reinforced with antitank weapons, obstacles, and mobile antitank reserves.

Reconnaissance is one of the basic SOF missions, and reconnaissance units

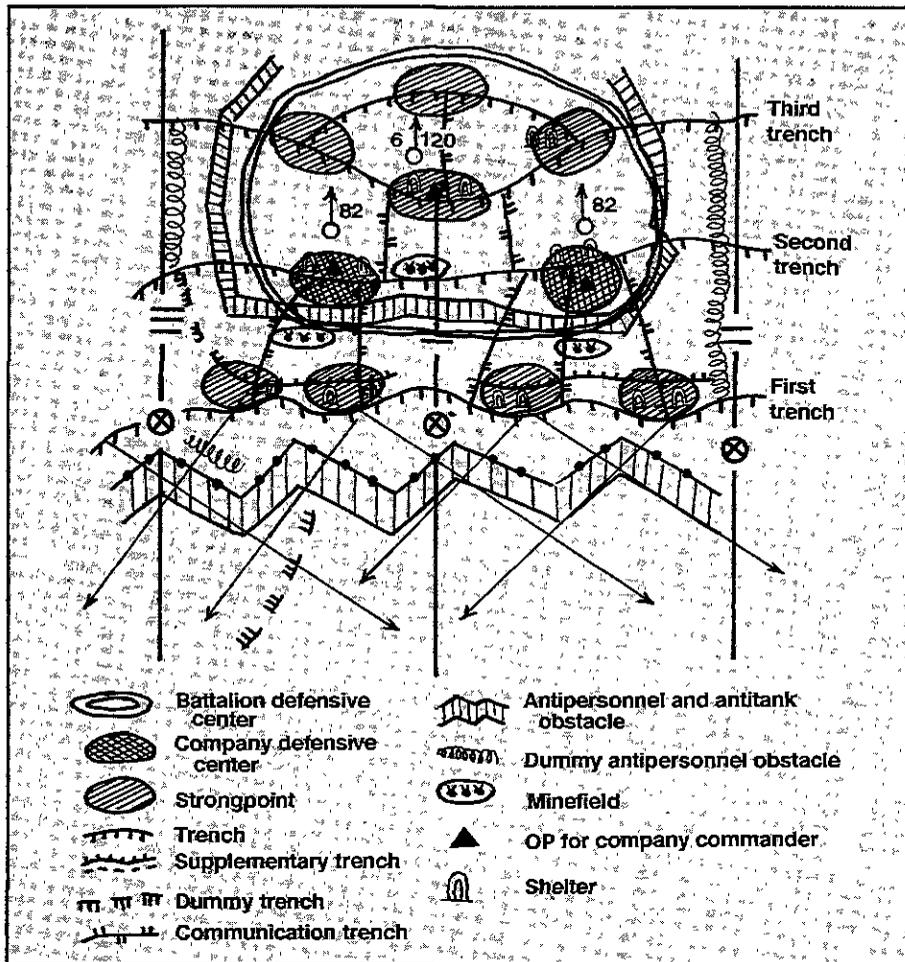


Figure 5. Battalion Stronghold

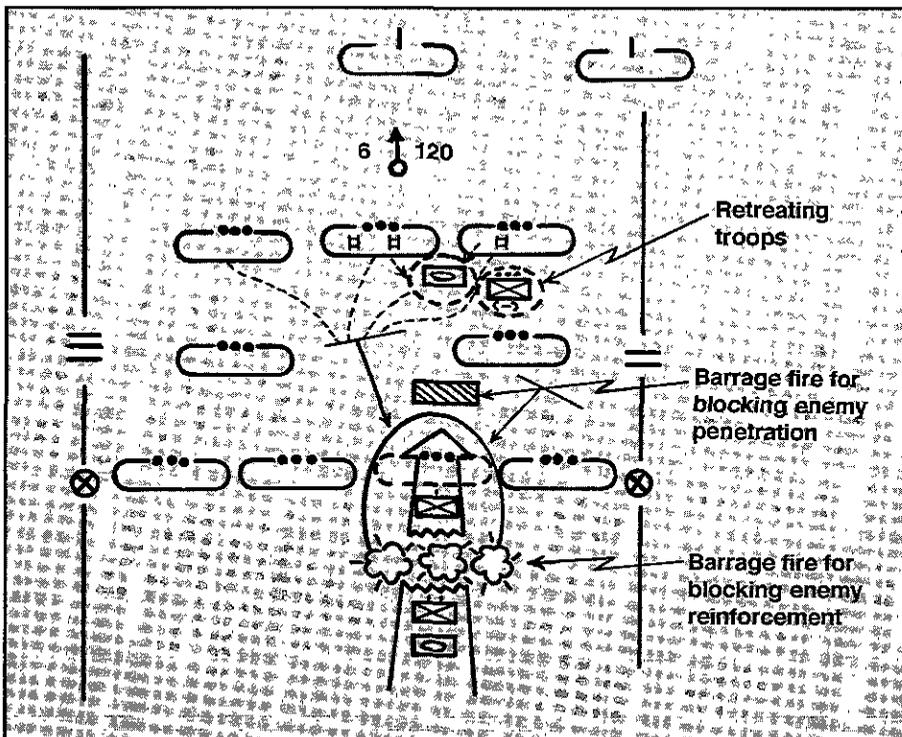


Figure 6. Counterattack Plan

are manned by light infantrymen. Small elements from the division's light infantry battalion perform reconnaissance missions in the enemy division's rear area. These missions are similar to those performed by light infantry brigades, sniper, and reconnaissance units in the enemy corps and echelons above corps rear areas.

NKPA reconnaissance operations include surveillance patrols, observation posts, listening posts, search and reconnaissance, raids, and ambushes. Each unit has personnel who are trained for surveillance and patrolling.

At the infantry battalion level, a surveillance patrol is usually composed of four to twelve men who may occupy one or two surveillance positions. The infantry battalion's advance guard moves two to three kilometers in front of the unit.

In urban terrain, the basic tactical element in the attack is a reinforced infantry battalion, which forms three to six raid teams and one security team. The raid teams have specific targets. Tanks and self-propelled guns usually advance with the infantry.

During defensive urban operations, an infantry battalion defends the approach routes to the city. Each of the other infantry battalions normally defends a street, with an infantry company defending a building. Most of the troops and weapons are located in cellars or on the bottom floors of buildings, but some of the unit's machine-guns and mortars are set up on the rooftops. Snipers and security personnel position themselves on upper floors to prevent enemy infiltration.

Mountain operations, because of the nature of the Korean peninsula, are the norm instead of the exception. The basic goals of a mountain offensive are to go around the enemy's flank, to penetrate the enemy's rear area, and to attack with all resources. Usually, the main attack is directed along a road or corridor terrain toward the objective and high points along the way that will assist command and control.

The infantry company in mountain operations is used as the base unit, with attachments of artillery, engineers, and

chemical personnel, as needed. Battalion commanders prepare for the offense by carrying out thorough reconnaissance, preparing to outflank the enemy, being ready for ambushes, and stocking the necessary supplies. The attack frontage for an infantry battalion is 1,000 to 3,000 meters; the frontage for an infantry company is 500 to 1,000 meters. Mortars, because of their high trajectory, are especially effective in mountain operations.

Infantry battalion defensive strongpoints are located on hilltops with connecting ridgelines and are linked to the company and platoon strongpoints. The fire support plan coordinates indirect and direct fire for all-around coverage. Fires and obstacles are placed to prevent the enemy from bypassing the position. Reserves are positioned along the anticipated enemy main attack.

During night operations, NKPA tactics are basically patterned after those of the Soviet and Chinese armies, but these tactics are adapted on the basis of experience gained during the Korean War, and the factors of METT-T. Unlike the Soviets, the NKPA has used little or no illumination and has avoided even bright moonlight, but there has been an increase in planning for illumination for conventional units.

Their doctrine emphasizes that half of all field training should be conducted at night and requires daylight reconnaissance before night operations. Plans include the use of night vision devices and illumination. Flares and searchlights may be used to mark targets and points of reference.

In the offense, the starting (attack) positions are located as close to the objective as possible. The army uses three types of formations for night movement—*column*, *standing abreast*, and *dispersed*. The *column* formation is used when the starting position is a great distance from the enemy positions; the *dispersed* formation is used when the starting position is near the enemy positions; and the *standing abreast* formation is the standard for night attack. A unit's "combat zone" has a narrower front and a shorter depth during night attacks. Battalion night

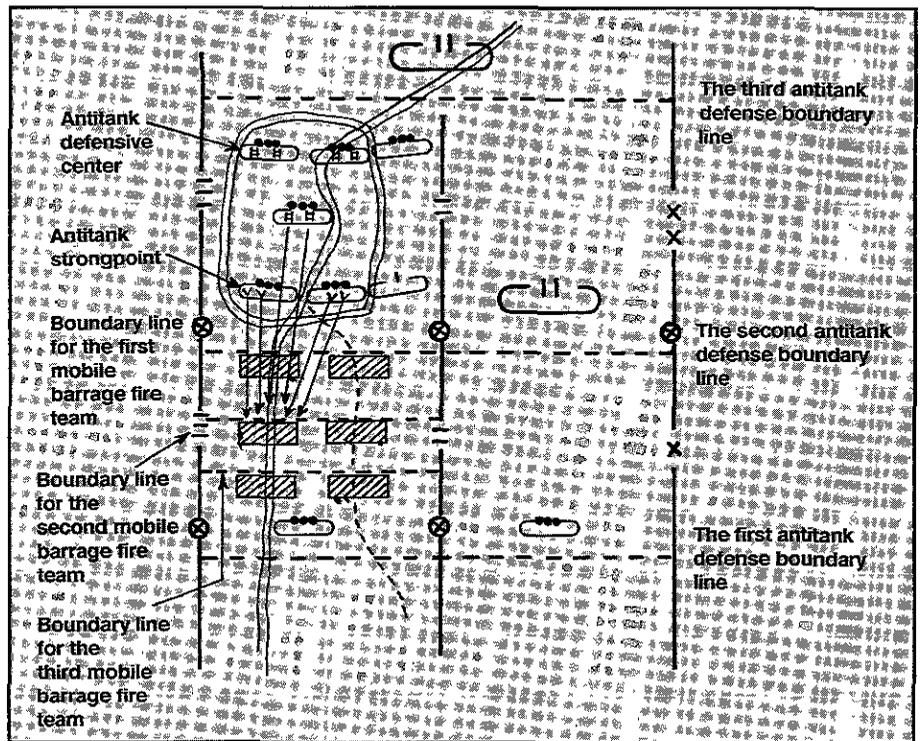


Figure 7. Antitank Defense Plan

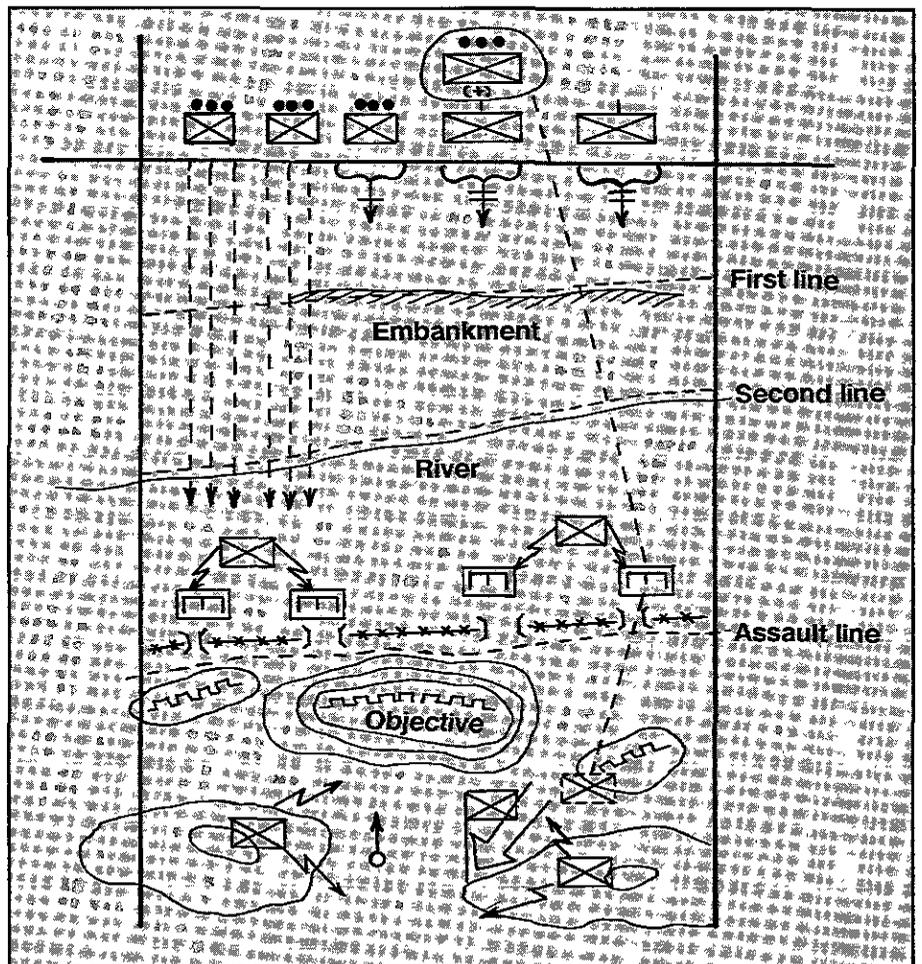


Figure 8. Battalion Night Attack Plan



attacks are usually conducted with only one echelon, all three companies on line (Figure 8). Each company retains a reinforced squad as a reserve.

A night defense differs from a daylight defense in that troops are positioned differently, and the fire support plan is changed. Preparations for a night defense are normally made during daylight hours. At night, troops are used for patrolling and filling in the gaps between elements. Reserves are near the line of defense, and one unit is designated the duty element. Ambush teams and sentries report any enemy attack and then withdraw. When the enemy approaches the firing zone, he is engaged with small arms and concentrated fire. When the enemy penetrates the defense line, he is engaged by troops firing at point blank range and then in hand-to-hand combat.

An airborne unit is used primarily to conduct raids, usually at night. Battalion-size airborne operations are conducted against such valuable objectives as an airfield or a field army command element. Units smaller than battalion are used to attack less important targets. After the raid is completed, airborne or airlanded forces try to link up with the advancing ground forces. If they cannot link up, the forces reorganize for aggressive defense using ambushes, raids, and counterattacks. Airborne operations may also be conducted in support of amphibious operations.

Air assault attacks (usually light infantry, but sometimes infantry or sniper) are coordinated with attacks by the main ground forces. Air assaults can be used in river crossing operations to seize favorable sites, reconnoiter the far bank, and protect river crossings from overwatching positions. Air

assault units are used to assist amphibious operations by supporting the landing and achieving tactical surprise. The North Koreans use the MD 500 helicopters, which are also used by South Korea.

The differences between conventional and guerrilla warfare are in the organization, tactics, missions, command, and area of operations. The NKPA has designed and fielded a special operations and unconventional warfare force that would conduct infiltration and quick-strike attacks throughout South Korea to support a conventional attack.

Guerrilla forces are organized from the assets of light infantry, sniper, or standard infantry battalions. They may not carry the heavy weapons, which are too bulky for guerrilla operations. Their missions include harassing the enemy's rear area and annihilating small enemy forces. (During the Iran-Iraq War, the North Koreans trained Iranian revolutionary guards in unconventional warfare techniques.) Guerrilla units may wear or carry civilian clothing or South Korean uniforms.

Several training references and aids on North Korea are available, and others will be available soon. These references include the following:

- *North Korea, The Foundations for Military Strength*, October 1991, and *Small Arms Identification and Operation Guide—Eurasian Communist Countries (U)*, DST-1100H-394076, 1 August 1983, put out by the Defense Intelligence Agency (DIA).

- *North Korea People's Army Handbook*, April 1992, published by the Battle Command Training Program, Fort Leavenworth, Kansas.

- FC 100-2-99, *North Korean People's Army Operations*, December

1986, published by the Combined Arms Center Development Activity, also at Fort Leavenworth.

- FM 34-71, *Opposing Force: North Korea*, February 1982.

- CA-ST-91-1, *North Korean People's Army Operations and Tactics*, and CA-ST-91-2, *North Korean People's Army Troops, Organization, and Equipment*, both published by the 40th Infantry Division, California National Guard.

In addition, the U.S. Army Infantry School is producing an interactive video disk on North Korean equipment recognition for use by long-range surveillance units. This course will complement the Combat Vehicle Identification Course on Soviet/Warsaw Pact Equipment, which should be issued during the second quarter of Fiscal Year 1993. This course has five modules. Module 1 covers North Korean tanks and light armored vehicles; Module 2 covers North Korean self-propelled artillery and antiarmor weapons; Module 3 covers North Korean anti-aircraft guns, helicopters, and missiles; Module 4 covers North Korean engineer systems; and Module 5 covers the review and end-of-course test.

These disks operate on the Electronic Information Delivery System (EIDS) AN/GSH-55. These systems are available at Training and Doctrine Command schools and are available to the National Guard as well. Additional information on the course is available from Mr. Noble at DSN 835-4030; commercial (706) 545-4030.

The North Korean Army represents a sizable threat, and our own army must be prepared to fight against it and win. The first step in this process is to know how the North Korean People's Army is organized and equipped and how it fights.

Michael R. Jacobson is an intelligence research specialist assigned to the Directorate of Threat and Security, U.S. Army Infantry Center at Fort Benning. He is a major in the U.S. Army Reserve assigned to the 87th USAR Maneuver Area Command. During 12 years of active duty, he held various military intelligence positions.

The Company XO: A Commander's Letter of Welcome

CAPTAIN BRIAN D. BARHAM

What can a company commander do to ensure that his executive officer makes a rapid transition into the job and begins working on the priority projects right away?

We have all known lieutenants who had been outstanding platoon leaders but seemed to take forever to become adequate XOs. Some XOs never seem to be thinking the same way as their company commanders; some do outstanding work on projects that are secondary in importance while letting important tasks slip.

Often company commanders expect their XOs to draw on their experiences and determine their own priorities. But lieutenants receive virtually no training that prepares them to be company XOs, and company commanders are often far too busy to give their new XOs the specifics on what to do next.

During my two company commands, I had seven different company XOs. After several attempts to help these officers make the transition, I drafted a letter to the next one outlining his duties. All of the men who served in this capacity did a good job, but I wish I had done my own job better by giving them more help in their transition. If each man had received my description of his duties, along with an introduction and welcoming session, and followed by a detailed Officer Evaluation Report (OER) support form, I might have made their transitions easier.

Each unit is different, and each company commander has his own ideas about what his XO is supposed to

accomplish. The key idea is that he should spell it all out for the new XO. The following is a sample letter:

Welcome to your new position as company XO. You arrive at this position having already earned my respect and trust. Continue to conduct yourself in the same professional manner I have observed, and you will be an outstanding XO. Contact me at any time. No doors in this company are closed to you, and I expect you to be interested in everything.

As the company XO, you are my second-in-command, and I want you to be an integral part of every aspect of the company. You and I and the first sergeant must work as a close unit if we are to be an effective command team. The purpose of this letter is to describe your primary duties.

You will work closely with the battalion XO. He is the second-in-command of the battalion, and you should view his directives in this light. He will task you to support the needs of the battalion. Remember to keep me informed of all taskings and to get me involved any time you do not consider them appropriate.

You will also work closely with the battalion staff officers and the section noncommissioned officers in charge. You should be their best ally. Although you take your orders only from me, you must have the trust and confidence of all the battalion's officers and NCOs. If any difference of opinion should arise as to what is best for our company, refer it to me for a final decision.

Whenever possible, involve the first sergeant in your dealings with the platoon sergeants and section NCOICs. I want every NCO to know that I rely upon and support our first sergeant as the top noncommissioned officer in the company.

You will work closely with the platoon leaders. Make sure you are open to their comments and concerns. If the appropriate opportunity arises, you may find yourself coaching and teaching them. Never pretend you know what is going on if you don't. Make sure all the company officers are working together. We must have a team effort at every level.

We have a strong headquarters section, but it is going through some changes. In a short time, the commander, the XO, the first sergeant, the training NCO, and perhaps the NBC NCO will all have changed. The command inspection validated that we have solid programs in place for running the company. But I am counting on you to assume your duties quickly and become knowledgeable so there is no drop in performance. When working with the headquarters section personnel, keep the first sergeant informed of your intentions.

You are responsible for representing the company at several key meetings. The battalion training meeting is normally on Tuesdays at 0900, and the training NCO will attend with you. You must be familiar with the training support matrix and Annex C of the battalion training SOP. Also be familiar with



the company's training schedules and calendar. The battalion XO and staff usually meet Wednesdays at 0900. Make sure our binder has all the appropriate information posted in it. Remember that you speak for me at these meetings. As soon as possible after a meeting, I will expect you to brief me, the first sergeant, and the training NCO or supply sergeant, if appropriate.

Other meetings I want you to attend are the company training meeting and the company commodity chiefs' meeting, normally held on Fridays. You are in charge of the latter meeting; see that the commodity chiefs are working on the right projects, and give them the appropriate priority for the coming week.

As a general rule, I want you to focus on areas that pertain to your responsibilities. Learn as much as you can from your predecessor; he has done a good job as XO. Additionally, I want you to be familiar with and understand the following:

- Your areas of responsibility in the dining facility.
- The supply room:
 - The supply SOP.
 - Master hand receipts, sub-hand receipts, component listing, shortage annex, temporary hand receipts, and issue documents.

- Self-service Supply Center (SSSC).
- Direct exchange.
- Clothing records.
- Procedures for absentee baggage.
- Procedures for reports of survey.
- Procedures for an inventory.
- The arms room:
 - The SOP.
 - Status of equipment.
- The motor pool.
 - Status of equipment.
 - SOP for services.
 - How to request parts.
- The training room.
 - Procedures for requesting terrain, ranges, ammunition, transportation, and aircraft.
 - Taskings from current battalion memorandums of instruction.
 - The unit status report.
 - Field SOP and reports.
- Policies for:
 - Crime prevention, physical security.
 - Safety.
 - Drug and alcohol.
 - Fire marshal (know how to test and turn off alarm).
 - Energy conservation.
 - All other additional duties.

I believe the company XO in this battalion has the most challenging job for a lieutenant and the most difficult one to do well. He is saddled with many responsibilities, has few assets with

which to accomplish his missions, and must compete against the needs and desires of others in the company.

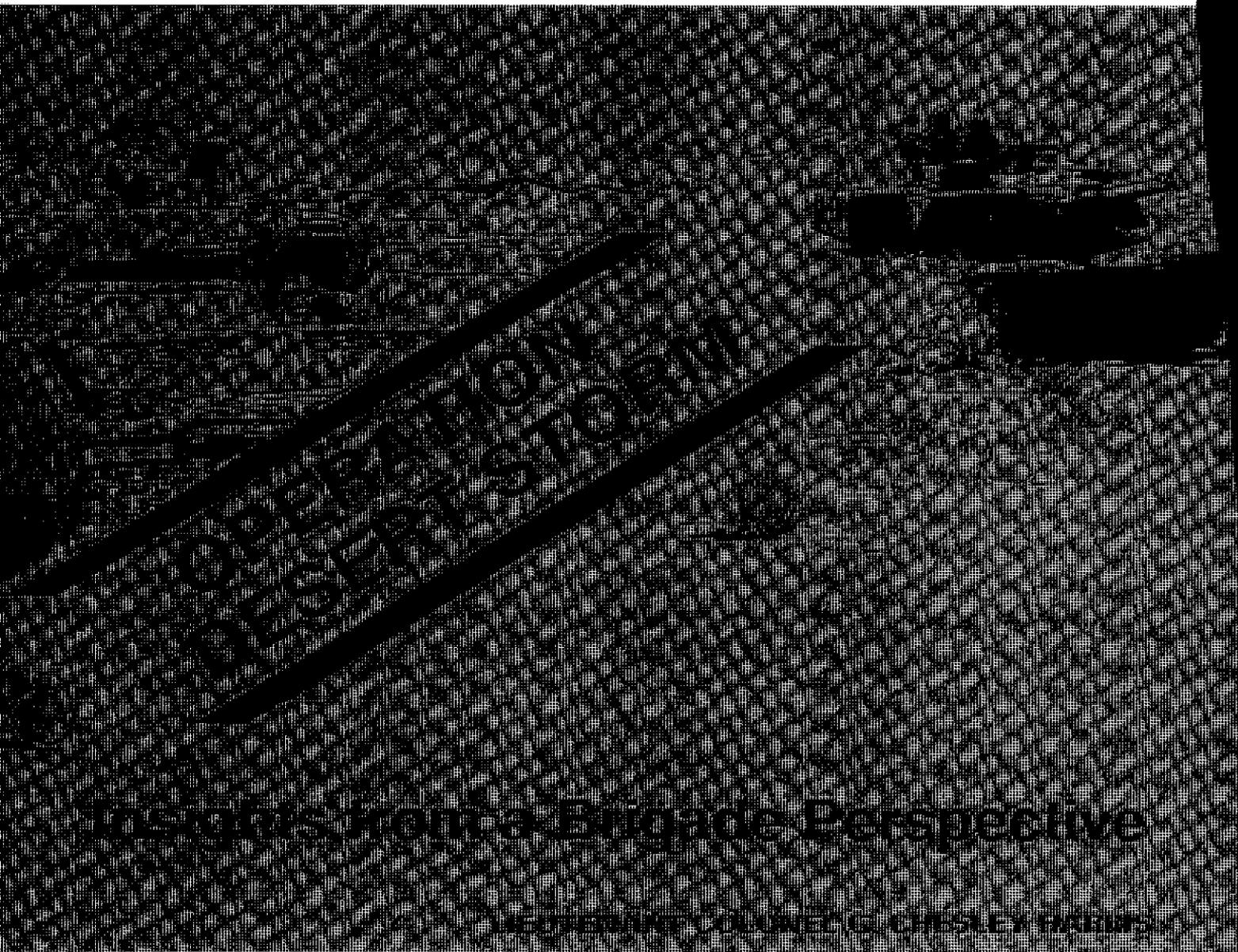
In short, the XO's job requires a man who knows his own mind and can make his own way. I know you will do fine. Along the way, don't forget to make it fun. Seek me out any time you are not sure where you stand, and we will figure out what to do together.

Good luck in your new job!

After the XO has read your letter, ask him what he thinks about his job. Make sure he is not overwhelmed by it; assure him that you know there will be a learning process. See if there is anything he would like to add to or delete from the letter in regard to his duties. Give him suspenses for working through the tasks you have given him. Also, schedule a separate session in which to go over his OER support form with him. Remember that he may be the newest officer in the company and is working at a job the other company officers have not seen him perform. Make him feel like a welcome part of your team, and try to put him in a good light before the company and the battalion staff as soon as possible.

A letter such as the sample I have offered here will go a long way toward helping the new XO learn his new job quickly. It will ensure that he knows what you expect from him from the beginning. It will give him some idea of the effort required to do the job well. And it will help him begin to grasp the volume of work required. Finally, helping your new XO with his transition into his new duties will enable you to concentrate on commanding the entire company.

Captain Brian D. Barham was a company executive officer in the 82d Airborne Division and commanded companies in the 1st Battalion, 13th Infantry, in Germany and the 3d Battalion, 75th Ranger Regiment, at Fort Benning. He participated in Operation URGENT FURY in Grenada with the 82d Division and in Operation JUST CAUSE in Panama with the 75th Ranger Regiment. He is a 1981 ROTC graduate of the University of South Alabama and is now a small group instructor at the U.S. Army Infantry School.



It was 25 February 1991, 2230 hours. The 3d Brigade, 1st Armored Division, had just completed its first fight against the Iraqis as part of VII Corps. We had conducted a well-synchronized brigade attack that was based on a simple plan and a few deeply ingrained drills, rehearsed to the precision of football plays.

The brigade had pounded the objective with more than 800 DPICM (dual-purpose improved conventional munition) rounds as the maneuver force closed, conducted a mounted armored attack, cleared the area, refueled, and rearmed, then re-formed, and prepared to continue the attack. The fight and the subsequent actions had covered more than 40 kilometers in five hours. (Our plan had been good, but it had not been completely executed as planned.)

We were now 150 kilometers into Iraq and under orders to hold there for 24 to 36 hours. That evening, the battalion commanders huddled with the brigade commander for an after-action review on the attack just completed. Then a warning order came from division with a change of mission. Additional details came over the radios in the brigade commander's and S-3's Bradley fighting vehicles (BFVs).

At the tactical operations center (TOC), the battle staff rapidly went through the mission analysis process. A new order, especially graphics, needed to be published quickly; we were only eight hours from the point of execution. For a variety of reasons (navigating at night across areas still filled with wandering Iraqi soldiers, no illumination, inconsistent satellite access for navigation aids, torrents of rain), we did

- Do not let the “destroy in zone” mission weaken the tempo and momentum of the brigade movement.
- Make the most of the weapons’ range standoff advantage, but confirm positive identification before engaging.
- Complete the fight in three hours or less, sustaining less than five percent casualties, but destroying all enemy vehicles and defensive positions of platoon size or larger.
- Re-form in a brigade wedge, refueled, rearmed, and prepared to continue the attack.

Finally, the staff should give the commander a “strawman” intent that is based on the intent of the commanders at the next two higher levels and on the imperatives for the success of the unit mission. With this beginning, the commander can more easily formulate his intent and initial planning guidance that allow the staff to develop courses of action.

I have never met a commander who did not modify his intent to align with his personal understanding of his own commander’s intent. Since most brigade S-3s, in practice, propose a draft intent for the commander, it may as well be included in the formal mission analysis procedure.

These three additions to the briefing format enable the staff to focus the development of a meaningful commander’s intent and clearly establish the guidelines the staff must consider while developing and wargaming a course of action. There is nothing radical in these proposed additions, and they significantly helped us during our experience with compressed mission planning in combat.

Materiel

Field a “commander’s accessory set” for the armored vehicles of the brigade and battalion commanders, brigade S-3/air liaison officer (ALO), and fire support officer (FSO). The authorized radio configurations, internal seat arrangement, lighting, mapboard, and administrative capabilities for both the commander’s and the S-3’s fighting vehicles are woefully inadequate. We should not wait for a new command and control vehicle; commanders and S-3s need one now.

The basic combat vehicles are sound. We need only apply a standardized accessory package similar to an option package purchased for a family car. But let’s get it standardized and not unique to command and control.

Although our solution was one of many used during the war, it was probably similar in many ways to the modifications other commands developed.

The brigade commander and brigade S-3 fought from M-2 Bradleys—well forward in the brigade formation. Both command posts—the TOC and the TAC (tactical command post)—remained fully functional on the move. The commander stayed with the main effort and the S-3 with the supporting attack. When the fight developed into a tank duel, the brigade commander remained forward, moving to his M-1 Abrams tank.

In all command post vehicles, significant modifications were made to radio and antenna mounts, communication harnesses, seat configurations, and ammunition storage areas to accommodate the lessons learned through a month of trials

RESOURCE REQUIREMENTS			
COMMAND POST	VEHICLE	RADIO NETS	MANNING
Bde TAC (Cdr)	M2A2 BFV	Div Cmd Div Intel Bde Cmd Bde O&I CF2 DIVARTY CF1 GPS (Nav)	Bde Cdr (BC) A/S-3 Officer A/S-2 Officer DS FA Bn Cdr Master Gnr (Gunner) Driver
(S-3)	M2A2 BFV	Div Cmd Div Intel Bde Cmd Bde O&I Flank Unit Loran (Nav) GPS (Nav)	S-3 Opns NCO Intel Analyst A/Master Gnr (BC) A/Opns NCO (Gunner) Driver
(CP)	M1A1	Div Cmd Bde Cmd Bde O&I	A/Opns NCO Gunner Loader Driver
Bde TOC (Opns)	M577	Div Cmd Div Intel Bde Cmd Bde O&I CF2 Loran (Nav) GPS (Nav)	Bde XO A/S-3 Officer S-2 Officer FSO RTO A/Opns NCO Driver
(Plans)	M577	HF (Div net) Div Cmd	A/S-3 (Plans) Plans NCO A/Plans NCO Driver
(FSE)	M577	CF2 Div C&I Digital FD	FSO NCO TACFIRE NCO FS Specialist Driver/RTO
(ALO)	HMMWV	HF VHF JHF FM (Bde Cmd) FM (Bde ALO)	ALO Tac Air Control Spec
(Eng)	M577	Engr TF FM Bde O&I Div Eng Loran (Nav)	TF Eng (Bde Eng NCO) A/Opns NCO TF Eng A/S-3 Officer Bde Chem Officer Driver
Bde Ctr	Trans CP	M577	Bde S-1 Bde S-4 Bde S-1 NCOIC Bde S-4 NCOIC Driver

*Division HF net was never fully functional during the war.

Table 2

and rehearsals in the desert. The resource requirements for these systems are shown in Table 2.

Commanders, S-3s, FSOs, and ALOs need common armored vehicles to command and control the fight. Survivability and a common signature with forward combat vehicles are still essential. Assuming that we organize as

CO	1ST BN	2ND BN	3RD BN	4TH BN
Commander	Tank 1	Tank 2	Tank 3	Tank 4
CSO	BFV 1	BFV 2	BFV 3	BFV 4
FSO	BFV 1	BFV 2	BFV 3	BFV 4
ASO	BFV 1	BFV 2	BFV 3	BFV 4

Paragraph 1: This unit will be responsible for...
 Paragraph 2: This unit will be responsible for...
 Paragraph 3: This unit will be responsible for...
 Paragraph 4: This unit will be responsible for...
 Paragraph 5: This unit will be responsible for...
 Paragraph 6: This unit will be responsible for...
 Paragraph 7: This unit will be responsible for...

combined arms task forces, we should consider authorizing a tank for the battalion and the brigade commanders so they can maneuver with the main effort, usually an armored force. Although this is heresy to many infantrymen, these commanders, at least, should be proficient enough to serve as both Bradley and tank commanders, and a tank offers significantly more survivability. BFVs for the combined S-3/ALO, commander/FSO, and FSO/TAC, as well as other infantry elements should fill the gaps in trail behind the tank assault.

On the basis of this proposal, we should consider the armored vehicle allocations shown in Table 3.

Training

Rigidly enforce the planning and execution of detailed rehearsals at all levels. Units should rehearse to the point that they can execute their procedures with the crisp precision of a drill. Although this is common sense, its significance never hit home with us until the brigade's night fight against two Iraqi battalions in a hasty prepared defense on the night of 26 February. The battle was fought under cloud cover and eight percent illumination. The enemy location was uncertain; enemy units were repositioning across our

front, forming a guard to protect the hasty withdrawal of the Iraqi forces positioned in central Kuwait. Although battle damage assessment reports correctly identified the Iraqi brigade's defensive orientation, the plot for the defense axis was off by several kilometers.

Our brigade attacked as part of a division wedge in the division zone. The increased intelligence picture clearly indicated the significance of this separate brigade fight, soon to be *our* fight, in the southern part of the division zone. We lost four tanks and captured more than 400 enemy prisoners of war (EPWs) in that night fight.

I offer the following insights on rehearsals:

All flank unit representatives should be included in unit rehearsals. The day before the LD, the commander of the flank brigade from another division, along with his S-3 and his liaison officer to our brigade, spent several hours reviewing the intricacies of contact points, recognition signals, control measures, concepts of operation, mission, and intent. Likewise, the adjacent battalion scout platoons rehearsed *link-up procedures*. The critical details exchanged here would have to last for the rest of the war; we would not formally meet again until the cease-fire on 28 February.

The scouts maintained a moving screen immediately adjacent to the brigade formation (more than 10 kilometers long) as the brigade conducted the attack through Iraq and Kuwait. The planned link-up at many contact points never occurred—the scout BFVs were like ships passing in the night. Radio contact was sporadic, but the frequent unit location exchanges between adjacent scout platoons, companies, and battalions were passed to brigade.

This fight was truly non-linear between divisions, for there were huge gaps between units. Our missions were force oriented. On this night, both attacked adjacent defending elements of the same Iraqi division. There was great potential for fratricide in this attack, but perseverance, a good bit of luck, and a common understanding of mission and intent averted disaster and ensured unity of effort.

Use a limited number of simple maneuver drills or plays; rigidly track and rehearse the time and distance factors to implement each play, considering every battlefield operating system. We developed a template for each of the brigade's three maneuver drills and two movement drills from the brigade's base wedge formation (Figure 1). Once the intelligence picture developed, the brigade commander selected the play—a brigade action right (Figure 2). Letter codes from the maneuver template—fire-from, turning point, assault line and attack orientation, reserve, and direct support artillery battalion—were used to transmit set points rapidly. All that remained was the commander's verbal intent for execution. With the template, such controls as restrictive fire lines, target reference points, combat train drop points, and command post set points were also standing operating procedure (SOP). Commanders merely adjusted location based on factors of METT-T (mission, enemy, terrain, troops available, and time), and broadcast the selected points and unit orientations.

Rehearse procedures for selected critical functions.

For us, these functions were casualty evacuation, EPW collection and hand-off, refuel and rearm operations, and hasty decontamination. We embedded full-up field training exercise (FTX) rehearsals of these drills for the task forces and specialty units in a brigade CPX of the anticipated fight scenario.

Partition the battlefield engagement areas. The dust created by DPICMs dramatically obscured the battlefield for several minutes after execution. It was essential that we partition the battlefield to make the most of the range and the effects of each weapon system:

- Zero to three kilometers—direct fire, tank, TOW, 25mm gun.
- Three to eight kilometers—direct support artillery and attack helicopter.
- Eight to 15 kilometers—close air support (CAS).
- More than 15 kilometers—battlefield air interdiction and MLRS (multiple launch rocket system).

This partitioning reduced target obscuration, embedded adequate safety standoff, and provided an acceptable procedure for the command and control of massed fire distribution.

Eavesdrop on FM radio nets to collect information and plan actions to the anticipated decisions. As the intelligence picture of the impending night fight grew, it became obvious that an established boundary between us and the brigade on our north would reduce fire support restrictions and facilitate our maneuver. (We were moving as part of a division wedge in a division zone of action.)

The assistant division commander for maneuver and the two affected brigade commanders discussed the issue on the division command net. Simultaneously monitoring and working with the adjacent brigade S-3 on the division operations net, and with our brigade XO and FSO on the brigade operations and intelligence (O&I) net, we identified the best alternative. As brigade S-3, I proposed it on the division command net to the ADC(M) (assistant division commander for maneuver) and the two brigade commanders. The division artillery (DIVARTY) commander reviewed it with his fire support element and endorsed it. The ADC(M) approved the change; the DIVARTY entered it in the TAC-FIRE system, and we plotted it on the brigade overlays.

Meanwhile, our brigade XO distributed the warning order concerning the boundary change on our brigade command net. It took 15 minutes to initiate, coordinate, and implement a critical division-level command and control measure for a complex brigade night fight. Eavesdropping and net calls had made it all easier.

Upgrade the combat training centers to integrate, exercise, and assess all the operating systems to the level now executed for the command and control and maneuver systems. The following are a few examples:

Intelligence and Electronic Warfare. The amount of intelligence data “pushed” to the brigade S-2 at the CMTC had been less than five percent of that received per day in-theater. Most of the data received in-theater was accurate, but much of it was either old or had been transcribed. It was

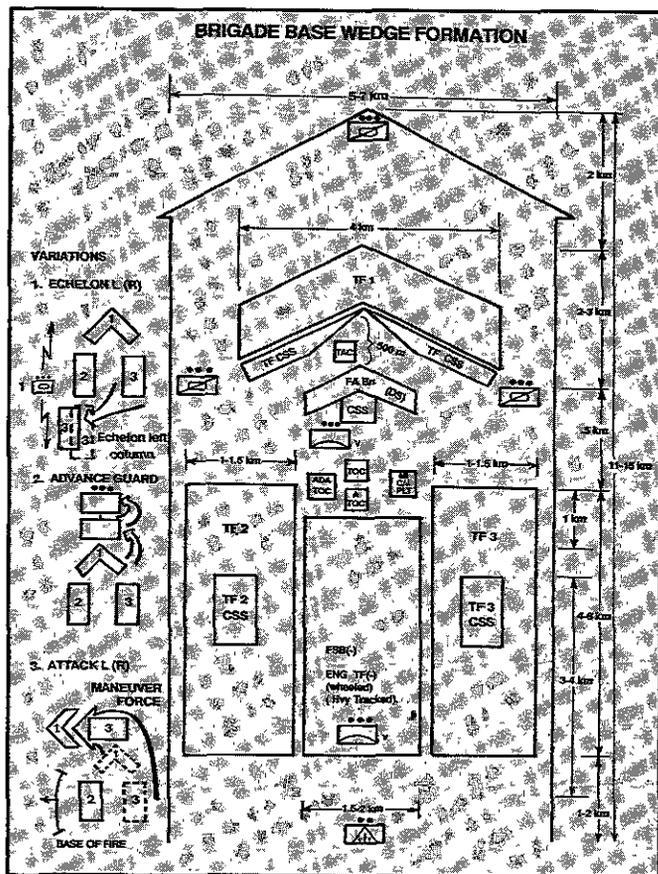


Figure 1

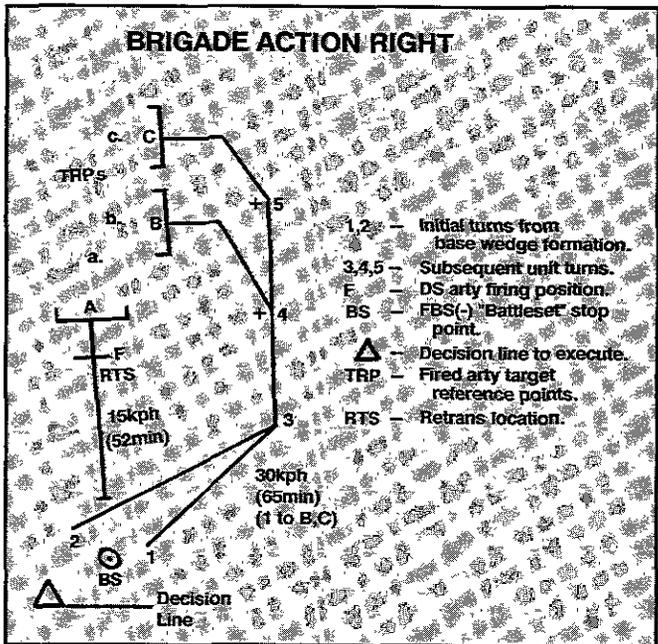


Figure 2

a monumental task to review, collate, timeline, post, and assess this data.

Fire Support. The target locations of Air Force-delivered cluster bomb units and artillery-delivered DPICMs had to be tracked and the information distributed as probable minefields by the brigade engineer. More than half of the damage to our wheeled vehicles and a third of our casualties came from the inadvertent detonation of unexploded bomblet munitions.

Command and Control. Extensive cross-talk between flank units (especially at battalion and brigade level) provided critical combat information that helped validate enemy templates, as well as to ensure the continuity of a coordinated fight.

Combat Service Support. Fuelers and ammunition haulers traveled hundreds of kilometers cross-country to and from isolated fuel and ammunition transfer points. The physical demands of loading and transporting ammunition and then finally loading it into combat vehicles fatigued everyone.

Maneuver, Countermaneuver, and Survivability. Combat engineer vehicles maneuvered well forward as part of maneuver teams, executing coordinated fires with tanks and BFVs to destroy bunkers and other prepared defenses—not as independent counter-obstacle teams.

Rehearse down to the lowest level possible on a scaled terrain model—then ramp up to full rehearsals. The brigade used three terrain models to prepare for the offensive:

Formation Model. This scaled model, about 10 by 40 meters, depicted every tracked and wheeled vehicle in its brigade attack position. During the weeks in the assembly area, every driver visited the “rock garden,” as it came to be known, to see his place in the brigade wedge. Wheeled vehicle drivers knew who and where their tracked recovery mates were. Routes for fueler, maintenance, and recovery crews were clarified. Maneuver routes and separation distances were emplaced. Each driver and track or Bradley commander understood his part in this formation.

Enemy Attack Formation Model. This model, which was to the same scale as our formation model and immediately in front of it as if to suggest a meeting engagement, depicted the complete vehicle array of our probable foe—the Tawalkana Division. Battalion and company commanders maneuvered their “rocks” as we rehearsed attack options, while our S-2 maneuvered the enemy against us.

Operations Model. We portrayed our zone of action in an area more than twice the size of a football field. It included all terrain features (surprisingly numerous), control measures, and enemy positions. The enemy situation—including gun tube orientation, occupied positions, type of vehicle, and likely counterattack routes—was updated daily on the model by the S-2 section. Leaders—down to specialty platoon and company command—participated in frequent brigade-level rehearsals.

Rigidly train the implementation of the IPB—especially the development of decision support templates (DSTs) for the base plan and probable branches and sequels. As we moved, I maintained and updated the template in the TAC. As the situation unfolded and we approached decision points, I worked with the brigade XO back in the TOC to ensure that the right systems reacted or that the brigade commander was notified for a decision. This included everything from changing the priority of fire and identifying the time and place for refueling to setting artillery radar or submitting requests for CAS or attack helicopter battalion support. Comprehensive wargaming with good IPB and detailed syn-

chronization matrix orders spawns good DSTs and ensures the most effective use of each combat multiplier.

Force Design

Organize, station, and design training around the “brigade battle group” (for want of a better term) as the basic combat formation. We must truly train as we intend to fight. We need to organize the brigade battle group in garrison as a combined arms unit with all the required assets either attached or assigned. Three or four maneuver battalions, a reconnaissance platoon, an artillery battalion, an engineer task force (E-Force design), an air defense battery, a military intelligence detachment (with collection and jamming as well as ground surveillance radar capabilities), one or two military police platoons, and a forward support battalion tailored with all the capabilities expected of it during independent combat operations (including engineer, air defense artillery, and intelligence and electronic warfare maintenance specialties). Enough combat support and combat service support “plugs” (using the Army of Excellence concept) should be retained at division level and higher to weight a main effort.

We were extremely fortunate to have a month of in-country training as a newly task-organized brigade. Unquestionably, our flexibility and inherent ability to bring organization out of turbulence remain fundamental American traits. Many claim that this flexibility to change basic organizational structure is a fundamental component of our employment concepts. We must caution against this perception and build on the numerous studies that endorse the bonding and organizational strength developed through strong individual and unit ties.

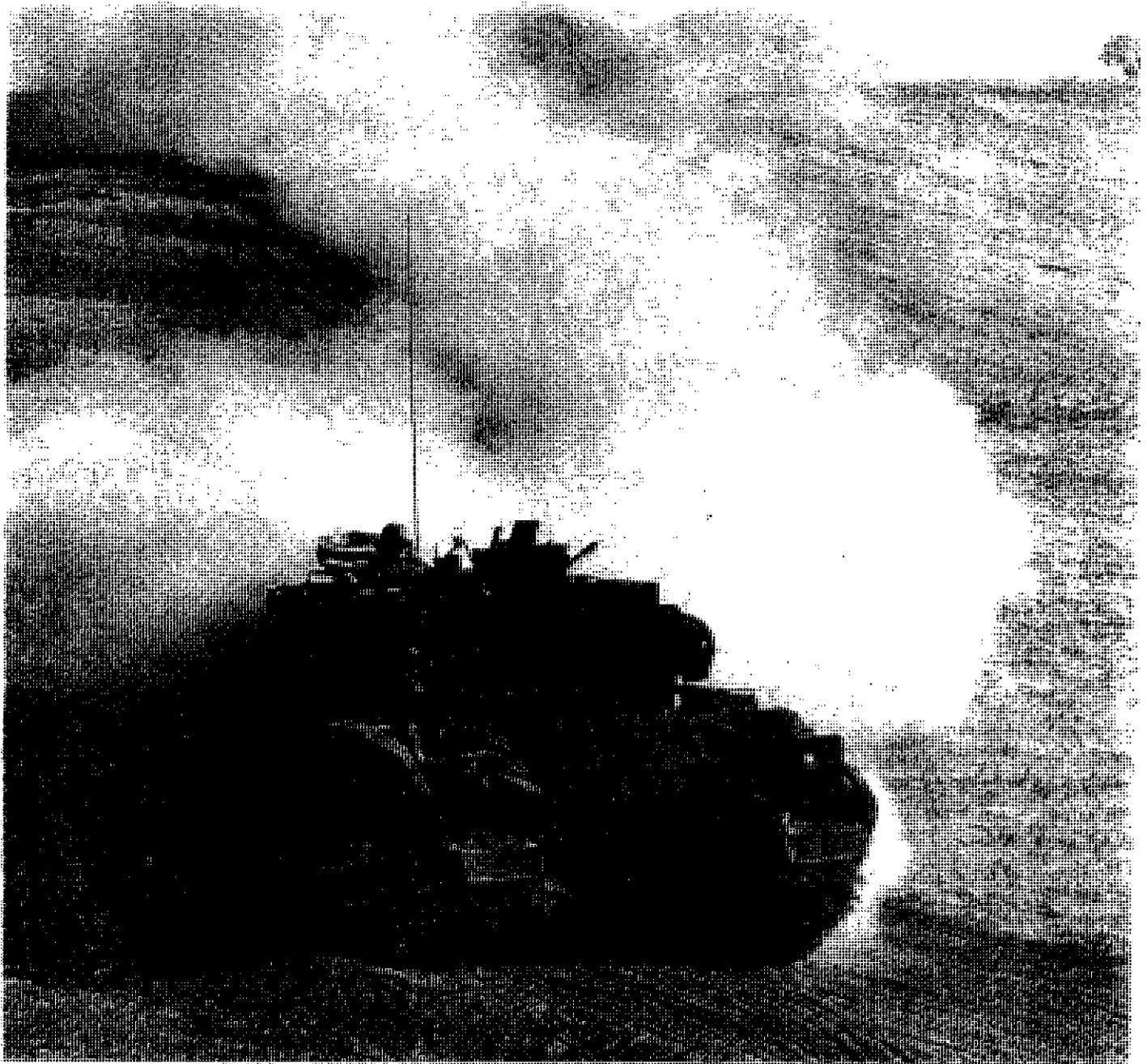
As the down-sized Army wrestles with world-wide deployment challenges, we cannot afford on-the-fly task organizations. Combat organizations must truly live, train, and grow together. We may not always have the luxury to prepare, rehearse drills, restructure support battalions, and assimilate new unit SOPs and personalities with the efficiency we had before the ground campaign in the Gulf War.

Operation DESERT STORM gave the Army at large a tremendous opportunity to bond its units and harden its soldiers and leaders to the rigors of armored warfare. The in-country training period provided great training challenges for the entire chain of command. The commander’s intent was clear. We trained hard (harder than we had imagined we could). And we had to survive both the environmental and the psychological pressures associated with preparing and executing true combat operations. We need to approach with caution—but sincerely review and consider—the lessons that we learned from this highly successful operation.

Lieutenant Colonel G. Chesley Harris was S-3 of the 3d Brigade, 1st Armored Division, during the division’s deployment to DESERT STORM and now commands the 2d Battalion, 6th Infantry in Europe. He previously served with the 24th Infantry Division at Fort Stewart. He is a 1975 graduate of the United States Military Academy.

CMTC Lessons: Company Operations

MAJOR DANIEL J. KLECKER
CAPTAIN JAIME L. BONANO



Observations of operations at company level have shown trends that seem to transcend the type of unit conducting them. During several years of observation, the lessons learned at the Combat Maneuver Training Center (CMTC) in

Germany have been refined and documented, and we present them here for the benefit of training units. For convenience, these lessons are discussed under the seven battlefield operating systems.

Intelligence

An intelligence preparation of the battlefield (IPB) consists of the following elements:

- Battlefield area evaluation.
- Terrain analysis (OCOKA—observation and fields of fire, cover and concealment, obstacles and movement, key terrain, and avenues of approach).
- Weather analysis.
- Threat evaluation.
- Threat integration.

The IPB conducted at company team level is seldom complete. Too often, company IPB data are extracted from the S-2 information that was briefed at the task force operations order (OPORD), or they simply repeat the S-2 data. The most important intelligence information a commander can provide is an accurate description of what the enemy will look like in the company's area of operations.

Terrain analysis at the company level must identify more than "slow go" and "no go" terrain. Individual trails and mobility corridors must be identified, and an actual reconnaissance must be conducted. In the defense, this reconnaissance will detail all mobility corridors and connecting trails leading into and out of the company engagement area, and within the area itself. Choke points and natural terrain features that might be used with obstacles should be identified, as well as the locations of dead space and routes to them.

Any key discoveries from this detailed reconnaissance should be reported to the battalion. For example, the company effort may reveal a new bridge or a high-speed road that is not shown on the current maps. Such key elements as these could affect the task force plan.

Similarly, the weather analysis must be detailed, and the plan must be based on the most likely conditions at the time the mission is to be executed. Contingency plans, however, must address any possible restrictions that weather conditions may impose. The most common oversight is in planning for limited visibility caused by darkness or fog.

The company analysis of the enemy must include the following details on the enemy's composition:

- Capability—weapon systems, lethal ranges, limitations.
- Weaknesses—strength, morale, training deficiencies, or equipment shortages and limitations.
- Intentions—formations, missions, area of operations, probable objectives.
- Physical description—type and composition of different echelons of reconnaissance, vehicle types (including aircraft), uniforms, and equipment.

Once the enemy composition and intentions are known (threat evaluation), the unit must evaluate how the enemy will attack in the company sector or defend from the company objective (threat integration). We often assume that the unit's soldiers know the enemy, but even the most seasoned soldiers can benefit from a review. The review should focus on the ways in which the enemy may be deviating from a doctrinal template. This review is most helpful when the soldiers have returned from continuous operations; leaders must remember that the soldiers are the best source of intelli-

gence because they get closest to the enemy.

Intelligence gathering at company level is often limited to any named area of interest (NAI) that is specified in the task force operations order. The company commander should use the many intelligence gathering resources available to him. His checklist—and the unit standing operating procedures (SOPs)—should include specific guidance on the following:

- The employment of PEWS (platoon early warning systems).
- The employment of M-8 alarms.
- An aggressive reconnaissance and security plan (local patrolling, local security).
- Passive security measures.

A unit's security posture should be a function of a METT-T (mission, enemy, terrain, troops, and time) analysis. The fact that there are scouts or counterreconnaissance efforts forward of a unit does not necessarily mean there is no enemy threat in the company's area of operations. Remnants of enemy units and partisan activities should always be considered potential threats, in addition to any enemy reconnaissance forces that may have eluded the forward counterreconnaissance efforts.

An IPB is a continual process that requires continual refinement. As a unit's reconnaissance efforts reveal enemy activities and intentions, this information is reported to the higher headquarters. A system needs to be in place to ensure that this information is also provided to all subordinate leaders. This becomes a real challenge late in the planning process, when the most accurate information usually becomes available. Units repeatedly succeed when they ensure that the front-line soldiers understand the threat (as a result of the orders process) and have the most up-to-date information as they enter the fight.

Maneuver

The lessons on maneuver include some general considerations. First, units must train to ensure their proficiency in battle drills. Such proficiency will save lives, because it enables soldiers to react instinctively during the critical first few seconds of contact with the enemy.

Once the warning order informs subordinate units of the upcoming mission, the unit should rehearse specific battle drills as directed in the unit standing operating procedures (SOP). If the SOP does not direct specific drills, the drills to be rehearsed should be listed in the warning order.

All operations should be rehearsed to the fullest extent possible. A unit should strive for a full, combined arms rehearsal, including all assets and—if possible—on the actual terrain where the mission will be conducted. If this is not practical, the level of involvement can be scaled down, consistent with METT-T, but it should still include as many soldiers and systems as possible.

In an assembly area, for example, the attached engineers might construct a complex obstacle similar to the kind expected in the upcoming operation. Following this rehearsal, the obstacle should be built again for the purpose

of a company combined arms rehearsal of all elements at the same time. The company fire support officer (FSO) should call for smoke to obscure the target and ensure that the alternate shooter rehearses it as well. The lane should be marked to standard.

Rehearsals must be done at every level, and the more contingencies rehearsed, the better. There is no danger that rehearsing contingencies will confuse subordinates, so long as they understand the commander's intent; in fact, these rehearsals will reinforce different means of accomplishing the mission. (See also "Tactical Unit Rehearsals," by Captain James L. Boling, in *INFANTRY*, March-April 1991, pages 25-30.)

The time and space relationships for maneuver must be practical. If an element is required to reposition, the order for its displacement must allow for its movement in time to accomplish its mission. The worst possible scenario should be rehearsed; for example, moving in chemical protective gear (MOPP Level IV) at night. If the order for displacement allows enough time for this scenario, it is workable. If it does not, a different trigger point or decision point which affords more time must be selected. A leader cannot merely hope that the plan—and the risks involved—will be exactly as briefed.

During offensive operations, an IPB must be an ongoing process that requires constant refinement. Intelligence on enemy activities, such as the scouts identifying the location of a combat observation post or an obstacle, may become available only at the last minute, and a system must be in place that will make sure the maneuver units have full benefit of the latest intelligence updates.

The commander must ensure that the control measures are adequate to aid command and control during the execution of the mission. If appropriate, the control measures should be graphically depicted and rehearsed. In addition to aiding fire control and fire distribution, these measures will help prevent fratricide.

The techniques that can be used during dismounted actions on the objective include having only key leaders fire tracers. The other soldiers then fire where their leaders have directed them. Another technique, particularly useful at night, is to prohibit the use of automatic fires until they are directed; the soldiers can then assume that all other automatic fires are coming from the enemy. Ground-burst illumination on the objective can also help control fires. During a dismounted assault, leaders might consider the most effective employment of combat vehicles and their thermal optics. In a passive role, they can be invaluable in providing intelligence.

Again, a combined arms rehearsal is absolutely necessary. It should be conducted under the same conditions that are expected during the mission—darkness or in chemical protective gear. The rehearsal should include all assets (fire support, engineers, combat service support) and should use as many of the soldiers and systems as possible. If the rehearsal is limited by time or some other constraint, it can include only key leaders.

The plan must detail consolidation and reorganization. A good technique is to plan backward from the objective (as included in the commander's intent) to the line of departure. If most of the planning time and effort is not focused on the objective, the plan may lack the necessary detail and coordination.

The IPB must be thorough and tailored to the company's portion of the battlefield, including what the enemy will look like in the company sector. The spot where the unit wants to engage the enemy should be marked with a target reference point (TRP). This is the location where fires may need to be massed. The TRP needs to be easily identifiable and should

“What is necessary to be performed in the heat of action should constantly be practiced in the leisure of peace.”

Vegetius: De Re Militari, 378 A.D.

be heated to allow recognition during periods of limited visibility.

A company may need more than one TRP to control the fires of its subordinate elements. One technique is to assign responsibility for emplacing and servicing TRPs to subordinate elements. The unit SOP should specify that the element assigned responsibility for a TRP must also keep it heated. Each platoon should be required to build and carry a heated TRP kit.

Range cards and sector sketches must be prepared to standard. The unit SOP should dictate the times for completion and submission, and these times should be enforced. The status of the preparations should be maintained in the company command post (CP) and should include such key events as digging vehicle fighting positions (primary, alternate, and supplemental), emplacing obstacles, and building and camouflaging individual fighting positions.

Local security is a continuous process. The SOP should address the use of PEWS, M-8 alarms, wire instead of FM radio, radio listening silence, observation posts (OPs), aggressive local patrolling, and the use of camouflage. The SOP should be supplemented with any specific guidance that may be unique to the current mission.

Units should consider using pre-stocked Class V and digging it in. Careful planning will help determine whether the ammunition should be located with each vehicle, at platoon cache points, or in alternate or supplemental positions.

In the defense, a patient collection point is probably needed for each platoon. The location must be well marked (considering limited visibility), and a route must be available to allow the evacuation vehicles forward. Evacuation along this route must be rehearsed.

The use of “no-move times” should be considered. This technique, when well disciplined, allows for better acquisi-

tion of enemy vehicles, since no friendly vehicles are moving. It is particularly useful when enemy reconnaissance elements are likely to be in the area. Again, company combined arms rehearsals should be conducted at every level.

Fire Support

Units should adhere to the fire support doctrinal considerations of implementing "top-down planning" and "bottom-up refinement." The top-down planning is usually done in drafting the OPORD, but the refinement process often requires the commander's attention.

The FSO should accompany the commander throughout the planning process. He should attend the task force order briefing with the commander. This not only provides him with early first-hand information on the upcoming mission; it also enables him to make direct, face-to-face coordination with the task force FSO and the other company FSOs who are attending the order with their commanders. Similar coordination should take place at rehearsals.

Fire support planning should include all elements of fire support, including artillery and mortar fires, close air support, and naval gunfire, if available.

Primary and back-up fire support should be identified for each target. Both should be in position to acquire the target and have the necessary graphics, call signs, frequencies, and communication assets to do this job. A company commander should be careful not to overload his FSO with the task of being primary shooter for all targets. The FSO should be put in the best position from which to support the overall mission and then allowed to orchestrate and coordinate the overall operation. The placement of the fire support vehicle (FIST-V) should be carefully considered, particularly in offensive operations. Immediately behind the commander's vehicle is not usually the best position for it.

During defensive operations, the commander might con-

"The man who is prepared has his battle half fought."

Cervantes: Don Quixote, 1605 A.D.

sider digging in the FIST-V and dismounting the crew members and positioning them forward, dug-in, with overhead cover. Fires should be registered whenever possible, particularly key targets and final protective fire lines.

The commander should always plan for limited visibility. He should know what munitions are available, any restrictions on their use, and the location of fire support assets.

The fire support plan—including graphics, target list, and matrix—must be disseminated to all key personnel. Once the refinement process is completed, the updated plan is disseminated.

A good technique for briefing the fire support portion of the OPORD is to have the commander brief his intent for

fire support, followed by the FSO briefing of the fire support plan.

The fire support chain will conduct its own rehearsal, but the fire support elements still need to participate in the company's combined arms rehearsal.

Everyone needs to know how to call for and adjust indirect fires. Having a forward observer does not eliminate the need to train and rehearse this skill. Plans must include measures for identifying and safeguarding friendly forces to prevent fratricide.

Air Defense

The control and air defense (AD) warning status should be disseminated. It describes for the soldiers exactly what they are expected to do and illustrates the weapons control status. The air defense plan may change during different phases of an operation, and it is important for the commander to clarify this in his order. If passive air defense measures are to be taken, the order should explain exactly what the soldiers are expected to do. Similarly, if the company air defense plan includes combined arms air defense (CAAD), this must be specified and clarified in the order. These elements should be included in the unit SOP to help streamline the orders process.

The air IPB should be disseminated. Information on known friendly air missions in the unit area of operations will help prevent fratricide.

If a Stinger team is working with the company, the commander must talk to the team leader early to make sure both understand the exact support relationship directed in the task force order. This early coordination will also help identify any problems the air defender may be having (maintenance, Class V, and the like). In this early coordination, the commander should find out exactly what the team leader's capabilities and limitations may be (is he under armor?). AD must be integrated into the reconnaissance and security plan, and the team leader should be included in the orders process. He can brief the air defense portion of the order and should be present for the company combined arms rehearsal.

Mobility, Countermobility, Survivability

The company should link up with supporting engineer assets as soon as possible and conduct face-to-face coordination with the engineer leader to verify the status of his unit. He should be allowed to detail his specific capabilities and limitations, which will help make the most of this key asset. Attached engineers must be considered in LOGPAC (logistics package) estimates.

The plan must call for redundancy in breaching assets. If the success of the plan is predicated upon successfully breaching a specific obstacle, a plan must be briefed and rehearsed that will cover contingencies in case the mine clearing line charge (MICLIC) is destroyed or damaged before the breach can be made. These contingencies should be part of the plan and should be rehearsed at combined arms breaching rehearsals. The plan should include an in-stride breach. Even if this is part of the unit SOP, it still

requires special attention and rehearsal.

The marking of a lane in an obstacle needs to be standardized and included in the SOP. It is important that the marking be standardized, at least at the task force level, and preferably at the brigade or division level as well. The initial marking will probably be hasty to keep the unit from losing momentum as it continues with the attack. While the elements are passing through the breach, engineers need to continue widening and marking the breach. The marking system must be disseminated to follow-on units. A follow-on unit that is not familiar with the marking of the lane during this critical time may suffer unnecessary casualties, and the lane could be blocked by a disabled friendly vehicle. Limited visibility markings also need to be considered. Breached lanes must be reported to subordinate elements and to the higher headquarters.

Once the obstacle has been breached and the lane appropriately marked, it is often a challenge for the follow-on elements to find the breach. A useful technique is to have the breach manned by a guide in an armored vehicle with FM communications to help vector in the follow-on elements. This vehicle should stand off from the breach to improve its survivability and direct the follow-on elements to the site of the lane. This technique is particularly useful during periods of limited visibility.

The tactical countermobility plan is designed to support the task force commander's fight. It is important to clarify the intent of the obstacle plan and the way it supports the scheme of maneuver. Obstacles are designed for various purposes: to turn, disrupt, fix, or block the enemy forces. Clarifying the intent of the obstacle plan will help synchronize the efforts of the supporting engineers and subordinate elements. Otherwise, a well-intentioned subordinate may place a blocking obstacle to protect his front, while the task force commander may want to allow the enemy unimpeded access through that location and into an engagement area.

The task force obstacle plan should be reviewed and reconnaissance conducted well before the supporting engineers arrive. The actual placement of an obstacle may require adjustments to the plan to complement natural obstacles or to ensure coverage by direct fire. Obstacles that are not covered by direct or indirect fire are ineffective and a waste of engineer assets and effort. The ownership of assigned obstacles must be established. Inherent in obstacle ownership is the responsibility for inspecting and repairing obstacles, reseeding minefields, and closing lanes.

Priorities must be established for using the digging assets and a posted time line must be adhered to. Then, even if blade time is curtailed, the most important positions are still likely to be completed. The construction of vehicle fighting positions is the responsibility of the vehicle commander, who supervises the engineer effort to ensure that the position is properly located and oriented and dug to standard.

The positive link-up and hand-off of digging assets must be ensured. One technique is to designate a dozer chief, someone who escorts the digging assets throughout the defensive area and ensures compliance with the priorities

and the time line.

Another technique is to have the digging assets escorted from one position to another by the next element on the priority list. For example, the platoon that is second in priority of effort would send a representative to the first element to escort the digging assets to its own battle position in accordance with the time line. Regardless of the technique, it is important to make the best possible use of these valuable resources.

There should be no engineer effort in a company area of operations without the unit's knowledge and supervision. This rule will help eliminate wasted effort by ensuring that obstacles are placed correctly. Additionally, a unit should be responsible for the local security of the engineers while they are working in its area. The engineer unit will not be as efficient if it has to provide its own security while emplacing obstacles or digging. To prevent fratricide, the unit's soldiers need to be aware that the engineers are moving into and around the company area.

The task force SOP, supplemented by the OPORD, should clearly define the responsibility for transporting and positioning Class IV and V supplies. If it is not clear how this is to be done, the commander should ask questions at the order briefing.

Consistent with the task force commander's intent, the company commander might consider emplacing point obstacles in depth, particularly during limited visibility. In addition to denying the enemy access into the defensive position, these obstacles may confuse his reconnaissance as to the unit's actual defensive positions. Point obstacles can also provide early warning of an enemy presence, as he stops to overcome them.

Once the obstacles have been emplaced according to the plan, the entire defense should be reviewed and the tactical operations center (TOC) notified of any changes or additions to it. All obstacles must be covered by direct or indirect fires, and any lanes that need to be closed must be identified and responsibility for this action fixed. The obstacle plan and all other pertinent information must be disseminated to everyone in the company to prevent fratricide.

A nuclear, biological, chemical (NBC) threat analysis should be conducted so the company will understand the enemy's capabilities and the likelihood that he will use chemical agents. The effects of the weather on chemical agents should also be a part of the IPB process.

The unit SOP must govern the use of the M-8 alarm, M-9 paper, M-256 kits and the use of over-pressure systems. Pre-combat inspections (PCIs) should include these items. An adequate supply of wire should be designated solely for use with M-8 alarms and stored with them.

Additionally, the SOP should address who performs the initial chemical agent tests with the M-256 kit and when and by whom subsequent tests are to be conducted. It should also address the marking of contaminated areas, casualties, vehicles, and routes.

Hasty decontamination planning should occur whenever the threat analysis indicates that the enemy may use chemi-



cal agents. This planning should include locating a water source near the unit, protective garment exchange, a routing map of decontaminating stations, medical evacuation and treatment of contaminated casualties, and a route identification for vehicles carrying contaminated material.

NBC skills should be rehearsed and practiced as part of the priorities of work. These should be included in the commander's time line and inspected to ensure compliance.

Combat Service Support

Combat service support (CSS) should be integrated early in the planning process. Any changes to the task organization will have CSS implications, particularly in Classes I, III, V, and IX.

Doctrinally, the company XO plans CSS and the first sergeant executes the plan. One technique is to have the XO and the first sergeant work together in the planning process and have the first sergeant brief the CSS portion of the company operations order. This involves the first sergeant in the early planning and gives him a better understanding of the commander's intent.

CSS graphics must be disseminated to the lowest level, and the company CSS plan should be on the company maneuver graphics. The company team CSS plan must be disseminated to all potential users. One technique is to have the first sergeant reproduce enough copies of the team's CSS graphics and matrix to ensure that the company XO and the platoon sergeants have copies. If the first sergeant becomes a casualty, the commander will have some options in decid-

ing on his replacement. Because of other circumstances on the battlefield, the SOP on who assumes the first sergeant's duties and responsibilities may be impractical, but the platoons should still have access to the task force CSS plan.

Whenever a subordinate element is assigned a mission that separates it from the company, CSS considerations should receive special attention. For example, in an offensive operation, a company may be required to send out reconnaissance patrols that will not link up with the company until it is in the assault position. Is resupply practical, or must the combat load of each soldier sustain him for the duration? Will aerial resupply be necessary? What about water? What types of ammunition and how much? What is the plan for casualty evacuation?

A LOGPAC includes all classes of supply to sustain operations. The SOP should include formats to permit the requisition of all supplies.

The SOP should also specify how to report casualties and how to render a long distance recognition signal for the evacuation vehicles. One technique is to use colored flags. A red flag might signal urgent patients, and a yellow flag, priority patients. A method such as this speeds the evacuation of more critical patients and saves lives.

The CSS plan should be rehearsed as part of the company combined arms rehearsal. The first sergeant should personally attend the task force CSS rehearsal. Platoons should rehearse the evacuation of casualties from individual fighting positions to the patient collection point. Medics should rehearse the evacuation from the collection points to the for-

ward treatment team. Recovery crews should reconnoiter routes from the company positions to the appropriate maintenance collection points.

Command and Control

It is most important for soldiers to understand the commander's intent. If they do, they will enjoy greater success while acting independently in executing their mission. Their efforts will be better focused on the execution of the company mission.

The rule that is probably violated most often is to keep the plan simple and executable. Enough complications are generated by battlefield confusion, limited visibility, chaos, poor communications, and any number of other elements that add to the *fog of war*. The plan should be simple and graphically correct. If there is no requirement to pass units through one another, it should not be planned. If there is no requirement for units to cross in front of one another, it should not be planned. Likewise, if there is no requirement for forces to converge on an objective, they should not be required to do so. If there is a requirement for two forces to converge on an objective, and one of the forces can be made stationary so that only one is moving on the objective, the plan will be less complex.

Many units either do not have a functional SOP or do not use what they have effectively. An SOP is a reference that governs a unit's routine functions. It aids in the rapid assimilation of new individuals and cross attached units. A unit that is habitually cross attached must have a current copy of the SOP, and once all parties have copies, it is important that they understand it and use it. The more functions that can be standardized and incorporated into the SOP, the less will have to be directed in an operations order. Obviously, enforcing the use of an effective SOP is far more efficient than trying to coordinate, direct, and supervise every aspect of an operation.

The SOP should include pre-established order groups. The key individuals must know who they are and which of them are required at what portions of the orders process.

The SOP should specify when subordinate elements are to conduct each PCI. Conduct of the PCIs should also be included on the time line.

Task organization for a mission must be prompt, and the first sergeant must be briefed immediately on any changes to the organization. He can then modify his plan to resolve any CSS problems. If the LOGPAC has already been configured, it may make more sense to adjust the effective time of cross attachment. Early information pertaining to a change in task organization will allow for timely planning and appropriate adjustments.

Unless coordinated otherwise, any cross attached units must be brought under the explicit control of the gaining unit at the time specified. One way to do this is to make sure the time is specified in the task force OPORD. If the order does not specify when and where link-up is to occur, the commander must make the coordination before leaving the TOC. The commander must see that frequencies and call signs are

exchanged and must direct a subordinate to verify that link-up has occurred as planned, or have him call the other units immediately—on their frequencies—to sort out any problems. Another technique is for the commander to send a liaison to the attached unit to guide it into the appropriate position in his area of operations and then escort the leader to the CP.

It is important for everyone to conduct land navigation refresher training, because this facilitates rapid response to contingency missions and calls for fire.

Radio net discipline is critical. The subordinate elements on the net need to understand the importance of cross talk, but they also need to understand when they should keep the net free so that units in contact can pass reports or request instructions. Unnecessary radio transmissions only increase the likelihood that a unit will be located and targeted.

The effective articulation of the commander's directives is absolutely necessary. The five-paragraph operations order must be supplemented with neat, correct graphics. The use of an execution matrix helps the commander envision the fight as he plans it and also helps his subordinates see where the other elements are and what they are doing during any phase of the operation. This helps synchronize the fight. Since the matrix is organized by phase, it also helps subordinates understand the operation by allowing them to grasp each phase in succession. The use of a sketch, which can be on the same page as the execution matrix, also helps subordinates see the big picture.

Some sort of checklist or preprinted format must be used in preparing and presenting orders, because there is too much to remember. A more orderly, complete, and structured OPORD will result, and it will take less time. A terrain model or large sketch should be used in presenting orders. Briefing an operation order from a 1:50,000 map sheet is not as effective.

A briefback immediately following the order allows each leader to show that he understands the plan and, specifically, that he understands his element's role in the company mission. No unit will operate in isolation; the questions one leader asks at the briefback usually pertain to other elements as well.

Some of these lessons learned at the CMTC about company operations—some of the techniques and procedures—have been presented here to illustrate better ways (or different ways) to accomplish certain tasks. To experience success on the battlefield, a unit must train as it expects to fight.

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TRAINING NOTES



Modern Dragoons Bradley Mechanized Infantry

CAPTAIN CHRISTOPHER E. LOCKHART

The Army's dragoons of the 19th century fought dismounted against Seminole Indians in the Florida swamps and some years later, deployed west of the Mississippi River to fight mounted against the Plains Indians. So, too, are our modern dragoons—Bradley mechanized infantrymen—required to maintain their skills in both mounted and dismounted operations.

The Army's two most recent combat deployments demonstrated the importance of versatility in mechanized infantry units. The conflict in Southwest Asia during Operation DESERT SHIELD/DESERT STORM highlighted the mounted role of mechanized infantrymen. Only a year earlier, however, mechanized infantry units (although not Bradley-equipped) participated in Operation JUST CAUSE in Panama and encountered circumstances dramatically different from those we found in Southwest Asia: For example, the terrain was urban and jungle rather than desert and the enemy was predominantly a light infantry force rather than an armor or mechanized infantry force. Such extreme differences demonstrate that mechanized infantrymen must be proficient in both mounted and dismounted skills if they are to meet a

variety of threats in the post-Cold War era.

The introduction of the Bradley infantry fighting vehicle has technologically revolutionized mechanized infantry, and all U.S. Army mechanized infantry units will soon be equipped with Bradleys. While the Bradley gives soldiers more offensive options than the M113 armored personnel carrier (APC),

it also raises two major issues that leaders of Bradley units must resolve: What is the role of Bradley-equipped mechanized infantry in the combined arms team? and How does a commander prevent the training of the mounted element from overshadowing the training of the dismounted element?

There are many different opinions on the proper role of mechanized infantry



Bradley crew in the 3d Armored Division reconns cease-fire line, Operation DESERT STORM, 1991.

units equipped with Bradleys. Some contend that the Bradley is essentially an infantry personnel carrier with some added firepower. Others believe it has so revolutionized the tactical employment of mechanized infantry units that these units should be managed by Armor Branch and renamed *armored infantry*. The proper perspective lies between these two extremes.

Bradley mechanized infantrymen are neither *mounted infantrymen* nor *mini-tankers*. They are today's dragoons, who must be equally effective in both their mounted and dismounted roles. These roles will include supporting armor-heavy forces. Although supporting tanks is a hard pill for some infantrymen to swallow, this is a function they must recognize if they are to arrange essential tasks and missions in the right priority, and take advantage of the tank's mobility and firepower.

Bradley crewmen and Abrams tank crewmen go through similar training events: Unit Conduct of Fire Trainers (U-COFTs), Simulations Network (SIMNET), the JANUS computer war game simulation, the Bradley (or tank) Crew Proficiency Course, Table VIII and Table XII gunnery. But a Bradley is not a tank, nor is it designed primarily to kill tanks.

Although the TOW is the Bradley's most powerful weapon, it is not the vehicle's main weapon system. The TOW provides stand-off fire beyond 3,500 meters and enables the Bradley to engage tanks at ranges equal to or greater than those of the tank's main gun, but its main gun is the 25mm Bushmaster cannon.

Equally important, the Bushmaster should not be thought of as just an APC-killer. It also supplements the fire of the tanks' main guns by destroying lightly armored combat vehicles with its sabot rounds. Often overlooked, however, is the Bushmaster's equally critical task of destroying or suppressing armor-killer teams with 25mm high-explosive rounds. The Bushmaster can accomplish this task more efficiently and at greater range than the vehicle's coaxial machinegun.

In fact, destroying armor-killer teams

has been the 25mm cannon's primary role, from its conception. Yet training on ranges and in simulators such as the U-COFT focuses on the cannon's role in killing BMPs.

The Bradley's task of destroying lightly armored combat vehicles should not be secondary to its role of destroying or suppressing armor-killer teams. The two tasks should receive equal emphasis. Thus, trainers of mounted crews must expand the role of the 25mm cannon.

Dismounted soldiers, on the other hand, must narrow their focus to tasks that are truly mission essential, and mechanized infantry leaders must arrange the dismounted tasks to be trained in a logical order of priority. The company mission essential task list (METL) determines the training plan, of course, but leaders can prioritize the types of dismounted tasks and missions that commanders should concentrate on.

Dismounted squads must be trained to proficiency in such tasks as reducing an obstacle that armor-heavy forces cannot bypass, clearing a building in a built-up area that armor-heavy forces have already bypassed, and clearing a woodline that may conceal enemy infantrymen armed with antitank guided missiles (ATGMs). Dismounted squads should also master tasks that facilitate their deployment as armor-killer teams and defending or assaulting along dismounted avenues of approach.

On the other hand, leaders should not emphasize missions that are traditionally associated with light infantry until the dismount squads have demonstrated their proficiency in missions associated with the movement and defense of heavy forces. In other words, the training priority should not be on executing long-range patrolling, search and attack, or raids and ambushes. This point is especially important because so many distractors can divert training time from dismounted training.

When some people think of cross-training in a mechanized infantry unit, they think of dismount soldiers learning turret or driving skills—not of gunners or Bradley commanders practicing individual movement techniques. No com-

mander would think of going to a gunnery exercise without a number of alternate crews who are trained, at least to minimum standards, in the U-COFT. And these alternate crews must come, of course, from the dismount element.

The soldiers of the dismount element must also be trained in the procedures for loading the 25mm ammunition and TOW rounds, which further takes away from their training on dismounted tasks. When a dismount element is deployed on the ground, one member must be left in the vehicle to load ammunition. Ironically, the Bradley's increased firepower results in reduced manpower for the dismounted squad.

Gunnery also takes away from the dismount element's training: The soldiers in the dismount element traditionally provide range support so the mounted crews can concentrate on gunnery. Dismounted soldiers also guard, break down, and issue ammunition to the mounted crews; serve as safety officers in the misfire and clearing pit; and man various details such as cleaning billets, guard force, and KP.

In addition to taking away from their training time, the use of dismounts in this manner leads to conflict between the mounted and dismounted elements, and the dismounts are often looked upon as "second class citizens."

The presentation of awards tends to amplify this conflict. Medals are awarded to the mounted crews because their accomplishments are more visible to the chain of command during high-profile events such as shooting distinguished on Tables VIII/XII, or chalking up a dozen enemy vehicle "kills" at one of the combat training centers. The tendency of Bradley units to focus on gunnery and mounted maneuver also highlights the dismount element's subordinate image.

There are several steps mechanized infantry commanders can take to train their mounted and dismounted elements, and also counter the "them-versus-us" mentality. First, they should devise a separate training plan for each element. Gunnery rotations should not focus strictly on the Bradley; dismounted squad and platoon live-fires should be

incorporated, using the mounted crews for detail support. After both mounted and dismounted squads have attained proficiency in the basic skills, collective training events such as Bradley Table XII should be used to train the two elements together.

Key leaders (from platoon sergeants through battalion commanders) must spend equal time planning and observing dismounted and mounted training events. This not only allows them to provide and receive feedback on training but also emphasizes the two elements equally.

After the completion of such major training events as gunnery or rotations at the combat training centers, awards should be distributed equally to the

mounted and dismounted elements. This practice would further reinforce cohesion and the idea that, to be successful, each element should complement the other.

A plan should be implemented to rotate dismounted and mounted crews—not only to achieve cross-training but also to encourage the impression that personnel moves from the dismounted element to the mounted element are lateral, not upward.

Moving proficient soldiers out of high-visibility positions into less visible positions (especially proficient Bradley gunners) is often a difficult decision. But these measures will help develop a training program that produces a complementary, rather than competitive,

relationship. Only when the elements receive equal emphasis will Bradley mechanized infantry units be able to achieve the versatility required of modern dragoons.

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Moving Under Fire

CAPTAIN MICHAEL C. CLOY
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Soldiers who train at the National Training Center (NTC) often seem to be deficient in the techniques of moving under direct fire—better known as individual movement techniques (IMTs). This trend is especially evident in the infantrymen who dismount from Bradley fighting vehicles (BFVs).

One reason for this deficiency, we believe, is that the techniques of moving under direct fire are rarely included in unit training exercises. The soldiers do not use the terrain to their advantage, do not coordinate individual movements, and do not maintain the momentum. As a result, units often lose the close-in battle. Once they are within small arms range of the opposing force (OPFOR), units of platoon, company, and battalion size become decisively engaged by OPFOR squads and platoons. The results are always the

same—an objective is not taken; a mission is not accomplished; and a battlefield is littered with casualties.

Army doctrine and history adequately address individual movement techniques, and infantry soldiers are taught the basics during their initial entry training. Infantry leaders learn the value of IMT through the various service schools. Every infantry-series manual except one teaches and reinforces this awareness: IMT is not included in the Skill Level 1 tasks in the infantry soldier's manual. The closest individual task to IMT is "Move as a Member of a Fire Team." This manual, therefore, does not help infantrymen reinforce IMT training.

On the basis of our experience during several rotations at the NTC, we believe that unit training should be based on a detailed assessment of each soldier's

IMT skills, and that individual marksmanship should be linked to movement techniques before the soldiers participate in collective task training.

Although many soldiers know at least something about how to conduct IMT, their squad leaders and platoon sergeants do not always insist that they do it right. Moving under direct fire is a skill that leaders often assume their soldiers have already mastered.

To draw a parallel, IMT is the equivalent of blocking and tackling in football. Every year, football coaches across the nation proclaim that they are "going back to the basics." They usually base this decision on their teams' poor performance—or an assessment of every player's performance. In most cases, each player receives a grade indicating how he has done. Fall and spring practices begin with the basics of

blocking and tackling; running and passing are out of the question until every individual on the team has mastered blocking and tackling.

The situation is the same with IMT. Each soldier's ability to conduct IMT must be assessed before he can move effectively as a member of a squad or conduct any collective fire and maneuver. ARTEP 7-8 MTP (Mission Training Plan), paragraph I-5, states that individual tasks form the basic building blocks of training. Before progressing to collective training, a unit must first train individuals to the prescribed standards.

But how does an infantry leader go about assessing his soldiers' individual skills? The answer can be found in Chapter 5 of Field Manual 25-101, Battle Focused Training. This manual provides a source of accepted and commonly used assessment tools for company commanders and other leaders down through squad level. The challenge for these leaders is to learn how to assess wartime mission essential tasks. The sources of evaluation data for organizational assessments shown in Figure 1 (taken from Figure 5-1 in the manual), will help a senior leader assess his organization's ability to accomplish wartime missions.

Leaders do not use all of these sources of assessment to the trainer's—and their soldiers'—advantage. As in football, they want to throw the ball (assess collective training) and see if they can score (meet the standards) before they take time to determine whether the players can block and tackle (move effectively under fire).

Unfortunately, there are many clear indicators of weaknesses in the available assessment tools. NTC take-home packages, for example, demonstrate that moving under direct fire has been reported as a training weakness for several years without much improvement. But are these take-home packages being used as assessment tools? Unit results on the Expert Infantryman's Badge (EIB) Test and the Common Task Test (CTT) also indicate a high failure rate for this task. Low scores on the Army Physical Fitness Test (APFT) indicate a

training weakness when endurance is contrasted with individual movement techniques. Does a minimum score of 180 points mean that a soldier is able to move under fire? Even a simple pre-combat inspection of a dismounted infantryman who is about to conduct an offensive mission will give a leader some indication of that soldier's ability to move under fire. Experienced dismounted soldiers outfit themselves with knee and elbow pads, for example, and their load bearing equipment is tightly

fitted and always buckled.

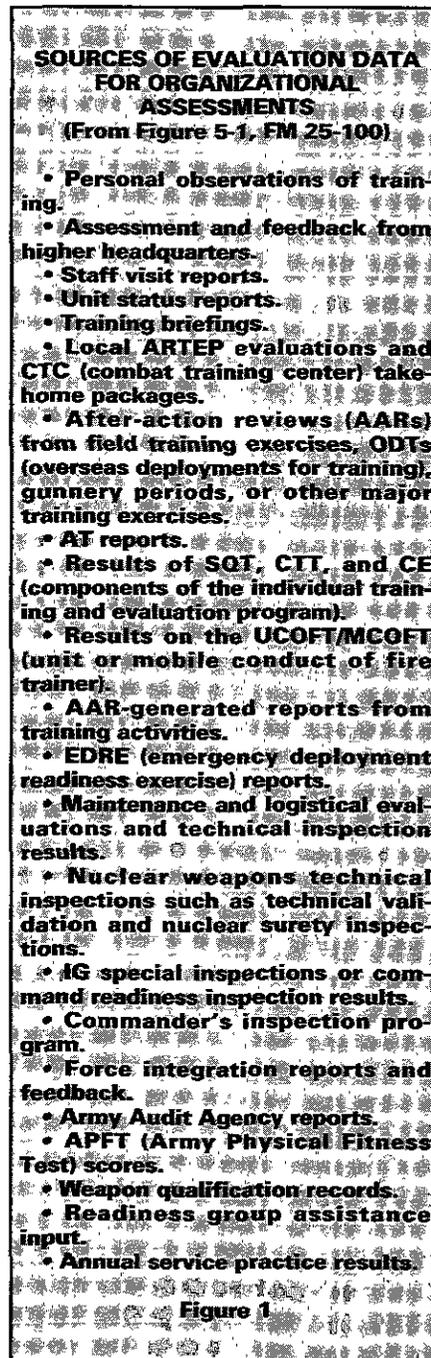
Leaders must not ignore such indicators. They must build collective tasks upon individual tasks. They must know and develop their soldiers' IMT skills so the unit can seize the objective. If they don't, unlike football coaches who lose games, these leaders will squander valuable lives and fail to complete their missions.

IMT and individual marksmanship are integral parts of the AirLand Battle definition of combat power, which is "the ability of a unit to fight." This power is determined by maneuver, firepower, protection, and leadership. Supporting the elements of combat power requires a direct link between IMT and individual marksmanship.

With individual marksmanship, leaders can emphasize firepower and also focus on the other essentials of combat power. During marksmanship training, infantrymen should practice not only how to fire but also how to move and protect themselves under their commanders' leadership. This is training as they will fight. If soldiers are to be trained and ready for warfare, their peacetime training must replicate battlefield conditions as nearly as possible. Trainers must make sure their soldiers can cope with the complex, stressful, and lethal situations they will encounter in combat.

Destroying or capturing the enemy often means close combat, and in most cases dismounted infantry must move under direct fire. Soldiers must be able to make this connection between moving and shooting. We now expect them to come off a linear, predictable rifle range, exit from the back of their Bradley, and conduct actions on contact and on the objective.

Those who are responsible for training must find ways to bridge the gap between individual marksmanship and IMT. FM 23-9 places the responsibility for basic combat rifle marksmanship on units. Units are filling these basic requirements, but they should do more than that. We need a year-round cyclical training strategy that will hone our soldiers' advanced combat marksmanship skills. Bradley infantry trainers



need a point of reference that will describe how to get from FM 23-9 to Table XII of FM 23-1.

We need a manual that addresses the standards of infantry rifle marksmanship, perhaps patterned after the BFV gunnery tables. BFV dismounted infantry training would then mirror the format of the gunnery tables in FM 23-1 (perhaps in another manual or in a more detailed version of Chapter 8 in FM 23-1). There are two reasons for this: First, the ultimate goal of a BFV dismounted platoon is to perform battle drills in concert with the mounted force, which BFV Table XII describes to standard. Second, this approach would give a dismounted BFV infantryman a gunnery training mindset. Once he becomes familiar with the format of FM 23-1, the standardization would unite for him, in one reference, mounted and dismounted gunnery for the BFV platoon.

Formatting BFV dismounted gunnery into tables would also ensure that our dismounted infantrymen could effectively exercise the elements of combat power. Incorporating a table-based, gate-oriented training strategy would enable units to train—in sequence—individual soldiers, buddy teams, fire teams, squads, and platoons, just as FM 23-1 enables them to train crews, sections, and platoons.

This training strategy would make moving under direct fire a less perishable skill, because the dismounted force would then be required to meet a published standard of their whole continuum of training. Furthermore, the BFV trainer would have a more measurable standard to use as an assessment tool. This training strategy could also overcome other problems associated with BFV infantry, such as leader development. Squad manning would receive as much emphasis as crew manning. The investment of time and resources in our dismounted soldiers would not be so quickly spent in hasty decisions to man the turret. Noncommissioned officers would also have a more complete reference to use in meeting the dual responsibilities of their duties.

The dismounted infantry marksmanship tables that we propose are shown

COMBAT POWER TABLES (CPTs)	
TRAINING EVENT	TABLE
PRELIMINARY	
Elementary Marksmanship Test	DMT
BFV Rifle Marksmanship	I
Advanced Marksmanship Techniques	II
IMT Land Navigation	III
Mark Under Direct Fire Test	IV
MTP	
Mark Under Direct Fire Test	V A B C
Mounted Team MTP (MTP) or Individual MTP (MTP)	VI A B C
INTEGRATED	
MTP (MTP) or MTP (MTP) or MTP (MTP)	VII A B C
SECTION Squad or Platoon (MTP)	VIII A B
ADVANCED	
MTP (MTP) or MTP (MTP) or MTP (MTP)	IX A B C

in Figure 2. These combat power tables (CPTs) are not designed to replace the integrated training strategy described in Chapter 8 of FM 23-1, or to replace FM 7-7J, ARTEP 7-7J-Drill, and ARTEP 7-8-MTP. Rather, they are based upon the Infantry Soldier's Manual and FM 23-9. Units would be responsible for integrating the tables into the training strategy they use in leading up to their collective task training, but the format of the CPT would not be violated. A unit would therefore be free to create each CPT within the limits of the marksmanship and basic soldier skill manuals. Until an Army-wide standard could be published, scoring requirements would be met by a unit-designed training and evaluation outline (T&EO).

It is important to understand that CPTs are not situational training exercises (STXs). STXs are single-mission oriented, while CPTs would be skill oriented. The focus of the CPTs would be on finding out whether the individual, buddy team, fire team, squad, and platoon could move properly under direct fire while exercising the soldiers' marksmanship skills under unit leadership. The focus would not be on the link between individual and collective tasks. A unit would have to complete

all of these tables before training on MTP tasks, STXs, or field training exercises (FTXs). CPTs would therefore bridge the gap between shooting and moving before the unit conducted STXs or even battle drills, and would then become the foundation for the MTP collective tasks.

Preliminary CPTs would determine whether every soldier knew the M16 rifle—including all the leaders from platoon to fire team. The dismounted marksmanship test (DMT) measures the soldiers' ability to field strip every small arms weapon in the unit, and also their knowledge of the weapons' capabilities.

M16 qualification and advanced marksmanship techniques are hands-on performance tasks described in FM 23-9. A soldier will already have qualified with his assigned weapon, and advanced individual movement techniques can be performed with blank ammunition. IMT land navigation determines the soldiers' ability to identify low crawl, high crawl, and rushing terrain. (This is done from the prone position.) Finally, the soldier is required to perform the techniques of moving under direct fire with his assigned weapon. FM 23-1, Appendix

F, as well as the CTT manual, will provide the doctrinal standard that is missing from STP 7-11BCHM as a Skill Level 1 task.

In the proposed tables, basic through advanced CPTs incorporate an OPFOR with marksmanship. Table A uses MILES and blanks, BB guns, or paint ball guns. Table B uses dry fire techniques, then live rounds. The soldiers are outfitted with MILES gear for both tables for scoring and control purposes. They are given a minimum amount of time to choose their course of action from a certain vantage point; then they must negotiate the course. MILES zero would be required before execution. Soldiers would negotiate the basic through advanced CPTs with their assigned weapons. Thus, the squad automatic weapon, the Dragon, and the M203 would be incorporated.

Individuals would not be allowed to negotiate the next table until they had achieved a satisfactory score on a requisite table, as determined by the unit. Individual scores would be used to determine cumulative scores at buddy team and higher levels. The replication of battlefield effects would be kept to a minimum in order to stress IMT and marksmanship skills and remain focused on them.

The final outcome of CPTs would be a qualitative score for the various tables, not unlike the evaluation a foot-

ball player receives after a game. The trainer would then have an accurate assessment of the individual's IMT and marksmanship skills from buddy team through platoon. This score could be referenced much like the SQT score or a BFV crew Table VIII qualification score. Leaders would be evaluated on the basis of the amount of combat power that reached the objective.

Once the CPTs were complete, the trainer could be assured that he would progress into effective collective training. The result would be a smart, able, and aggressive dismounted infantryman who was integrated into his unit team.

The inability of dismounted soldiers to move under direct fire is a disturbing deficiency that must be corrected. This change must begin with the individual infantry soldier and his squad leader.

Squad leaders must be expected to know their soldiers' IMT skills in respect to their marksmanship ability. Including IMT skills as part of the train-the-trainer concept in the infantry Basic Noncommissioned Officer Course would help the squad leader do this. CPT would complete the battery of assessment tools the squad leader could use to judge and subsequently train his soldiers' offensive fighting skills.

Combat power tables would give company commanders and first sergeants the basic tool for training fire team and squad leaders on how to get

all their combat power on the objective. Battalion commanders and command sergeants major could use CPTs to ensure that the BFV platoons' dismounted and mounted elements could execute battle drills and collective tasks in concert. The speed and firepower of the BFV, therefore, would not overshadow the combat power the dismounted element contributes to the battlefield.

Finally, all trainers would endorse their superiors' confidence in the offensive skills of the dismount element by reminding them—through higher proficiency on collective tasks—that the dismounted soldier is an integral member of the combined arms team.

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Light Infantry Battalion Counterreconnaissance

LIEUTENANT ROBERT L. BATEMAN

A successful defense is made up of reactive and offensive elements working together to deprive the enemy of the initiative. A defense that can destroy the coherence of the enemy's operations

can then ultimately defeat his uncoordinated forces.

Fundamental to a good defense are four key points: *preparation, disruption, concentration, and flexibility*. By

focusing on these points, a tactical commander can develop and execute a plan that disrupts the enemy's synchronization. He does this by defeating or misleading the enemy's reconnaissance

forces, impeding his maneuver, disrupting his reserves, and interrupting his command and control.

All of this is outlined in Field Manual 100-5, Operations, which describes the doctrine the Army will use in fighting the AirLand Battle. This manual does not state how this is done (since it is concerned with doctrine and not tactics), but it does list some of the key points for a successful defense. One of these points is that the defense must "fight the enemy throughout the depth of his formations to delay him, disrupt him, and create opportunities for offensive action." A light infantry battalion is capable of putting up such a defense, but only if it creates a counterreconnaissance force. But, again, no current manual describes how a light infantry battalion might organize such a force and use it on the battlefield.

One of the problems of a light infantry force is its comparative lack of mobility. This characteristic is highlighted in the manual by its discussion of using light infantry forces within the two broad categories of mobile defense and area defense.

A mobile defense focuses on the destruction of the attacking force by permitting the enemy to advance into a position that exposes him to counterattack and envelopment by a mobile reserve. Relatively small forces are deployed forward while the commander uses maneuver supported by fire to take the initiative away from the attacker. A force that is conducting a mobile defense must have mobility equal to or greater than that of the enemy. In this type of defense, light infantry forces are used mainly in a static role to channel enemy forces; heavy forces are required in the counterattack for their speed and shock value.

An area defense is usually conducted to deny the enemy access to specific terrain for a specific time. Most of the defenders are deployed to defend ground with a combination of defensive positions and a small mobile reserve. Such a defense is usually required for a light force. Here, then, is the problem for light infantry units: How do they organize for and execute a defense that

"fights the enemy throughout the depths of his formations" when they are tied to a specific area by their own inherent lack of mobility?

Again, FM 100-5 is helpful in describing two kinds of forces that act as the forward security echelon in close operations: screening forces and covering forces.

A screening force repels enemy reconnaissance and keeps enemy artillery from firing on the FEBA (forward edge of battle area). A covering force is designed to fight a major action to destroy leading enemy formations, to force the early deployment of enemy follow-on units, and to force the enemy to disclose his main effort.



The manual's description of these forces, however, refers to the commitment of entire battalions, brigades, and regiments to this role. And this is the domain of colonels and generals—not sergeants, lieutenants, and captains.

How, then, does a light infantry small-unit leader apply this information? Fortunately, the concepts that work at higher levels still work down at battalion level. The point here is that a light infantry battalion needs a force that will provide the flexibility a screening or covering force offers.

At this point, I would like to provide a link between the upper echelon doctrine of FM 100-5 and the way a light infantry battalion might organize and execute this concept—and to provide some practical lessons one battalion learned when it tried this technique.

In April 1990, a joint study project was published on observations at the

Joint Readiness Training Center (JRTC) and their implications for senior leader training. This project provided lessons that were based upon the observation of 11 separate units that had rotated through the JRTC. One of these lessons was the need for a light infantry battalion in the defense to deploy some sort of counterreconnaissance force to defeat the enemy's reconnaissance efforts.

This study was co-authored by then-Lieutenant Colonel Howard W. Crawford, Jr., and Lieutenant Colonel Robert M. Hensler. Colonel Crawford is now Director, Operations and Training at Fort Benning, Georgia. Colonel Hensler now commands the 3d Brigade, 25th Infantry Division (Light), where he has implemented some of the observations and suggested changes. As part of the study, the 4th Battalion, 87th Infantry, executed an area defense during its annual external evaluation in which it deployed a counterreconnaissance force in the form of a company team tailored for that mission.

The following recommendations and lessons, drawn from that experience, are provided here to give other light infantry units guidelines they can use to execute the counterreconnaissance mission.

Organization

Light infantry is designed to be employed in restrictive terrain and in low-intensity and mid-intensity conflict scenarios—depending, of course, upon an analysis of METT-T (mission, enemy, terrain, troops, and time).

A METT-T analysis in these situations draws heavily upon the intelligence preparation of the battlefield and upon the limited assets a light infantry battalion has at its disposal. The 4th Battalion, 87th Infantry, was no better off than any other light infantry unit in these areas, and our solution reflected these limitations.

The counterreconnaissance force was organized as follows:

- A line infantry platoon.
- A battalion scout platoon.
- A ground surveillance radar (GSR) section.
- An antiarmor (Dragon) section.
- A team headquarters element.

This organization gave the counter-reconnaissance force a moderate field strength of 62 men. The team, under the commander of the headquarters and headquarters company (HHC), operated as a separate battalion asset, rather than as a subordinate element of one of the line companies. (This TOE is obviously flexible.) The battalion may use two line platoons in addition to the scouts or, if the terrain is appropriate, substitute the TOW platoon for the Dragon section. (In fact, the original plan for our team included the TOW platoon, until an analysis of the area where the team was to deploy showed that the terrain and vegetation were too restrictive for the TOW's range.) In addition, a UAV (unmanned aerial vehicle) team (if attached to the battalion) might be useful, or one or more sniper teams could be used.

Mission

The planned mission for the counter-reconnaissance team we sent out was to be executed in three phases:

The first phase began 12 hours before the time when the battalion main body was to arrive at the planned location for its area defense. At this time, the team was to conduct an air movement to a landing zone a short distance to the rear of the planned defensive line. The team would then patrol the area to clear any OPFOR scout teams that might have already occupied positions in the vicinity. The main effort for this was the team's line platoon. The scout platoon was to begin moving toward their planned positions early, and the Dragon section was to set up a hasty blocking position to cut off vehicle access to the area.

Phase two consisted of moving to and occupying positions forward of the main battalion line. The scouts, acting in their normal role, were sent three to six kilometers forward. The line platoon occupied a series of squad-sized positions spread across the battalion front one to two kilometers forward. The antiarmor section was split to cover the only two possible mounted avenues of approach, and the GSR team, based upon its analysis of the best sites for its

equipment, was attached to one of the squads.

During Phase three, the active reconnaissance and counterreconnaissance phase, the team was to collect intelligence (primarily a scout function) and intercept and destroy any OPFOR scouts who tried to move into positions from which they could call fire on the battalion main line. This phase would end when the OPFOR's main body approached the counterreconnaissance team's main line (which centered on the infantry line platoon). At that point, the team—minus the scouts who would remain forward in hide positions—was to move back to the battalion, conduct a passage of lines, then act as the battalion reserve.

Lessons Learned

We learned many lessons during this operation. The most important of them are presented here, arranged by battle-field operating system.

Maneuver. The ability to disengage is imperative to the survival of the counterreconnaissance force. It must plan to shoot-and-scoot, remembering that it is all alone out there. The disruption of the enemy scheme of maneuver by direct fire should be part of the plan. Massing the assigned line platoon to hit the OPFOR's main body while the troops are in column—without becoming decisively engaged—can impede his maneuver and interrupt his command and control. We did not do this, but we will certainly do it in the future.

Conducting a passage of lines is also a very important skill that line infantry companies do not practice often enough, even when they plan for it in an exercise. Line companies should—as a minimum—reconnoiter and identify the point at which they plan to move back into friendly lines, and then coordinate with the unit that is responsible for that section of the defense.

Fire Support. A fire support officer (FSO) should be sent with the team to coordinate fires. The team, when it is forward of the main defense, should have not only priority of fires but positive *control* of fires. This is for safety, because it is quite possible that some-

body out there with a radio may *not* know there is a friendly counterreconnaissance force to his front and may call for fire.

Additionally, pre-coordinated no-fire zones should be placed on the counter-reconnaissance force's position. On the last night of our exercise, the lieutenant in charge had to place check-fires on five separate missions that were called on the FSO net before the OPFOR assault. At least one of these missions probably originated from a main defensive line Dragon team that may have seen elements of the team through their thermal sight. This argues for the no-fire zone; by this time, the control and priority of fires had shifted to the main defense line.

Intelligence. For the battalion command element, one of the most frustrating aspects of the operation was the sheer volume of reports coming from the team. Even with a very experienced captain as commander, the team still sent quite a few reports to the rear. On the battalion command net, some of these reports either got lost in the shuffle or took too long to get in. The solution to this problem would be a direct link to the battalion S-2 on a separate net, possibly the HHC command net. Thinking of the counterreconnaissance element more as a dedicated S-2 asset makes this linkage clearer. True, the additional element in the chain could impede communication, but it is also the S-2's job to establish the value of the reports that arrive, regardless of the source.

Some battalion commanders may not approve of this method, but that is easy to rectify by an SOP that says the counterreconnaissance force will switch to the battalion command net when in heavy direct contact, as well as making hourly battalion net communication checks.

Also, for the hard intelligence, there should be a regularly scheduled S-2 pickup. We later found that much of the hard intelligence we had captured had been misrouted because of the unorthodox methods we had used, by necessity, to get it to the rear. This same pickup could also be used to bring

to the drop point whatever limited resupply the counterreconnaissance force might need, thereby eliminating the need to dedicate a second vehicle to resupply.

Mobility, Countermobility, and Survivability. Mobility means survivability for the counterreconnaissance force. Hasty fighting positions are good, but anything larger would detract from the mission and might develop a "bunker mentality" in the force. The best defense against artillery is not to dig and hold but to be gone by the time it arrives. This force is not large enough, nor does it have the assets, to dig full fighting positions with 18 inches of overhead cover and still accomplish its primary mission.

In the area of countermobility, our counterreconnaissance team used vehicle and antipersonnel mines to increase the limited killing power it had with direct fire weapons. Again, these were not meant to be used to initiate a major engagement but rather to give the OPFOR a bloody nose and give the team time to decide whether it wanted to continue with direct fire or pull back and use indirect. In any future operation like this, it is advisable to think about doubling the basic load of mines the force carries. At worst, the OPFOR units will be slowed by the need to detect and clear the mines; at best, they won't know what hit them.

Air Defense. On the last day of our defense, there were multiple overflights by OPFOR AH-1 and OH-58 helicopters. The counterreconnaissance team was under a battalion-imposed yellow-tight air defense artillery status, but the team would have imposed this status in any case. Being as spread out as we were, there was no way to effectively mass the fires needed for air defense. In such cases a Stinger team attachment might be used to provide a nasty surprise to OPFOR aircraft that believed they were well out of line-of-sight from their target.

Combat Service Support. Resupply needs to be redundant. The counterreconnaissance force will probably not have the assets or the time to conduct resupply on its own. Either a cache sys-

tem or one or two good push packages could have sustained our counterreconnaissance team for quite a while longer. The battalion should plan for this, with input from the team commander.

Command and Control. If a force is configured along the lines of what we used (scout platoon, line platoon, antiarmor section), it will work well with either the HHC commander or the S-3 Air as the team commander. The S-2 should not be selected to command the force, because it is his job to evaluate *all* of the information that comes to the battalion and to develop the scenario and the OPFOR's probable courses of action for the battalion commander.



Also, the linkage from the team to the battalion should pass through the S-2 at the tactical operations center, for reasons that have already been discussed.

A decision matrix based on the battalion guidance regarding the engagement criteria would be helpful. The counterreconnaissance force should be given the information they need to decide when they can use direct fire weapons. When should their mission shift from strictly self-defense direct fire and primary use of indirect, to possibly aggressive short range and duration patrolling to throw the OPFOR maneuver element off balance? The soldiers of the counterreconnaissance force may excel in both of these roles,

but they need to know when the battalion wants them to execute each phase. And lacking direct orders, they need certain criteria that will allow them to decide for themselves when to switch over.

Our counterreconnaissance team was reporting on the battalion net, in effect acting as a fifth company. As a result, the team commander also had some difficulty sending in the reports he was collecting on the team radio net. The suggestion here would be for the team to act independently, reporting all normal communications and reports through a separate S-2 net. Command and control by the battalion may be somewhat impaired by this arrangement, but it should not be an obstacle if the team is given enough guidance before its deployment. Also, if a situation should require the direct intervention of the battalion command group, the team commander could still switch over to the battalion radio net.

There is no established doctrine that states how a counterreconnaissance force should be structured or how it should operate. In our battalion task force, we simply set out to build a team that would work. It was a learning experience and one that worked out well in the execution.

The team accomplished two missions for the battalion: The scout platoon fulfilled its normal role of providing deep reconnaissance for the battalion and the team. The line platoon and the antiarmor section dominated the middle region between the scouts and the battalion main body. They accomplished the mission of killing the enemy scouts and providing the battalion with mid-distance intelligence.

Our continued control of the reconnaissance battlefield denied the enemy a clear picture of the battalion's real strengths, weaknesses, and dispositions. There was one area, however, the team did not address that may be useful in the future: A deception plan could be included in a counterreconnaissance force's mission statement.

One last suggestion in regard to lessons learned: Because of the special nature of the counterreconnaissance

mission, it could be beneficial to select a single platoon to use for the counter-reconnaissance mission. Operating to the front of the battalion is normal for the scouts, but a line platoon with a mixed offensive-defensive mission needs to practice the coordinations and skills essential in a counterreconnaissance force. Not every platoon needs to

execute this mission; few, in fact, ever will. Those few should be given the opportunity to learn from their mistakes, retrain, and execute better the next time. Other platoons that replaced these in the force would be more likely to repeat the same mistakes.

In essence, it all comes down to one thing: On the battlefield, intelligence is

power, and there is no reason a light infantry battalion should not have this power.

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Aerial Resupply The Blackstar Technique

CAPTAIN MARK SHANKLE

Numerous evaluations, battalion level exercises, and training rotations at the Joint Readiness Training Center (JRTC) have revealed one glaring weakness in the light infantry battalion: With its austere tables of organization and equipment (TOEs), it cannot afford to commit the resources and personnel needed to establish and maintain a secure main supply route (MSR).

Supply convoys, even with security from the military police and the TOW platoon, repeatedly encounter vehicle ambushes prepared by opposing force (OPFOR) units.

Aerial resupply also has some disadvantages. Specifically, an approaching helicopter that is landing, or even hovering, during daylight is easily detected and always draws the OPFOR to its location. The OPFOR may also establish direct and indirect fire ambushes on possible landing zones.

The 10th Mountain Division, after experiencing the disadvantages of both vehicle convoys and daylight aerial resupply, decided there had to be a better way. The division developed a tech-

nique that enables the light infantry to conduct secure resupply operations during periods of limited visibility without compromising their positions.

This technique (called Blackstar) was designed specifically for light infantry rifle and scout platoons. It has proved successful in the jungles of Panama in summer and in the forests of northern New York in winter. A single UH-1H helicopter has supplied four light infantry platoons at four separate locations during a 27-minute period in darkness. The Blackstar technique has been adopted as standing operating procedure in the 2d Battalion, 22d Infantry, 10th Mountain Division.

The following scenario will illustrate the way it works:

During a light infantry battalion search and attack operation, the MSR has been interdicted, and resupply must be done by air. To protect the air assets and maintain operational security, the unit determines that its best option is to conduct the resupply during the hours of limited visibility. There are few landing zones in the sector and

some of these are unusable—either because of enemy obstacles, because they are suspected of being under enemy observation, or because they are covered by direct or indirect fire.

The aerial resupply annex of the Ranger Handbook is ideal for pre-mission coordination. When units are down range, however, the information needed is not difficult to obtain. As long as FM communication is good, the minimum coordination required is the following:

- Communications checkpoint (CCP) locations (prominent terrain features within the battalion's sector).
- Report times and windows (the time the aircraft will arrive at the designated CCP).
- Frequencies and call signs.
- Actions on enemy contact (both ground unit and aircraft).
- Courses of action in case of communication failure.

For purposes of this scenario, the S-3 air and the S-4 have completed their coordination with the ground unit, the aviators, and the supply personnel. The

aircraft lands at the combat or field trains to load supplies in the appropriate classes and amounts. Since logistics packages (LOGPACs) are carried inside the aircraft, the seats are taken out.

Depending on the situation, the rifle company XO, the headquarters company (HHC) XO, the support platoon leader, or the S-4 may control the missions from inside the resupply aircraft. Infrared chemical lights are attached to the LOGPACs with 550 cord and waterproof tape.

When the aircraft is ready, it flies toward the designated CCP at the designated time with its external lights off. The supply personnel inside the helicopter contact the ground unit at maximum FM radio range. The ground unit sends the aircraft the CCP to be used (if this has not been decided earlier, or if the situation has changed), along with the direction (magnetic azimuth) and distance from the CCP to the unit's location. For example "M76 this is Y44, CCP 1, 270, 800," which means fly to CCP 1 on a heading of 270 degrees for 800 meters.

The ground unit, upon hearing the aircraft, turns on a strobe light with an infrared cover and pulls it above the trees (just like raising a 292 field expedient antenna). Then they ensure that the area immediately below the strobe light is kept clear so that no troops will be hit by the LOGPACs. The resupply helicopter then flies to the CCP, picks up the correct flight heading, and flies

the approximate distance while the pilots and supply personnel locate the flashing infrared (IR) strobe with their night observation devices (NODs).

Once visual contact of the strobe light has been confirmed, the IR chemical lights attached to the LOGPACs are activated. Then, while the helicopter hovers as low as possible directly over the strobe light, the LOGPACs are either kicked out or belayed from inside the aircraft. The ground unit then lowers the strobe light, locates the packages (using night observation devices), collects them, and quickly moves out to distribute them at another location. The helicopter may continue to resupply other units, conduct false hovers, or return immediately to the rear.

This system places no extra burden on the infantrymen; all the equipment they need to receive the supplies is already in the field with them. A rifle platoon needs a strobe light, an IR strobe light cover, 75 to 100 feet of 550 cord, a PRC-77 radio, NODs, and one full canteen (which is attached to the 550 cord so it can be thrown up into the trees).

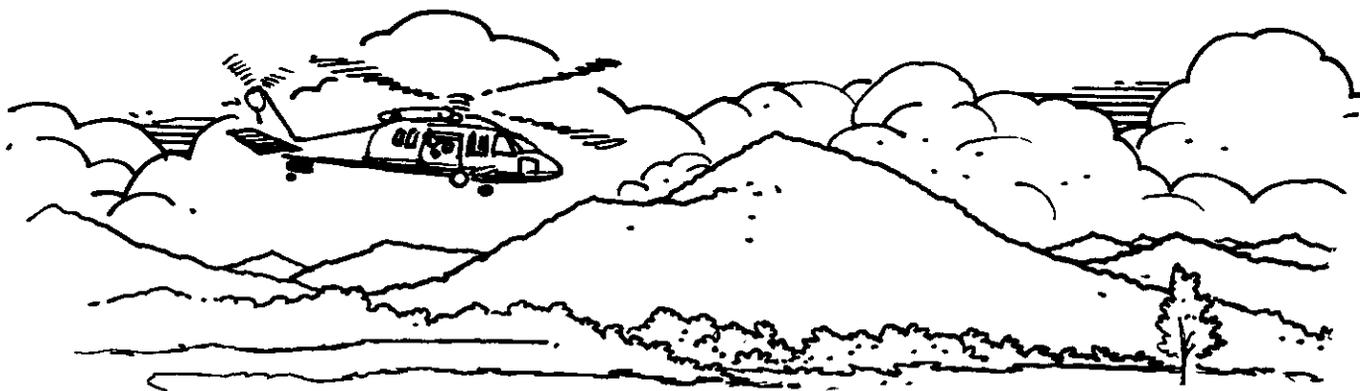
Supply personnel must have air support, IR chemical lights, waterproof tape, 550 cord, snap-links (if a LOGPAC needs to be belayed), PRC-77 with headset, and delivery containers. Some supplies such as IVs and water jugs won't survive free drops, but in thick vegetation, the tree branches usually slow the fall to a semi-soft landing.

Although most ammunition can free-fall, a belay system is needed for such items as hand grenades and 40mm high explosive rounds. (Mortar rounds have never been dropped, as mortars are usually located close to clearings.)

The belay system uses 550 cord, double-wrapped through a snap-link connected to the aircraft's interior. This is more of a controlled fall in which the weight of a LOGPAC crashes through the vegetation to the ground. The number of packs that can be belayed at one time depends on the number of supply personnel on board to handle them. Although the Black Hawk (UH-60A) helicopter holds more supplies and personnel, the older UH-1H can also be used for this mission.

Consideration must be given to the selection of delivery containers. All unnecessary trash needs to remain in the field trains or the combat trains. We have successfully used old duffel bags, aviator flight bags (the unit kept both types until the situation allowed their return), and triple-reinforced trash bags. The latter were buried in the field. A leader can use his imagination with whatever is available.

The supply personnel inside the aircraft (company and HHC XOs, support platoon leader, or S-4) need a designated radio with headsets. I have concluded—after dealing with the large volume of aviators' communications, and after flying in aircraft with inoperative FM radios—that the only way a leader can



be sure of completing the mission is to bring his own radio. The headset, signed out from the battalion signal platoon, allows him to communicate directly with his people on the ground without interference from prop wash and helicopter noise. He can then relay instructions to the pilots if their FM radio is down.

Codes can be coordinated to tell pilots which CCPs to use, to inform aircraft that the ground element is in contact; to direct them to return at a specified later time, to abort the mission, or to drop supplies at the CCP; and to indicate that the ground unit will attempt to recover when possible. Pyrotechnic signals can be established for the alternate communication plan—for example, a green star cluster could mean “drop LOGPAC at the CCP”.

The Blackstar technique offers both

advantages and disadvantages. It helps prevent enemy units from learning exact unit locations (as the Viet Cong did by tracking the daily logistics helicopter). The exact location of a helicopter at night is hard to spot, because the sounds seem to come from everywhere at once. Unless an aircraft flies directly over his head, the enemy will not be able to zero in on the location of the friendly force that is receiving supplies. For the best security, however, ground units should still plan to move immediately after receiving supplies.

The trade-off for the increase in security and stealth is that this aerial resupply technique is, for the most part, a one-way operation. Back-hauling casualties, still one of the most difficult tasks facing a light infantry battalion, usually requires the use of LZs or vehicular extraction, when the tactical

situation permits. The use of the jungle penetrator, combined with Blackstar, may be an answer.

Despite its disadvantages, the Blackstar technique allows light infantry to prevent commonplace MSR attacks when they use roads and LZ ambushes when they use aircraft. This technique enables a unit to conduct aerial resupply at times and places the enemy does not expect it—at night and in the middle of thick forest and jungle.

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Military Operations on Urban Terrain

CAPTAIN JOHN S. ZACHAU

All infantry soldiers should be trained in military operations on urban terrain (MOUT). In recent years, we have seen that, as the world becomes more populated, even more urban areas may become combat zones. For example, during Operation JUST CAUSE in December 1989, a large percentage of the fighting occurred on urban terrain—such as on the military base of Rio Hato and in Panama City. This operation also confirmed that low-intensity as well as high-intensity conflicts can include such operations. More recently, today some of the bitterest fighting in the Balkans is concentrated in towns and cities.

The critical skills in MOUT include

entering urban areas, moving within urban areas, entering buildings, clearing and securing rooms and floors, and detecting and avoiding booby traps. Since soldiers are rarely trained in these skills, I would like to touch on them and also to discuss some techniques that can help during training or during the next MOUT conflict.

MOUT planning revolves around one simple tenet: centralized planning with decentralized execution. Leaders cannot achieve central control during an urban operation, because MOUT warfare often dissolves into many compartmented battles. Leaders must realize this and emphasize a simple mission with a strong commander's intent that

will allow their soldiers to use initiative in executing the mission. If a plan is not central in its development and design, soldiers tend to get caught up in their own battles during the execution phase and forget their commander's intent.

Planning must take into consideration the resupply of such critical items as ammunition, water, and the role of medical evacuation teams, because the tempo of a MOUT operation is much higher than that of a standard operation. Casualties can be two or three times the number leaders may expect. In 20 minutes, casualties or a lack of ammunition can render a platoon incapable of accomplishing its mission. A unit mis-

sion can easily bog down if the commander does not have a good plan for evacuating wounded and resupplying his unit: the enemy can mount a counterattack or regain the initiative.

Entering an Urban Area. Any area that has a concentration of people and the structures to support habitation can be defined as an urban area, whether it is made up of huts or skyscrapers. It is restrictive terrain that has more potential danger areas than a forest, a desert, or an open maneuver battlefield.

The approach to any built-up area must be reconnoitered carefully for the most tactically advantageous entry point. Areas that offer an entry, such as high ground, will also provide overwatch and excellent direct and indirect fire support. Choosing the initial entry to an urban area is a vital decision, because this is the secured passage point that will allow the continued flow of reinforcements and combat service support (CSS) onto the battlefield. It could be essential to enter an urban area during times of limited visibility, or to use smoke. If the point of entry chosen is cut off, the forces sent in may well be encircled.

Movement Techniques. Movement is difficult in cities because the defender has so many places to hide. Piles of rubble or tiny sniper holes in the sides of buildings many blocks away can conceal muzzle flashes. Every building may hold a potential threat. For units conducting offensive missions, the reverse is true. There is little natural concealment during movement. Streets and alleys are perfect kill zones—level, clear, and with little dead space to conceal troops. Movement must therefore be carefully planned, and soldiers must be trained in urban warfare, if possible.

A soldier should watch the muzzle of his weapon during movement, and never let it extend around a corner before he does. This provides a dangerous signature. One man should go ahead to low-crawl up to a corner and peek around at ground level. If he has a survival mirror, he should use it to peek around for him. A soldier who is looking around at ground level is a hard target for the enemy to acquire.

When passing a building, a soldier should never walk in front of an open window; he should crawl under it or, if it is a basement window, jump over it. If he can do neither, someone should cover him as he passes the window and he should pass it facing toward the building with his weapon toward the potential enemy. This at least gives him a fighting chance.

The leader should watch troop dispersion. Although this sounds like common sense, in a city it is easy to bunch ten or 15 people around any object that offers a little cover or con-

cealment. Leaders must control the flow of troops down streets. One enemy machinegun could cause numerous casualties in less time than it takes to tell.

Fighting in Buildings. When entering a building, a soldier should always try to enter at the highest level possible. Using the height of the first secured building, he can then use ropes, poles, or boards to enter other buildings from the top.

Room entry and clearing techniques vary. The technique itself is not as important as making sure it provides



Stairwells are natural kill zones and should be avoided whenever possible.

overwatching fire for the point man, and that the room is thoroughly searched, cleared, and secured.

The same technique applies when securing a room, a floor, and subsequently a building: Gain a foothold and use it as a base from which to extend your operation.

Stairwells are particularly difficult places to fight in. This is one reason for fighting downward instead of upward; it is much easier for a soldier to fight his way down a barricaded staircase than to fight up it. If the enemy holds the high ground, or upper floors, the stairways will probably be booby trapped or barricaded. Stairwells are natural kill zones and should be avoided whenever possible.

A grenade thrown into a room before clearing usually shakes up the enemy enough for a successful room clearing. But a soldier should check the thickness of the walls before he starts tossing grenades. It is of little value for him to toss a grenade into a room if it blows right through the wall that he thinks is protecting him and others. In addition, in cluttered areas a grenade can strike an object and bounce back, especially in stairwells where it could strike a wall and roll back down.

A good technique for gaining entry to second and third floors is for each man to carry a pole section from a camouflage system. A section is about one meter long and weighs about one pound. The sections can be put together in seconds to form poles of varying lengths, and a fire team can elevate a man to a second- or third-story window in a matter of seconds.

Marking Cleared Areas. Marking areas cuts down on the need to tie up radio nets with situation reports on safe rooms, buildings, or areas. There are many techniques for marking cleared areas.

As each room is cleared, chalk symbols or spray paint symbols can be applied to safe rooms. White chalk should be avoided, because the enemy can pick up a rock and start scratching similar white markings. Chemical lights can be useful at night or in dark buildings. After a chemical light is

activated, it can be broken and the luminous liquid applied to the walls in cleared rooms. This way, the enemy cannot remove the symbols. Again, the enemy may also have chemical lights, so designated colors are best.

As each floor is cleared, a distinctive signal should be hung outside a window on that floor on each side of the building so that all friendly forces can see them. Engineer tape, sheets, or VS-17 panels are excellent tools. When an entire building has been cleared, a distinctive symbol or signal will let all friendly troops know.

Booby Traps. Booby traps are among the greatest considerations during MOUT training and combat, but the least trained. Detecting and disarming booby traps are critical tasks, and commanders should train to accomplish them.

A booby trap can be as simple as a hand grenade under a body with the weight of the body holding the spoon down, or a grenade taped to a desk or furniture leg with one end of a string tied to the pin and the other end to a fixed object at ankle level.

More ingenious booby traps include a claymore or any explosive device rigged to an electrical source, such as inside a refrigerator, for example: An enemy soldier opens the door to check for food and becomes a casualty.

All soldiers during MOUT training must be trained not to open or turn on anything, because anything that opens or is a power source can also be a booby trap. If a door, drawer, or anything else must be opened or moved for some reason, a field expedient pole of some type should be used.

Fighting Underground. Fighting in sewers can be difficult because of the danger of electrical and methane gas injuries, but it offers another direction from which to attack the enemy, or from which an attack can be expected. A leader should try to get the plans of any city or town where he is conducting operations. The town hall and library are good places to send a scout patrol to see what plans or designs they can find, or a reconnaissance patrol can be sent to see where the sewers are.

Small patrols should be used, and a rope or 550 cord tied around each person's waist with a snap-link that hooks to a main connecting rope. This can give the patrol quick-release when they need it, but it still keeps the patrol together during movement.

Half of the soldiers should enter the sewer wearing protective masks and the other half wearing night observation devices. The leader should have his AN/PAS-7 hand-held thermal viewer or AN/TAS-5 Dragon thermal sight on and ear plugs in. With half of the patrol masked already, the threat of the entire patrol succumbing to methane gas poisoning is greatly reduced, and the half wearing night observation devices can give the patrol greater initial fighting ability.

In an enclosed area such as a sewer, the shot of a pistol could blow out a soldier's eardrums and render him unconscious, even if the round doesn't hit him. He may want to have ear plugs in, but not so deeply that he can't communicate, and if contact is made, he can push them in deeper for added protection.

As a room is cleared and secured, troops must be left back to make sure the enemy does not reoccupy it. (As these troops come forward later they can bring ammunition or medical supplies.)

Although MOUT training can be rewarding, the challenges of a MOUT environment are unique and frustrating. MOUT warfare requires that soldiers have skills in city fighting; the fighting is often close in, and the first mistake can be the last.

Almost all infantry posts have MOUT training areas, and commanders should get out and use them. In this way, we can ensure that our soldiers can close with and decisively defeat an enemy, even in an urban environment.

Captain John S. Zachau is assigned to the 177th Armor Brigade at Fort Irwin. He previously served as a light infantry platoon leader, an antitank platoon leader, and a company executive officer in the 2d Battalion, 27th Infantry. He participated in Operation JUST CAUSE and in Operation DESERT STORM.

OFFICERS CAREER NOTES



ADVANCED CIVIL SCHOOLING (ACS)

Each year, Infantry Branch at PERSCOM recommends officers for advanced civil schooling. Staff and faculty positions at the United States Military Academy account for a large portion of the Army's requirements for officers with advanced degrees. Functional area positions account for the rest.

Officers who want this schooling must complete the Graduate Record Examination (GRE)—or the Graduate Management Admissions Test (GMAT) for master's of business administration programs—within five years of submitting their applications.

Application packets for advanced civil schooling must contain a completed DA Form 1618-R (found in AR 621-1), a copy of undergraduate transcripts, and copies of GRE or GMAT scores. Applicants must send this correspondence to Infantry Branch by October of the year before they want to begin graduate school.

BRANCH TRANSFERS

Regular Army officers may request to transfer to another branch after completing three years of active federal commissioned service. Other-than-regular-Army officers may submit their requests after receiving Voluntary Indefinite status.

Infantry officers may transfer to any understrength or balanced branch, provided they meet the requirements of the gaining branch and have an aptitude and overall manner of performance acceptable to the gaining branch.

To initiate this action, an officer must submit a DA Form 4187 through his chain of command, stating the requested change and justification.

The following branches are currently understrength: Quartermaster, Ordnance, Signal, Military Intelligence, and Transportation. (Chapter 4, AR 614-100 contains further details.)

E-MAIL AND PROFS

Assignment officers at Infantry Branch can be contacted by E-Mail or PROFS. The advantages of using this system are that an officer's message gets through the first time, and he gets a "hard copy" record of the requested information. It is also beneficial to officers overseas who have difficulty reaching their assignment officers because of time differences.

To protect confidentiality, Infantry Branch will transmit information on an officer's file assessment or manner of

performance only to his personal user identification (USERID).

The USERIDs of assignment officers are shown in the accompanying table.

COMBINED ARMS AND SERVICES STAFF SCHOOL

The curriculum for the Combined Arms and Services Staff School (CAS³) consists of two phases. Phase 1 is a 140-hour correspondence course, and Phase 2 is the nine-week resident portion conducted at Fort Leavenworth, Kansas. Officers must complete Phase 1 before attending Phase 2.

Additionally, all officers in Year Groups 1979 and later must complete Phase 2 before attending or enrolling in a MEL 4 resident or non-resident course. From a career management per-

INFANTRY BRANCH E-MAIL AND PROFS USERID		
POSITION	NAME	USERID
Branch Chief	LTC John Arnold	ARNOLDJ
Branch XO	MAJ Bob Crain	CRAINB
Assignment Columnist	MAJ Mike Cunningham	SCAPARRC
Major Assignments	LTC John Duggott	BAKSCHEJ
Captain Assignments	MAJ John Anderson	KINDERSJ
Company Assignments	CPT Robert Johnson	JOHNSR
Company Assignments	CPT William Shorter	SHORTERW
Company Assignments	CPT Brock Thomas	THOMASB
Company Assignments	CPT Wayne Sulzby	SULZBYW
Personnel Assignments	CPT Dave Domingo	DOMINGOD
E-Mail Address: infantrybranch@army.mil		
PROFS Address: infantrybranch@army.mil		
If such services are available, see PROFS		

OFFICERS CAREER NOTES

spective, the ideal time for an officer to attend Phase 2 is while serving on a staff before assuming command.

Over the past several years, Infantrymen have tended to lag behind their peers in other branches in regard to CAS³ attendance rates. As a result, the writing, speaking, and thinking skills derived from the CAS³ experience boost the effectiveness of officers later, rather than in their company-grade years.

It is the Chief of Infantry's intent to close the CAS³ gap by early management of non-CAS³-qualified Infantry officers in Year Groups 1982, 1983, 1984, and 1985, in order of priority. Actions are under way in the command channel to identify and fix this Infantry-wide shortfall.

Infantry Branch strongly encourages officers awaiting Phase II to take an active part in seeking quotas to attend from their local commands.

FELLOWSHIPS, SCHOLARSHIPS, AND GRANTS

A number of special programs are available to qualified Infantry officers annually. These prestigious programs include the following:

White House Fellowships. Open to branch-qualified officers. Completed applications are due not later than 15 December 1992. This one-year tour begins in September.

Congressional Fellowships. Open to majors or lieutenant colonels with military education level (MEL) 4 credit and less than 19 years of service. Applications due not later than 25 January 1993. One-year tour begins in August.

Olmstead Scholarship. Open to

branch-qualified captains with three to nine years of service. Applications due 28 January 1993. Three-year program involves language training and study at a foreign university.

For application procedures, see AR 621-7, Acceptance of Fellowships, Scholarships, and Grants. In general, an officer must obtain written Infantry Branch permission to compete, then initiate his request using DA Form 1618-R (found in AR 621-1). Assignment officers can provide further details.

VSI/SSB PROGRAM, FY 1993

The Infantry Branch team at PERSCOM will focus a top-priority effort in the coming months on supporting RIF-eligible officers in making difficult decisions on the voluntary separation incentive/special separation benefits (VSI/SSB) program.

The intent of VSI/SSB remains unchanged for FY 1993: Minimize involuntary separations; that is, generate enough volunteers to offset the required reduction (700 majors and 1,400 captains).

In support of this intent, we strongly recommend that RIF-eligible officers put their best effort into preparing for and executing a fully informed choice regarding the VSI/SSB. Infantry Branch stands ready and willing to assist in this decision process in any way possible.

Specifically, we suggest each of these officers take the following actions:

- Order a current copy of ORB and microfiche from PERSCOM, ATTN: TAPC-MSR-S, 200 Stovall Street, Alexandria, VA 22332.

- Read the MILPER message regarding voluntary incentive programs, which is available at local military per-

sonnel offices or personnel service centers.

- Ask for a file evaluation from his chain of command, mentors, or branch assignment officer. Focus on identifying where he stands in relation to others in his peer group.

- Decide and act not later than 25 January 1993, the probable closing date of the VSI/SSB window.

If the advice and self-assessment tell an officer he is at risk in the event a RIF is necessary, he should seriously consider the VSI/SSB options available.

We strongly encourage each officer in the RIF zones to call his assignment officer at PERSCOM for advice. Leaving a message a day in advance will give an assignment officer a chance to do his homework before the final counseling call.

Each officer can expect his assignment officer to do the following:

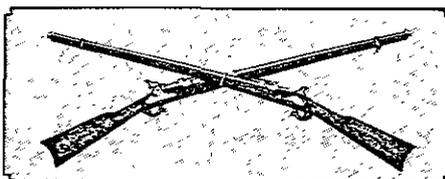
- Provide an overall assessment of the strength of his file in relation to those of other Infantry officers in the same year group. Specifically, this judgment will be made in the general terms of "above center of mass," "center of mass," and "below center of mass."

- Discuss officer evaluation reports (OERs), with the focus on command reports.

- Identify possible negative discriminators in height/weight, photo, OERs, academic evaluation reports, assignment history, and the like.

- Describe the degree of risk in the event of RIF consideration in the general terms of "greater than," "equal to," or "less than" 50-50 chance of selection.

Finally, while an assignment officer cannot predict the outcome of any board or know with certainty how any given officer will fare, he will provide the best possible information to help each officer make an informed choice regarding VSI/SSB.



BOOK REVIEWS



JEFFERSON DAVIS: THE MAN AND HIS HOUR. By William C. Davis. Harper Collins Publishers, 1991. 784 Pages. \$35.00. Reviewed by Lieutenant Colonel Cole C. Kingseed, United States Army.

Even 125 years after the U.S. Civil War, Jefferson Davis remains a highly controversial figure. This latest work by William C. Davis is a complete and balanced biography of the enigmatic President of the Confederacy. It is based on primary sources, including Jefferson Davis's private papers and the diaries and memoirs of his close associates.

The man who emerges from these pages is a chief executive and wartime leader beset by insecurity and characterized by unswerving loyalty. This loyalty made him the truest friend a man could have, but it also caused him to misplace his confidence in generals who failed to produce victories on the battlefield. In that light, Davis must share a large part of the responsibility for the Confederate debacle in the west, where political generals and military incompetents experienced a series of defeats. On the positive side, Davis prolonged the successful resistance in the eastern theater by his unyielding support of Robert E. Lee.

The author feels that, in the final analysis, Davis's credits outweigh his debits. He created the administrative infrastructure of the Confederate government; he also prolonged the life of his nation beyond what any likely competitor could have expected to achieve. But his overall performance as a wartime leader must be judged woefully inadequate. This inadequacy was due as much to his inability to take decisive action when the situation warranted it as it was to the nature of the government that reserved so much power to the states.

This book presents interesting insights into civil-military relations in a wartime democracy. Officers and historians alike will enjoy this examination of Davis and his place in history. In short, William Davis has made another valuable contribution to the historiography of this nation's bloodiest conflict.

NONE DIED IN VAIN: THE SAGA OF THE AMERICAN CIVIL WAR. By Robert Leckie. HarperCollins, 1990. 682 Pages. \$29.95. Reviewed by Major Don Rightmyer, United States Air Force.

The release of this Civil War history is timely with the release of *Battle Cry of Freedom*, the best-selling history by James McPherson, in the same year. McPherson's volume is an outstanding history and is obviously well received by the reading public, but it is much more scholarly in tone and weighty in its documentation and bibliography. *None Died in Vain*, on the other hand, is an easy-to-read, popular history that provides an in-depth look at the war and its participants.

Leckie uses the book's 67 separate chapters to break down the war by the individual battles and the major political and military leaders on both sides. He opens with a few chapters discussing the political, economic, and slavery questions that led to the outbreak of the war. He then moves chronologically through the events from 1861 to the war's end in 1865. Nicely interwoven with these are chapters that provide more background and understanding of such men as Lincoln, Davis, Grant, Jackson, Lee, Meade, Hooker, Johnston, and the like.

Readers who are familiar with Leckie's previous books will not be disappointed with this effort. As a general history of the Civil War, it will appeal to many general readers interested in a comprehensive survey of the entire war and those who led it. Although the book is not documented, it does have a good index and a sizeable selected bibliography of suggested readings. It also provides several maps, but they are somewhat general in their detail.

The book will not be enough for someone who is looking for small battle details; even a book of this size could not provide that degree of information on the entire war. But, overall, it is a good book for its intended purpose.

GENERAL MAXWELL TAYLOR: THE SWORD AND THE PEN. By John M. Taylor. Doubleday, 1989. 457 Pages.

\$22.50. Reviewed by Captain Rick Ugino, New York Army National Guard.

General Maxwell Taylor had one of the most distinguished Army careers of this century. He was a talented, inner-directed general who carried order and discipline to new heights, both in his career and in his personal life. Comfortable in both roles, and having a brilliant mind—coupled with cold ambition—Taylor rose to prominence and served in almost every prestigious post the Army could offer before his first military retirement.

His son and biographer chronicles this part of the story in detail. It is a good tale of what hard work and determination, along with ability, did for one soldier. But there the book ends; it gives the reader no real "feeling" about the general and no reminiscences by his contemporaries that might have added this dimension.

A reader of this book will think of descriptions rendered by Pulitzer prize-winner David Halberstam in his landmark work, *The Best and the Brightest*, published in the early 1970s. He wrote that Taylor was "cool, handsome, very correct, almost curt, . . . always in control, all business, all ambition, . . . cold as ice, . . . a loner in an Army where he was seen as aloof and self-centered." Halberstam goes on to say, "In spite of this, he was respected by his peers but more importantly, liked and respected by high-level civilians. . . here was a general they could deal with. . . a 'political general' in the classic sense, like Eisenhower and Marshall."

This book is a fine chronicle of a general's life and a tribute to his son's respect for him. But readers who are interested in a view of the whole person, as seen by those who worked with and around him at the height of his career, are better off reading the earlier Halberstam treatment.

THE AGE OF BATTLES: THE QUEST FOR DECISIVE WARFARE FROM BREITENFELD TO WATERLOO. By Russell F. Weigley. Indiana University Press, 1991. 579 Pages. \$35.00. Reviewed by Colonel John C.

Spence III, United States Army Reserve.

This book, as the title states, covers the period between Gustavus Adolphus's victory at Breitenfeld and Napoleon's defeat at Waterloo. During this period of nearly 200 years, significant, if not immense, changes occurred both in the form of warfare and in the organization of military forces.

Russell Weigley, a Professor of History at Temple University, has written a well-documented and analytical book. The book's central theme is that the massive battle in this period failed to yield a decisive result. Weigley views war, in its total context, as a history "of almost unbroken futility."

Other themes in the book are also worth noting: Three of these are the rise of the military profession, encompassing a systematic program of officer education; the development of the concepts of command and control on the battlefield; and the means of achieving tactical decisiveness in battle. A fourth theme that recurs in the book is how, through custom and agreement, limitations were placed upon warfare. Specifically, in this period, the principle of noncombatant immunity developed. From time to time, Weigley points out, this principle was both observed and breached.

Finally, in his survey of the development of weaponry, Weigley presents a non-theme: There was no pronounced change in military technology; in fact, technology remained relatively stable.

One important point Weigley makes is that a nation's military power can be examined independently of its economic, political, and social structure. For example, Sweden, which was economically poor by 17th century standards, was a formidable military power. The same could be said of Iraq in the recent war in the Persian Gulf. Although Iraq had little to qualify it as an economic superpower, it did wield military power for a time, to the detriment of Kuwait.

This is an impressive book. Its principal value lies in its incisive analysis of issues that still confront military professionals.

PERSPECTIVES ON WORLDWIDE THREATS AND IMPLICATIONS FOR U.S. FORCES. General Accounting Office Report, 1992. GAO/NSIAD-92-104. 57 Pages. Free on Request.

PAPERS PREPARED FOR GAO CONFERENCE ON WORLDWIDE THREATS. General Accounting Office Report, 1992. GAO/NSIAD-92-104S. 151 Pages. Free on Request. Reviewed by

Major Michael R. Jacobson, United States Army Reserve.

These two documents, prepared by the General Accounting Office (GAO) for the Chairmen of the Senate and House Committees on Armed Forces, are vital reading for officers of all services. They discuss the various threat countries and their capabilities and indicate what size U.S. force would be required to deal with possible threats. (The North Korean threat scenario is chilling.) A significant portion of the discussion is devoted to low-intensity conflict.

Single copies of these books are available from the GAO, P.O. Box 6015, Gaithersburg, MD 20877; telephone (202) 275-6241.

UNREASONABLE BEHAVIOUR. By Don McCullin (with Lewis Chester). Alfred Knopf, 1992. Reviewed by Captain M. Vernon, Canadian Army. \$23.50.

Don McCullin's work as a war photographer has taken him from Cyprus in the early 1960s to Lebanon and El Salvador 20 years later. By the time of the Falklands War, he could justifiably claim to have had "more experience of battlefields than any senior officer or soldier going down to that South Atlantic war." The somber photographs reprinted in this book are excellent images of war's indecencies, especially those dating from Hue and Biafra.

After his first experience under fire in Cyprus, he felt he had "a particular vision that isolated and homed in on the essence of what was happening." And he felt compelled to transmit this vision through his photos, which he wanted to have "the impact of ritual or religious imagery."

During the 1968 battle for Hue, he attached himself to a Marine company for two weeks and left it feeling almost totally exhausted by the experience. But the resulting photos, including one of a shell-shocked "grunt" claspng the barrel of his M16 and gazing into the deep distance, are classics of the genre.

The narrative of *Unreasonable Behaviour* moves along at a brisk clip reminiscent of Michael Herr's *Dispatches*. McCullin is unabashedly proud of his achievements, and no doubt Lewis Chester deserves some credit for tempering his emotions and prose. The book provides illuminating flashes of personal insight into virtually every "dirty little war" since the early 1960s, as well as into McCullin's own recent domestic troubles.

McCullin never got to the Falklands, partly, he believes, due to a deliberate campaign

by the British Ministry of Defence to keep professionals with combat experience at bay (with the exception of Max Hastings). This sort of treatment enraged McCullin, who, after nearly two decades of risking his life to photograph foreign wars, felt he was entitled to document the British experience. But any consideration of his exclusion also has to take into account his own stormy relationship with the staff Rupert Murdoch had appointed to run the *Sunday Times* in the early 1980s.

McCullin's misgivings about the inadequate documentation of the Falklands war are telling, in light of what has come out of Operation DESERT STORM. Not that gore should necessarily be the order of the day, but it does remind us—as a generation desensitized by television and movies—that war is the cruelest of all human activities. "Clean" photos of slightly anxious and uncomfortable soldiers do not convey this cruelty well. If we are to give war its due, we need to see more than patriotic shots of the Union Jack being raised over Port Stanley, or startlingly clear photos of Marines drinking bottled water against the backdrop of a perfect desert sunset. This is where the photographic vision of such men as Don McCullin is invaluable.

MATES AND MUCHACHOS: UNIT COHESION IN THE FALKLANDS/MALVINAS WAR. By Nora Kinzer Stewart. Brassey's (US), 1991. 192 Pages. \$20.00. Reviewed by Leroy Thompson, Manchester, Missouri.

The author of this book is a behavioral and social scientist with an interest in military subjects. As a result, parts of it read too much like a research paper, and the author's occasionally glaring errors in military terminology are annoying. Nevertheless, she makes some sound points about what makes a military unit effective and cohesive in combat and what causes declines in morale.

Many of the author's conclusions will come as no surprise to experienced officers and noncommissioned officers; they are the same basic tenets that sound military systems always try to instill in their subordinates. The Infantry School's "Follow Me" motto, for example, is based on the principle that good junior officers and NCOs lead from the front.

This same fact was proved once again in the Falklands War, where British officers in general proved better at setting the example and inspiring loyalty, for the most part, than the Argentine officers. Stewart does, how-

ever, offer some excellent examples of Argentine leadership that was effective and that inspired loyalty.

She makes other important points about the Argentines' lack of any recent experience in warfare, which gave them an unrealistic view of the problems of modern combat. The British, on the other hand, have been fighting large and small wars throughout this century and are therefore quite aware of logistic and other problems. The effectiveness of the British regimental system in instilling unit pride was also borne out by Stewart's study. Other factors that affect cohesion and loyalty—such as patriotism, societal views of the war, bonding between buddies in combat—are also covered effectively.

Although I recommend this work, I suggest the reader skip the chapters that cover the way the research was carried out (they seem to be rather lengthy discussions of the type that only hard-core academics find interesting) and move directly into the portions that deal with combat effectiveness. These parts offer some useful insights into combat leadership and leadership in general.

THE PHOENIX PROGRAM. By Douglas Valentine. William Morrow, 1990. 479 Pages. \$22.95. Reviewed by Dr. Joe P. Dunn, Converse College.

This polemic compares quite unfavorably to two other books also released in 1990. One of these is Orrin DeForest's *Slow Burn: The Rise and Bitter Fall of American Intelligence in Vietnam*, an account by one of the most successful Phoenix managers. The other is Dale Andrade's *From Ashes to Ashes: The Phoenix Program and the Vietnam War*, a first-rate academic study that addresses and gives a quite different answer to the question Valentine proposes: Was Phoenix a legitimate instrument of counterinsurgency or an assassination machine?

Valentine, a freelance writer, set out to demonstrate that Phoenix was an evil atrocity, little more than an instrument for indiscriminate torture, assassination, and other foul deeds. His thin research makes his conclusions hardly surprising and most problematic. (His research consists of the master's thesis and doctoral dissertation of a former agent, interviews with other disaffected Phoenix personnel, Stanley Kamow's *Vietnam: A History*, and citations from such stellar sources as *Playboy*, *Penthouse*, *True*, *Liberation*, *Commonweal*, and *The Progressive*.)

Unquestionably, Phoenix (and all the pre-

and post-clandestine activities that the author lumps together as Phoenix-type activities) engaged in unsavory and wrongful acts. But Valentine's paranoid fantasies and sweeping, unsubstantiated accusations undermine his credibility and call into question everything he relates in his encyclopedia of evil activities.

The book is not totally without value; but it should be approached with skepticism and caution. It is best read in comparison to the other two books noted.

LAWRENCE OF ARABIA: THE AUTHORIZED BIOGRAPHY OF T.E. LAWRENCE. By Jeremy Wilson. Atheneum, 1990. 1,188 Pages. \$35.00. Reviewed by Major Harold E. Rough, Jr., United States Army.

The reputation of T.E. Lawrence—"Lawrence of Arabia"—has grown to mythical and legendary proportions since his controversial death in 1935. Numerous articles and books and an award-winning film about him have further obscured his life story, and it has become increasingly difficult to separate fact from fiction.

Historian Jeremy Wilson spent close to 15 years diligently researching and systematically investigating Lawrence's personal papers, diaries, correspondence, and publications, along with numerous official military and government documents that were not released to the public until 1968. The result is this biography, which successfully peels away the layers of mythology that have accumulated over the decades.

Lawrence's life is recounted in intricate detail, much of it coming from his own correspondence and diary entries. His participation in archaeological expeditions in the Middle East from 1910 to 1914, during which his interest in the Arab peoples and cultures was kindled, is fascinating and also essential to anyone attempting to understand his role in the "Arab Revolt" of World War I. Of similar interest is Wilson's recounting of Lawrence's attempt to achieve anonymity by serving as an enlisted man in the Royal Air Force and, later, the Royal Tank Corps, in the 1920s.

The text is illuminated by more than 60 photographs and sketches of Lawrence and others who played prominent roles in his life. Seven maps permit a reader to follow Lawrence's exploits in the Middle East before and during the Great War.

Lawrence was indeed an enigmatic figure, and Wilson has succeeded in penetrating the shroud of obscurity that has surrounded his

life. He skillfully places Lawrence's various experiences within the contemporary and proper historical, military, and political contexts. In many cases, however, he refrains from critical judgment in his quest to present a complete and carefully researched biography, although he is quick to contradict accounts that are critical of Lawrence, especially those pertaining to his alleged homosexuality.

This monumental biography—934 pages of text and 214 pages of appendixes and endnotes—exhaustively recounts all facets of Lawrence's varied life. It will prove to be the definitive account of this controversial figure and will be indispensable to all those interested in "Lawrence of Arabia."

A CONCISE HISTORY OF THE MIDDLE EAST. By Arthur Goldschmidt, Jr. Westview Press, 1991. \$24.95, Softbound.

THE MAKING OF THE MODERN NEAR EAST 1792-1923. By M. E. Yapp. Longman's, 1987. \$21.95, Softbound.

THE NEAR EAST SINCE THE FIRST WORLD WAR. By M.E. Yapp. Longman's, 1991. \$24.95, Softbound. Reviewed by Captain David B. Des Roches, United States Army.

Few modern conflicts are as laden with the burden of history as those in the Middle East. Positions in the Arab-Israeli confrontation are commonly justified in Biblical arguments; the radical Islamic confrontation with the West is seen as a continuation of the Crusades; and supporters of the Iraqi invasion of Kuwait justified Iraq's position by pointing to the boundaries of the long-defunct Ottoman Empire.

Soldiers who seek to understand the often convoluted history of this vital region could do much worse than to turn to Goldschmidt's work. Written as a beginning textbook, it has an accessible format and a breezy, occasionally lurid, style that sometimes detracts from the narrative. Goldschmidt makes a conscious effort to steer clear of any bias in a highly partisan area, and he delivers what he promises: a terse chronology of the basic themes and events in the Middle East up to the expulsion of the Iraqis from Kuwait.

Professor Yapp's two works cover this same ground but from the period 1792 until the present. Yapp's studies are not as easy to pick up in the middle of a chapter, but a reader will find them more detailed and better written. They also provide a better introduction to the various themes of Middle

East history, as they explore these themes in more depth than does Goldschmidt's study.

Both studies are illustrated with maps and include bibliographic essays that refer the reader to different works on each subject raised. Again, Yapp's effort is more detailed. In addition, both works have chronologies—Goldschmidt's of events and Yapp's of rulers.

Soldiers will find both works interesting and useful introductions to the Middle East and its seemingly eternal problems.

HITLER SLEPT LATE: AND OTHER BLUNDERS THAT COST HIM THE WAR. By James P. Duffy. Praeger, 1991. 154 Pages. \$19.95. Reviewed by Lieutenant Colonel Donald C. Snedeker, United States Army.

The dust cover of this book states that the author has written three previous books and has had a life-long interest in military history. Unfortunately, no further information is provided to establish his qualifications for writing the book.

He begins with the premise that popular opinion in the United States perceives Adolf Hitler as a military genius and that it was only the overwhelming superiority of American men and materiel that led to his defeat. While this premise may be popular in some quarters, it certainly does not reflect the opinion of most who have read even the most basic history of World War II.

It almost seems as if the author is trying to take advantage of the popularity of "revisionist history." The author, by creating the impression that "most" people think Hitler was a military genius and then proving he was not, he can claim to have revealed the "truth" on these pages.

These "truths"—that Hitler personally caused a number of irreversible German defeats—are supposedly revealed here for the first time. They include Hitler's miscalculations over attacking Poland, and then on to the sands of Dunkirk, the failure to invade England, indecision and then blind stubbornness over Moscow and Stalingrad, holding back the tanks in Normandy while he "slept late," up to the final debacle in Berlin.

These are, in fact, truths, but they certainly are not revealed here for the first time—nor are the author's analysis and conclusions significantly original. Many of the facts were already known during the war. Most were thoroughly discussed and analyzed in Sir Basil Henry Liddell Hart's *The Other Side of the Hill*, published in 1951. And informed readers became aware of these

truths, at the absolute latest, after reading an insider's account in Field Marshal Erich von Manstein's 1958 classic, *Lost Victories*.

Thus, *Hitler Slept Late* is neither new, revealing, nor revisionist. Instead, it panders to those who know nothing about serious history of World War II. The book tries to sell itself on the basis of outrageous claims and flashy slogans.

For the serious military historian, there is nothing worth reading here. Even for the first-time World War II history reader, there are far better places to start.

RECENT AND RECOMMENDED

17th AIRBORNE: THE BULGE TO THE RHINE. Video Tape. VHS, 48 Minutes. Kenwood Productions, 1990. \$24.95.

JOINT WARFARE OF THE U.S. ARMED FORCES. Chairman, Joint Chiefs of Staff. National Defense University Press, 1991. Available from Superintendent of Documents, U.S. Government Printing Office (ISBN 0-16-035987-2).

OPERATIONS DESERT SHIELD AND DESERT STORM: THE LOGISTICS PERSPECTIVE. A Special Report. AUSA Institute of Land Warfare, September 1991. 30 Pages, Softbound.

THE TIGER TANKS. By Peter Gudgin. Sterling Publishing Co., Inc., 1991. 160 Pages. \$29.95.

MEANS OF ESCAPE: A MEMOIR. By Philip Caputo. HarperCollins, 1991. 400 Pages. \$25.00.

JAPAN'S BATTLE OF OKINAWA, April-June 1945. By Thomas M. Huber. Leavenworth Papers No. 18, Combat Studies Institute, 1990. 160 pages. \$6.00, Softbound.

THE HORSE SOLDIER 1776-1943: THE UNITED STATES CAVALRYMAN: HIS UNIFORMS, ARMS, ACCOUTREMENTS, AND EQUIPMENTS. VOLUME I, THE REVOLUTION, THE WAR OF 1812, THE EARLY FRONTIER, 1776-1850. By Randy Steffen. University of Oklahoma Press, 1991. 216 Pages. \$35.00, Softbound. (First published in hardcover in 1977.)

INTERNATIONAL HANDBOOK ON CHEMICAL WEAPONS PROLIFERATION. By Gordon M. Burck and Charles C. Flowerree. Greenwood Press Inc., 1991. 688 Pages. \$95.00.

THE CHANGING FACE OF THE WORLD'S NAVIES, 1945 TO THE PRESENT. By Bruce L. Watson. Brassey's (US), Inc., 1991. 281 Pages. \$30.00.

GO TO IT! THE ILLUSTRATED HISTORY OF THE 6TH (BRITISH) AIRBORNE DIVISION. By Peter Harclerode. Bloomsbury, 1991. (Distributed by Trafalgar Square, North Pomfret, VT 05053.) 192 Pages. \$45.00.

U.S. MARINES IN VIETNAM: THE BITTER END, 1973-75. By Major George R. Dunham and Colonel David A. Quinlan. History and Museums Division, U.S. Marine Corps, 1990. Superintendent of Documents Order No. 008-055-00178-1. 315 Pages. \$25.00.

MILITARY FORCE AS AN INSTRUMENT OF U.S. FOREIGN POLICY: INTERVENTION IN LEBANON, AUGUST 1982-

February 1984. By Ralph A. Hallenbeck. Praeger Publishers, 1991. 248 Pages. \$47.95.

THE HISTORICAL TIMES ILLUSTRATED ENCYCLOPEDIA OF THE CIVIL WAR. Edited by Patricia L. Faust. First Published in Hardcover in 1986. HarperPerennial, 1991. 850 Pages. \$20.00 Paperback.

PELELIU: TRAGIC TRIUMPH. By Bill D. Ross. Random House, 1991. 381 Pages. \$22.00.

CANADA AND THE UNITED STATES IN THE 1990s: AN EMERGING PARTNERSHIP. By William C. Winegard, et al. Brassey's (US), Inc., 1991. 88 Pages. \$9.95, Softcover.

THE MIDDLE EAST MILITARY BALANCE, 1989-1990. By Joseph Alpher, Zeev Eytan, and Dov Tamari. Westview Press, 1991. 454 Pages. \$74.50.

NEWSMEN & NATIONAL DEFENSE: IS CONFLICT INEVITABLE? Edited by Lloyd J. Matthews. Brassey's (US), Inc., 1991. 146 Pages. \$11.95, Softcover.

UNDER TWO FLAGS: THE AMERICAN NAVY IN THE CIVIL WAR. By William M. Fowler, Jr. Avon Books, 1991. 352 Pages. \$10.95, Softbound. (First published in hardcover in 1990.)

MOTHER, MAY YOU NEVER SEE THE SIGHTS I HAVE SEEN: THE FIFTY-SEVENTH MASSACHUSETTS VETERAN VOLUNTEERS IN THE LAST YEAR OF THE CIVIL WAR. By Warren Wilkinson. William Morrow, 1991. 665 Pages. \$15.00, Softbound. (First published in hardcover in 1990.)

THE SOVIET UNION AFTER PERESTROIKA: CHANGE AND CONTINUITY. By Paul Holman, et al. Brassey's (US), Inc., 1991. 110 Pages. \$9.95.

ARMY RESERVE FORCES: APPLYING FEATURES OF OTHER COUNTRIES' RESERVES COULD PROVIDE BENEFITS. United States General Accounting Office Report to the Chairman, Subcommittee on Military Personnel and Compensation, Committee on Armed Services, House of Representatives, August 1991. GAO/NSIAD-91-239. 49 Pages, Softbound. (The first five copies of each GAO report are free. Additional copies are \$2.00 each. Orders to U.S. GAO, P.O. Box 6015, Gaithersburg, MD 20877, or commercial (202) 275-6241.)

GONE FOR A SOLDIER: THE CIVIL WAR MEMOIRS OF PRIVATE ALFRED BELLARD. By Alfred Bellard. Little, Brown and Company, 1991. 328 Pages. \$19.95, Softbound. (First published in hardcover in 1975.)

WEAPONS OF MASS DESTRUCTION IN THE MIDDLE EAST. By Anthony H. Cordesman. A Royal United Services Institute Study. Brassey's (UK), 1991. 224 Pages. \$44.95.

JAPAN AND THE UNITED STATES: TROUBLED PARTNERS IN A CHANGING WORLD. By Mike Mochizuki, et al. Brassey's (US), Inc., 1991. 137 Pages. \$9.95, Softcover.

BEYOND GUNS AND BUTTER: RECAPTURING AMERICA'S ECONOMIC MOMENTUM AFTER A MILITARY DECADE. By Glenn R. Pascall and Robert D. Lamson. Brassey's (US), Inc., 1991. 169 Pages. \$23.95.

VIETNAM, 1969-1970: A COMPANY COMMANDER'S JOURNAL. By Michael Lee Lanning. An Ivy Book. Ballantine Books, 1988. 312 Pages. \$3.95, Softbound.

From the Editor

ON DIVERSITY

Ours is a diverse branch. From the light infantry that made up the Continental Army, we have evolved into mechanized, airborne, air assault, Ranger, and light forces. Although the types of infantry may differ in the way the soldiers travel into combat, in their relative firepower, and in the size and composition of their units, their mission is still to close with and destroy the enemy. None of the separate forms of infantry can be expected to deal with the whole spectrum of threats in today's world by itself; the diverse nature of our infantry is therefore a great strength, because it allows us the flexibility to respond to varied contingencies while having commonality among a good number of our weapon, command and control, and logistical systems.

We are trying to maintain a similar diversity in the subject matter that appears in *INFANTRY*, and I need your help to do this. This issue is weighted toward the mechanized force, because this is a time of considerable change for that field. In past issues, we have highlighted light forces and have included articles on Ranger training and airborne units. It is equally important to offer articles of interest to the infantry as a whole—such as land navigation, leadership, professional development, administration, and logistics—and we have done so. In this way we hope to maintain the interest of our readers in each and every issue of *INFANTRY*.

But who writes all of these great articles? The answer is simple: You do! A quick glance at the biographic note for each of our authors will show that few of them are staff writers at the Infantry School, and that still fewer are professional writers. (That's fortunate, since we do not pay for published articles.)

If you have been reading *INFANTRY* and feel that your own area has not received its share of attention, you can do something about it. Our branch is strengthened by the discussion and sharing of experience gained by infantrymen around the world. An example: Very little has been written about the MOU operations our forces conducted during Operations JUST CAUSE and URGENT FURY, yet events in the Balkans are revealing an environment in which urban operations comprise a significant part of the action. Our readers have contributed some terrific items to our Swap Shop and Training Notes sections as well.

Don't worry about length. If your material is relevant and has value, we'll work with you to get it out to the field. Do we publish everything we get? Of course not. But if you are interested, drop us a line and I'll send you a copy of our writers guide to outline our standards.

The only way *INFANTRY* can maintain its appeal to an audience as diverse as our branch is to continue to offer articles on a broad range of subjects. You have the expertise and the experience, and we have a magazine with world-wide distribution. Let's get together.

RAE

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