Infantry

JULY–AUGUST 1988

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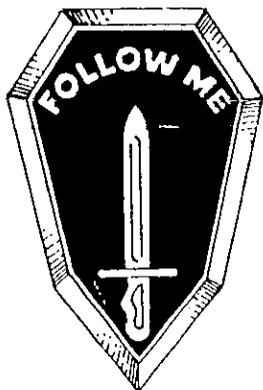
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Commandant's NOTE

MAJOR GENERAL KENNETH C. LEUER   Chief of Infantry

RECONNAISSANCE AND SECURITY

Effective reconnaissance and security are prerequisites to success in battle. Meeting the challenge of training infantrymen to the standards necessary to accomplish these critical tasks is a continuing priority at the Infantry School. My intent here is not to present final solutions but to discuss our current efforts to overcome these deficiencies at organizational levels from squad to battalion.

First, some definitions are in order. The following are the definitions of terms found in our present doctrinal literature:

Reconnaissance. Missions undertaken to obtain information by visual observation or other detection methods about the activities and resources of an enemy, or potential enemy, or the geographical characteristics of a particular area.

Security Operations. Operations designed to obtain information about the enemy and to provide reaction time, maneuver space, and protection to the main body.

Guard Force. The force that prevents enemy ground observation of and direct fire against the main body. It reconnoiters, attacks, defends, and delays as necessary to accomplish its mission.

Screening Force. The force that maintains surveillance, provides early warning to the main body, impedes and harasses the enemy with supporting indirect fires, and destroys enemy reconnaissance elements within its capability.

Lessons from our combat training centers have shown the strong correlation between successful reconnaissance and security and overall tactical success. This correlation is hardly surprising, for surprise and security have been proven historically and are included as principles of war by all armies.

Because of the importance of reconnaissance and security operations, commanders must avoid assigning more missions and tasks to their scout elements than the scouts have the resources to accomplish; these include such tasks as marking routes, screening, continuous observation of objectives, and the like. Commanders must either augment their scout elements or assign some reconnaissance and security operations to their maneuver or line elements. Many units at the combat training centers tend to try to handle reconnaissance tasks with their scout platoons and security tasks with platoon-sized units. The leaders of those units have learned that this is not sufficient, because the requirements are simply too large and too important. In actuality, analyses of units that provided adequate security and responsive intelligence show that at a given time during a battle one-third or more of the maneuver elements in a battalion were involved in some form of reconnaissance and security tasks either for themselves or for other units in the battalion.

What then are the capabilities and the limitations of TOE reconnaissance units that routinely require us to provide additional resources to them?

In a heavy battalion, the scout platoon consists of six M3 Bradleys (or three M113s and three improved TOW vehicles) and 30 soldiers. This scout platoon is capable of performing reconnaissance and limited security (screen) missions mounted or dismounted in various terrain conditions and under all weather and visibility conditions, day and night. As "the eyes and ears" of the unit commander, the platoon has the function of providing intelligence, not of initiating direct fire engagements with the enemy.

In addition to its primary missions, the scout platoon can conduct liaison; perform quartering party duties; provide traffic control; conduct chemical detection and radiological survey and monitoring operations as part of nuclear, biological, and chemical (NBC) defense; conduct limited pioneer and demolition work; and participate in area security. Once again, however, the challenge is to avoid overtaxing the platoon to the point where its primary mission is jeopardized while it performs these other, secondary functions.

The heavy scout platoon also has some limitations. First, it depends upon its parent unit for combat support (CS) and combat service support (CSS) to augment and sustain its combat operations. In addition, the platoon can normally reconnoiter only one route during a route reconnaissance and cover a zone no more than three to five kilometers wide during most missions. (Terrain conditions may increase or decrease the zone.)

During screening operations, the platoon is limited in its ability to destroy or repel enemy reconnaissance units. During counterreconnaissance operations, the platoon can certainly acquire and maintain contact with the enemy, but it must be augmented with infantry or armor or both to have enough combat power to kill the enemy's reconnaissance elements.

Another limitation is that the platoon can provide only six observation posts (OPs) for limited periods of time (under 12 hours) or three OPs for extended periods (over 12 hours).

The distance the scouts can operate from the main body is restricted to the range of communications and the elements needed to support their mission. Heavy battalion scout platoons cannot operate continuously on all necessary battalion nets (command, intelligence, logistics, mortar) while operating on the platoon net. And the platoon leader can monitor only two nets at one time.

In a light battalion, the scout platoon consists of 19 soldiers. Because it has no organic transportation, it is either footmobile or dependent on transportation provided by its parent battalion. It normally operates two to eight kilometers from the battalion, and its primary mission is to gather intelligence and perform only limited security. The scouts emphasize stealth, avoid enemy contact, and engage enemy forces only in self-defense.

A light, dismounted scout platoon can perform the same secon-

dary missions as the heavy scouts, although its small size and foot-mobility dictate that it concentrate on the most likely enemy avenues of approach in the defense.

It also has certain limitations—a lack of mobility to conduct all reconnaissance missions and its sparse communication assets.

Although information requirements will differ, a thorough intelligence preparation of the battlefield (IPB) and a responsive reconnaissance and surveillance plan are essential for the success of all task force missions.

In the offense, an IPB coupled with aggressive reconnaissance provides the commander with the following:

- The location of existing and reinforcing obstacles.
- The enemy's strength, composition, disposition, and orientation.
- The enemy's intent.
- Friendly and enemy avenues of approach.
- Enemy courses of action for employing his reserves and combat support elements.

At the same time, a task force must maintain *continuous* surveillance of the enemy's defensive positions and the terrain critical to the friendly scheme of maneuver while its plan is being developed, coordinated, and executed.

In the defense, the IPB orients on the enemy's need to conduct a successful attack and on the way the friendly force may use the terrain to gain an advantage. Defensive IPB and reconnaissance and surveillance planning emphasizes terrain analysis using the five OCOKA factors from both the friendly and enemy standpoints. From the friendly standpoint, it addresses key and decisive terrain needed to defeat enemy attacks, and for use as friendly counterattack routes. It also covers named areas of interest (NAIs) to determine the attacker's intent and to shorten friendly reaction time. Counterreconnaissance efforts are critical as friendly elements fight to deny the enemy scouts access and information.

In retrograde operations, effective reconnaissance and surveillance is especially vital to reduce the inherent risks in such operations. Because time is usually critical, reconnaissance elements must accurately identify routes, possible future battle positions, key terrain, and any restrictive terrain that might impede movement. Reconnaissance and surveillance must also locate the enemy so that security elements can deny him information and counter his efforts.

In the conduct of security operations, several aspects deserve to be emphasized. First, every unit routinely practices operations security (OPSEC). In addition, it always maintains security to protect itself. Finally, it performs security missions to support its parent unit.

As in reconnaissance and surveillance planning, units planning security missions use the IPB process to focus their security effort. The commander and S-3 analyze enemy force compositions, intent, and probable courses of actions in conjunction with the friendly force's course of action to develop the security plan and an organization for their own security forces. In a battalion, for example, the scouts may perform screening missions while the maneuver companies or teams perform guard missions.

In the offense, the scout platoon may screen if it is not conducting reconnaissance missions. Engineers and forward observers are attached as necessary, and the scout platoon normally has the initial priority of indirect fires. The platoon maintains contact with the enemy and reports on his activities but must avoid decisive engagement. If the screen requires a larger force, a maneuver company should perform the missions, with the scouts possibly augmenting it.

Companies with guard missions are task-organized on the basis of METT-T considerations. The key point is that a guard force must not allow the enemy to bring direct fire against the main body. In mechanized units, this means that company teams usually conduct guard missions. In lightly equipped battalions, companies with guard missions may have indirect fire priority

and TOWs.

As in offensive actions, scouts may screen when a task force adopts a defensive posture, but stronger forces are needed for more constraining security missions. Thus, all units in the force must plan to counter enemy reconnaissance elements and patrols that may attempt to slip past the forward security forces. Maneuver elements, CPs, CS, and CSS elements must establish their own local security and make maximum use of hide positions. OPs with an ambush capability should cover obstacles, gaps between units, and avenues of approach. Supporting fires should be planned around and between units and on obstacles. Available night vision devices should be positioned to ensure all-around visibility. (The S-3 coordinates these efforts with the S-2 to insure full coverage and avoid fratricide.) Subordinate maneuver elements should be specifically tasked to cover the areas between battle positions and to provide quick-reaction forces that have a tank-killing capability, as required.

It is essential that the enemy be located, that his reconnaissance elements be destroyed, and that he be kept blind. The enemy cannot bring overwhelming force against a friendly force in the defense if his reconnaissance efforts are nullified.

Security planning during retrograde operations is directed toward reducing risk. A task force commander must constitute a security force that is strong enough to secure enemy avenues of approach, deceive the enemy, defeat his intelligence, and overwatch the withdrawing units. The force must also be prepared to provide rear guard, flank security, and chokepoint security.

Because of the importance of effective reconnaissance and security operations to success on the battlefield, key reconnaissance and security tasks should be emphasized on Mission Essential Task Lists (METLs). Units can perform these critical wartime operations only if they master the collective tasks that increase the effectiveness of their own reconnaissance and security efforts, thereby keeping the commander from being surprised while giving him the flexibility to mass his combat power where it can be most effective.

For squads, platoons, and companies, reconnaissance and security collective tasks that must be trained to Mission Training Plan (MTP) standards include: Prepare for combat, maintain operations security, move tactically, employ fire support, reconnoiter zone, reconnoiter area, reconnoiter route, perform linkup, occupy OP/perform surveillance, screen, conduct point ambush, and disengage.

Battalion-level collective tasks include: Move tactically, infiltrate, guard, screen, perform operations security, conduct stay-behind operations, conduct intelligence operations, and operate fire support. Most other MTP collective tasks such as assault, overwatch/support by fire, defend, or perform antiarmor ambush have inherent reconnaissance and security subtasks that are key to task completion.

The best way to insure that a unit trains to MTP standards is to establish a training environment in which effective reconnaissance and security is rewarded by mission accomplishment and inadequate reconnaissance and security is penalized by mission failure.

Units can do this best by providing an uncompromising, aggressive, and uncooperative opposing force that executes its countertasks to standard and thereby forces the friendly unit either to use effective reconnaissance and security or to fail. Such a stubborn opposing force will demonstrate to our infantry units the value of early and continuous reconnaissance and security at all levels for all tasks.

On a nonlinear, dynamic battlefield, effective reconnaissance and security are essential to success, and the IPB process is critical to the planning of effective reconnaissance and security. To prepare for that success, a battalion must clearly define its reconnaissance and security missions and tasks, task organize its units to perform them effectively, and aggressively execute them.

INFANTRY LETTERS

FOR SAFETY'S SAKE

Captain Bryan G. Watson's article "Combat Safety" (INFANTRY, September-October 1987, page 40) is interesting, but his interpretations do not reflect the current trend in safety thought. He does not seem to have heard of tactical risk management— the current safety application that gives a commander and his staff a systematic approach to reducing or eliminating training hazards.

Under this approach, the unit safety officer identifies potential hazards during the planning phase of operations and provides the commander with ways by which identified hazards may be eliminated or reduced. The commander, not the safety officer, makes the final "GO or NO GO" decision based on these recommendations. In other words, the commander accepts the risk level for the training.

Captain Watson refers to so many "restrictive" safety measures that were enforced during an exercise. I must point out that, from my experience, many installations and posts have placed outdated and outmoded safety restrictions in their regulations and SOPs and that commanders are given little latitude in reducing unnecessary restrictions. This is not the fault of the commander of the safety officer but "cautiousness" on the part of the post or installation commanders.

I agree with Captain Watson that live fire exercises must be as tactically realistic as possible in order to get maximum training benefits for the time and resources expended. I have found, however, that many units do not properly prepare their troops for live fire environments during blank fire exercises. We do not enforce "live fire safety rules" diligently during these exercises; for example, clearing stoppages and jams in individual and crew-served weapons (troops point their weapons in any direction when clearing them during a live fire exercise the same as they do when using blanks). Therefore, commanders are safety smart to place heavier restrictions on units that have not demonstrated during blank fire exercises the safety awareness required to operate in a free play live fire exercise. During combined arms training, this unevenness in safety preparedness looms as an even more critical consideration for the overall commander.

And finally, I disagree that we need more safety SOP's in writing—Captain Watson complains that we have too many and then recommends that we develop more! What we need to do is ensure that unit safety SOPs are written completely and concisely (eliminating the "eye wash" found in many SOPs to please an inspecting officer); that safety SOP's be disseminated widely within the unit, at least down to the NCO level; and that we use the safety annex to OPORDs/OPLANs to define the commander's safety parameters for an exercise or a mission. We need *better* safety SOPs and annexes, not *more* SOPs!

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BATTLE DRESS SOP

I am glad Captain Gregory Banner commented on my battledress SOP article in the September-October 1987 issue of INFANTRY (pages 18-19). His letter (January-February 1988, pages 3-4) provided an interesting contrast of different approaches to solving the same problem—getting soldiers to wear their equipment to fit their own needs rather than someone else's perceptions or misconceptions of them.

Our opinions probably reflect different frames of reference and experience with soldiers, although it would be an oversimplification and an unfair generalization to say that elite troops are self-energizing and directing and that line soldiers are not as well motivated. Certainly the capabilities of the men, the size of the units, and the type of missions involved require differing techniques for promoting physical welfare and the ability to fight.

Captain Banner's criticism leads me to believe that I did not adequately develop my article's main point. My thesis was that most units are required to have a battledress SOP and that the commander should work hard to make sure it actually serves the needs of his men in combat conditions. If he does not, or if he leaves its development up to someone else at a higher headquarters (whose primary concern is reaching his sunglasses or cigarettes in his ammunition pouch while riding in his jeep), the unit will end up with an SOP that does not deliver its potential benefits but handicaps the soldiers instead.

We have to be careful about letting individual soldiers configure their equipment to suit themselves. Many of them don't have the experience to recognize their own self-interest or the wisdom to act upon it. They may need a little guidance from those who have learned the same lessons earlier. If the average soldier did what he knew was in his best interest, the Army would probably have, for example, 80 percent fewer accidents caused by predictable human factors.

Anyone who has been a specialist fourth class for a while only has to

keep his eyes open to see steel helmets cut with a torch into lightweight framework skeletons to support camouflage helmet covers. It is not unknown for a soldier to fill his canteen with Koolaid or M & M candies, or to cut a plastic canteen in half to hold a small camera or other items that are more important to him than water. Some soldiers have even pulled the springs and followers out of their magazines and loaded them with Hershey bars. Unless the magazines are pulled out and inspected, who can tell by looking at them upside down in an ammo pouch?

After 16 years in the mechanized infantry as an NCO and a company grade officer, I have learned to trust everyone, but to *check*. Time may have caused me to become suspicious or authoritative, but I am not embarrassed by the results. All it took was a couple of heat injuries and a few problems with feet during an ARTEP to cause me to implement company-wide enforced drinking and mandatory foot inspections in squad formations. It may have seemed theatrical, but it got the message across and eliminated those two problems for that field training exercise and future ones as well.

Another valuable benefit of a unit battledress SOP that I failed to mention is that, since everyone wears it the same way, it allows rapid common usage of another soldier's equipment. Its use may be something for the soldier himself in the case of a first aid bandage needed in a hurry, or for another soldier, getting ammunition off a casualty in the dark. Combat is not the time and place to try and figure out where a casualty liked to carry his first aid bandage, or that he had left it off altogether.

A good SOP would be self-policing because soldiers would have a legitimate interest in and reason for demanding that other small unit members carry their share of the load and take care of themselves and their equipment. An SOP is nothing more than acquired group knowledge converted into institutionalized unit practice.

Actually, a soldier rigged out the way I have described in my article, and practiced in my rifle company, will not look very soldierly at all—more like a penguin with a bustle—but he will be less likely to get hung up crawling on the ground or shot while rolling over to fumble with his ammo pouch. I took it for granted that left-handed firers would follow the common practice of reversing their gear, but that reflects the oversight of a right-handed writer.

Like most things, of course, the balance lies in the middle between anarchistic self-determination and didactic despotism. That middle ground is a participative battledress SOP designed by both the soldiers and their chain of command to fit their collective needs. The "why" should always drive the "what." If it doesn't, then something else is wrong with the unit besides its SOP.

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EXCITING CPXs

Captain Anthony R. Garrett's article "CPX Planning for A Battalion Staff" (INFANTRY, March-April 1988, pages 30-31) brought back memories of some exciting CPXs with the 11th Air Assault Division at Fort Benning in the early 1960s.

The one I learned the most on the fastest was when the control staff destroyed the brigade command post (CP) and designated our battalion commander as the new brigade commander. A curtain was hung across the middle of the GP medium tent and I became a brigade S-2. One side of the curtain held the primary battalion staff (minus the XO) as brigade staff and the other side held the XO (as the new battalion commander) with the NCOs becoming the battalion staff.

This sounds like SOP, but when you consider the further adjustments that had to be made to conduct continuous 24-hour operations, it was quite a big deal. Then there were two other battalion headquarters out there that were suddenly reporting to us and executing our generated orders.

It was excellent training. The old adage "Be prepared to assume the duties two levels above your own" was brought home.

Evidently, those of us on that temporary brigade staff did O.K., because a short two years later we were redesignated the 1st Cavalry Division (Airmobile) and we were all on brigade staffs enroute to An Khe, South Vietnam.

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TOW POSITION

I am writing in response to Captain J. Karl Clark's Swap Shop item on dismounted TOW positions (INFANTRY, March-April 1988, page 39).

It appears to me no small wonder that the TOW position pictured in the item was successful at the National Training Center, since MILES is normally the only weapon system employed against player units there. The position pictured was obviously not designed to stop bullets! Considering such things as artillery, direct fire, and weapon concussion, this TOW position could add to the casualty rate.

Since direct fire weapons are such a great threat on the battlefield, the stones used as a frontal parapet are dangerous. First, rocks don't support each other the way sandbags do, and the parapet could collapse when struck by bullets. Secondly, rocks tend to shatter and splinter when struck by high-velocity projectiles resulting in additional casualties even when soldiers are missed by the bullets. Thirdly, when rocks are used, gaps are left, as in Captain Clark's pictures, and projectiles have a way of finding gaps.

An additional factor is the instability of the U-bars being used to support the overhead cover. Even though fighting positions aren't normally designed to withstand direct artillery hits, a position with only four support

points (the legs of the U-bars)—when encountering near misses, or close air-bursts, or surviving the effects of cumulative weapon-firing concussion—can become unstable, similar to jumping on your dinner table with your guests underneath, with predictable results.

Further, and this is speculation, it appears from the photographs that the nine inches necessary for missile clearance is not present in the position. Along with this is the method of above-ground construction. The position presents a very high silhouette and is susceptible to all the ensuing dangers (such as exposed gunners or early enemy observation).

Nevertheless, the suggestion to use TOW caps is an excellent one. As Captain Clark stated, as well as in my own experience, the use of TOW caps saves soldier time, reduces work load, allows soldiers to be more rested and therefore more able to accomplish their missions. In addition, Captain Clark's use of camouflage nets is good, although I would stretch the net out a bit on the sides to blend with the terrain and break up the contour.

Building on Captain Clark's ideas, I propose a few recommendations for improvement:

First, use sandbags instead of rocks and stones. The number would vary since positions are sited on the basis of METT-T. Sandbags can also be filled in assembly areas and carried in vehicles. When emplacing a position, use the sandbags to provide frontal cover of 24 to 36 inches, allowing, of course, at least nine inches for missile fin extension. Also, use sandbags for side parapets of appropriate width and high enough to be flush with the top of the U-bars. If the U-bars are stable, the horizontal bars will easily support the weight of the TOW cap. This technique provides multiple support points, reinforces the various construction materials, and eliminates the use of those dangerous rocks.

I also recommend digging the weapon into the ground. The time will be well spent. (Rommel's *Infantry Attacks* supports this point.) Reducing the silhouette by even half a foot may make a great difference when the enemy is trying to acquire targets. Two feet would be superb.

When digging in, allow for free traverse of the weapon throughout its field of fire, and don't forget the nine inches of ground clearance, not to mention back-blast area. (From what I have been told, a general rule of thumb is to make the rear openings as large as those in front.) Don't spare the sandbags, and don't let your soldiers become casualties by being exposed. If you don't have sandbags, packed earth, earth-filled ammunition boxes (or MRE boxes), and terrain masking are possible solutions.

Above all, remember that the intent of a fighting position is to allow a soldier to continue engaging the enemy with real bullets while being fired upon by an enemy using real bullets, not laser beams.

Finally, as Captain Clark says, the key to success is using battle drill and load plans to facilitate employment. On the whole, I agree with his premise on the use of TOW caps.

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KILLING ARMOR

The article "Killing Armor in the Middle Ground," by Major Richard D. McCreight (INFANTRY, March-April 1988, pages 14-16) points out a serious deficiency that has existed for decades in the Army.

A short-term solution might be a system based on the Soviet RPG design. We could use improved propellant to allow for longer range or larger warhead, coupled with a simple optical rangefinder carried by the crew chief, assistant gunner, or ammunition bearer to give the firer a more accurate means of ranging a target. A three-man crew would allow for as many as a dozen rounds to be carried by the team, with the option of having a second launcher available as well as additional rounds carried within the platoon by other members.

Obviously, this is not the preferred weapon to use against the most modern reactive or improved armor, but it would still allow for mobility kills on the heaviest armor and the complete destruction of APCs, bunkers, and other lightly protected targets.

If the development of new propellants allowed for a seven-kilogram rocket to burn its entire motor while in the launcher tube (as with the LAW), and if launch velocity reached about 1,600 meters per second, then we might consider a two-rocket package on a modified M202A1 flame weapon launcher. The rocket would have a depleted uranium nose in front of a 100-gram charge of C-4 explosive detonated by a millisecond delay impact fuze. This gives multiple shots, the same trigger pull each time, increased range, dual-purpose rounds, and an organic but rudimentary ADA capability at the platoon level. But this is a future possibility; the RPG adaptation is available now.

For further information, check with the Israelis; they are the only Western army that issues the RPG at squad level.

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FOOT MOVEMENTS

The EIB road march is a counter-productive training standard. There. I said it and I'm glad. I realize that is a bit like being against motherhood and apple pie, but I have lived in the shadow of its destructiveness for too long. The personal load varies (sometimes with a full ruck, sometimes in guard mount LBE with entrenching tool, depending upon what year), and the purpose of the whole thing is obscure.

Someone needs to ask the big question: What is the purpose of the training standard of 12 miles in three hours or less? Do we really expect to

move units on foot this fast? Carrying all their ammunition, night vision devices, field phones, radios, wire, and all the rest? I submit that this is not a realistic option, but I am not alone in this opinion. The Canadian officer John English, in his book *On Infantry* (page 69), describes the pre-World War II training of the *Wehrmacht* (an organization not exactly known for its lax training standards):

Many German units were capable of astonishing feats in this area, and 30 miles a day for several days on end appears to have been fairly common training practice. A good rate for a longer march was considered to be an impressive four to five kilometers an hour. Equally important, however, was that more than six kilometers was considered impossible. The Germans were not afraid to admit to human limitations.

Six kilometers (3.72 miles) per hour was considered impossible, but on the EIB road march we are asking troops to move 19.31 kilometers in three hours at the most (if you come in at three hours and one minute, you are a NO GO).

Some of you are no doubt thinking, "Now, wait a minute! The EIB road march is a standard of physical toughness; a way of finding some of those who are a cut above in order to determine who gets a competitive award." This is true, in fact. And if it were clearly discerned by everyone, there would be no problem. Unfortunately, this is not the case.

For very young soldiers and leaders, the EIB is the only marching standard they know. It does not help that the training requirement for road marches is also 12 miles. "Twelve miles? Oh yeah. EIB, three hours, no sweat; pick it up, platoon sergeant."

We do well only what we practice, and too often road marching in the U.S. Army consists of hurtling your troops down a tank trail at unrealistic speeds without a thought to proper road march planning.

Nor is the simple road march the end of our problem. Many commanders will say, "Yeah, most other people don't do road marches well, but I have

breaks every hour, plan my route, make march tables, have foot checks, inspect personal loads, make provisions to evacuate and treat injured soldiers," and generally describe a textbook road march as prescribed in FM 21-18.

These are the same people who have their units cross the LD on an 18-kilometer foot movement over brutal, rocky, broken terrain to attack an enemy position and walk for six hours straight with no breaks at all!

It's enough to make you weep. Their troops are just staggering. Some of them have fallen out. Command and control has gone completely to hell. Squad leaders don't know where all their people are. The lightly loaded move toward the front. The Dragon gunners and other heavily loaded soldiers fall to the rear. The radio telephone operators struggle trying to keep up with a lightly loaded commander or platoon leader and curse the day they were born. The whole company is a *mob* of 100 men who have a slim and none chance of reacting to sudden enemy contact. When there is a halt (usually initiated by the discovery of a break in contact) troops just flop down and pant with no thought of tactical security. Junior leaders are usually as fried as their troops.

All of this comes from the one training standard for foot movement that every infantryman can quote chapter and verse—the EIB road march.

So what's to be done? As leaders we need to start educating ourselves and our subordinates on road marching. Our eyes should be on three basic factors:

• Get to where you're going on time.

• Have troops that are rested and organized enough to do something when you get there.

• Maintain reasonable tactical security while you're moving and at periodic halts.

The standards for an administrative foot movement are clearly laid out in FM 21-18, and we must ensure that all our subordinate leaders know and adhere to them— not only to preserve

troop strength and health but so that higher leaders can use standard planning factors for foot movement with a relative certainty of their being adhered to.

In addition, security measures must be planned for at all times. Even though a movement may be from one point to another behind the FLOT, this does not mean that no security measures need to be taken. In an attack situation the commander should designate places along his axis of advance for security halts. These places should offer cover and concealment and should be defensible for a short period of time. At these halts, junior leaders should count noses and check loads, and crew-served weapons and antitank systems should be placed out for security. A halt of 15 to 20 minutes will allow a unit to rest and reorganize before continuing.

It is also important in a tactical foot movement across the LD to an assault position for a commander to have the courage to say, "Can't get there from here," if his commander tries to put his dismount point too far back. Any terrain analysis must include an estimate of the difficulty of the ground to be traversed. If it is a night movement, the percentage of illumination is another key planning factor.

As for the EIB road march, either make it a 12-mile run in two hours in PT uniform or a 25-mile movement in nine hours in full combat load. The one is clearly not a road march standard; the other is a tough but realistic one.

In closing, I can only say that the U.S. Army has a great foot marching heritage. We are the descendants of Sherman's march and Stonewall Jackson's foot cavalry. That these were two great foot marching armies was due to the concern and professionalism of their leadership, not their ability to run 12 miles in three hours.

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INFANTRY NEWS

THE INFANTRY HOTLINE provides Infantry soldiers in the field with a way to communicate their problems or concerns about Infantry proponent issues. By dialing AUTOVON 835-7693 or commercial (404) 545-7693, anyone can contact the Infantry School's Directorate of Evaluation and Standardization. The Directorate acts as the School's quality assurance agency for all products and collects data from sources both inside and outside the School.

The hotline is connected with a telephone answering machine, and messages are usually responded to within two working days.

The School welcomes comments and issues on School products (courses, graduates, literature, training, and equipment) as well as deficiencies and will help a caller with doctrinal and tactical questions.

The School wants to know what it is doing right, what it can improve upon, and how it can best meet the needs of the Infantryman.

THE CMF 11 SOLDIER'S Manuals are under revision and will be fielded in January 1989. The revised manuals will be consolidated into one manual for each MOS for Skill Levels 1 through 4, as opposed to separate manuals for Skill Level 1 and Skill Levels 2 through 4.

The Trainer's Guide, formerly a separate publication, will be contained in Chapter 2 of the Soldier's Manual for each MOS.

The 11B Soldier's Manual will contain the tasks shared by all CMF 11 MOSs and will be distributed to all infantrymen. MOSs 11C, 11H, and 11M will have Soldier Training Publications (STPs) that contain only MOS-specific tasks.

The CMF 11 SQT date has been moved to June 1989 to allow Soldier's Manuals six months in the field before the test.

THE REVISED BASIC RIFLE Marksmanship (BRM) program has been implemented at all Army Training Centers throughout the Training and Doctrine Command since mid-1987. The prescriptive program standardizes the conduct of training as well as the evaluation of progressively learned marksmanship in Basic Combat Training and One Station Unit Training.

The program of instruction places more emphasis on the basic soldier skills and the shooting fundamentals early in the training and reinforces it for the rest of the time. Additional feedback firing is conducted on known distance ranges out to 300 meters.

The procedures for the conduct of individual qualification and allowable alibis have been made more stringent in order to better evaluate the many skills that make up the individual qualification standards.

All soldiers must complete nuclear, biological, and chemical training and night fire training exercises to standard as part of the overall BCT/OSUT basic rifle marksmanship program.

THE EXPERT INFANTRYMAN Badge (EIB) Test has been revised, and the effective date of the new EIB publication (DA Pamphlet 350-88-1) is 1 August 1988.

The following are the major points addressed in the revision:

• The content of the EIB test does not change all the tasks, and the events remain the same as currently found in the final approved draft, DA Circular 350-87-XX.

• All of the tasks will match established standards in the field as outlined in the Soldier's Manuals.

• An EIB board must contain at least one commissioned officer.

• The testing sequence is left to the discretion of the unit commander. The Army Physical Fitness Test and the 12-mile road march are no longer suggested as first in the testing sequence.

• Land navigation no longer requires a perfect score of six out of six but allows a soldier to miss one point.

• Soldiers should be tested by squad with the squad leader taking his troops through the test stations. Unit integrity should be maintained.

The EIB test is a training opportunity for a unit, and all soldiers should be given ample opportunity to try for an EIB. (The current pass rate throughout the Army is 14.33 percent.)

AN ERRATA SHEET for FM 23-1, Bradley Fighting Vehicle Gunnery, September 1987, has been sent to major commands and battalion S-3s. It contains clarifications and revisions of terms and procedures.

The changes are to be added to the manual in ink as an interim measure until the Change 1 packet is published. Units are encouraged to reproduce the sheet for local distribution.

Any comments or suggestions concerning the errata sheet or FM 23-1 should be directed to Commander, Bradley Instructor Detachment, ATTN: ATSH-IN-IB-BID-GPO, Fort Benning, GA 31905-5594; AUTOVON 784-7417/7250.

THE BRADLEY INSTRUCTOR Detachment at Fort Benning is asking all instructor/operator (I/O) certified

soldiers who plan to attend the Master Gunners Course to bring their certification diplomas with them.

Soldiers who are not I/O qualified are being enrolled in an I/O course during the Master Gunners Course. Those who have proof of their I/O certification can engage in more productive training instead of retraining on the U COFT.

Any questions concerning this request should be directed to Commander, Bradley Instructor Detachment, ATTN: ATSH-IN-1B-ID-MG, Fort Benning, GA 31905-5594; AUTOVON 784-6901/6433.

HAVING PROFICIENT Dragon gunners in its infantry squads is critical to a platoon's ability to defeat an armored enemy. The selection, training, and sustainment of Dragon gunners must therefore be an area of command interest.

Infantry One Station Unit Training selects, trains, and qualifies Dragon gunners and awards them Additional Skill Identifier (ASI) C2. Currently, the soldier's Dragon Scorecard (DA 5286-R) and his DA Form 2-1, coded with the ASI of C2, accompany him to his first assignment.

Personnel managers and commanders must see that mechanisms are in place that will distribute Dragon gunners to the battalions equitably.

FM 23-1, BRADLEY Fighting Vehicle Gunnery, has caused some confusion concerning the use of tactical scenarios on Bradley gunnery ranges.

The manual says, "The intermediate gunnery tables are not to be fired using wingman techniques. The intermediate gunnery tables are marksmanship and engagement technique tables. They are used to train the crews to properly acquire and engage targets through various target or firing vehicle conditions; therefore, they are not to be used under a tactical scenario." (Section III, Chapter 10, page 10-15).

This statement was not intended to

result in the generic reading of scorecard tasks, conditions, and standards as in an administrative small arms qualification range. The Infantry School continues to support scenarios that accurately portray a combat situation but that do not overwhelm the gunnery evaluation with tactical requirements associated with ARTEP-like tasks.

Combat oriented scenarios should be designated that accurately replicate Threat capabilities but do not complicate the technical requirements of running a gunnery qualification range. Scenarios should reveal only the information necessary for the proper conduct of a task—that is, type of fire command, visibility conditions, sighting system, and engagement type (offensive/defensive).

THE U.S. ARMY INFANTRY Board submitted the following items:

Bullet-Trap Rifle Grenades (BTRGs). As the Army's proponent for small arms, the Infantry School is constantly seeking ways to improve the effectiveness of small arms ammunition. Recent developments in foreign munitions have shown the possibility of increasing the firepower of riflemen through the employment of BTRGs.

These grenades are designed to be fired using service ammunition already loaded in the rifle; special non-projectile (blank) ammunition is not required to launch the grenade. The "bullet trap" in the base of the grenade catches the fired rifle bullet; the combined propulsion forces of the fired bullet and the expanding gases in the rifle barrel then launch the grenade.

The Infantry Board conducted a concept evaluation program (CEP) test for the Infantry School to assess the operational feasibility of the BTRG during the period 21 March through 8 April 1988. During this test, eight qualified M203 grenadiers fired training practice BTRG and 40mm rounds (M781) against a series of point and area targets to generate hit performance data. A limited number of

antipersonnel and antiarmor BTRGs were also fired by manufacturers' representatives to compare their effects with those of the 40mm high explosive dual-purpose round.

Illumination provided by BTRG and 40mm illumination rounds were compared, and the smoke obscuration provided by the smoke BTRG was assessed. The visual and audible signatures, human factors, and safety of the BTRG were also assessed.

The School will use the data in making decisions concerning any future use of BTRGs.

M16 Rifle Training Devices. As the Army's proponent for rifle marksmanship, the School is also seeking ways to improve the effectiveness of rifle marksmanship training. The results of evaluations conducted over the past several years indicate that improvements in effectiveness and economy may be achievable through the use of device-based training.

During the period 30 September 1987 through 29 April 1988, the Infantry Board conducted a CEP test to assess the relative effectiveness of six rifle marksmanship sustainment training programs (STPs) designed to be used in TOE or TDA units. Although primarily focused on the relative effectiveness of the alternative STPs rather than any materiel system, the test involved the use of the Multipurpose Arcade Combat Simulator, a low-fidelity part-task trainer.

The STPs were varied with regard to the frequency of training, the use or nonuse of a training device, and the amount of live fire. Six company-sized units (one per STP) participated in the six-month training programs. This ensured that a minimum sample of 75 soldiers would complete all of the training, exercises, and tests for each STP.

The School will use the test results to develop the best training strategies and to initiate actions for obtaining appropriate training devices.

M113 Block II Modifications. There have been several improvements in the M113 armored personnel carrier over the years, from the basic M113 through the M113A2. Additional

improvements (Block II modifications) in the areas of the power-to-weight ratio and the vehicle's ability to withstand small arms fire have been incorporated into the M113A3.

These improvements include a 275-horsepower turbocharged version of the 6V53 diesel engine powering an XT-200-4 cross-drive transmission with steering and braking functions; spall liners to provide additional protection for occupants; and external fuel tanks to reduce the chance of fire and to increase interior space. Additional bolt-on applique armor protection and an armored machinegun shield were added to the M113A3 for testing. With the applique armor installed, the vehicle weighs about 31,000 pounds.

During the period 28 March through 28 April 1988, the Board conducted a CEP test to assess the effects of the external armor kit on the vehicle's operational mobility and reliability and of the Block II modifications on the soldiers' ability to accomplish mission-essential functions.

Two nine-man mechanized infantry squads conducted a side-by-side comparison of a modified M113A3 with applique armor and a standard M113A2 during a series of mobility, swim, and recovery exercises and crew drills in an operational environment.

Data was also collected on human factors, safety, training, logistical supportability, and reliability, availability, and maintainability. The School will use the test results to assist in making decisions regarding the utility of the external armor kit and the revised load plan.

THE NATIONAL INFANTRY Museum is proud of its outstanding Civil War collection. Among the items on display are a number of Currier and Ives lithographs, and others as well, showing battles, heroes, and military installations of the Civil War period. During that time, patriotic citizens displayed pictures such as these in their homes.

A particularly interesting piece is a
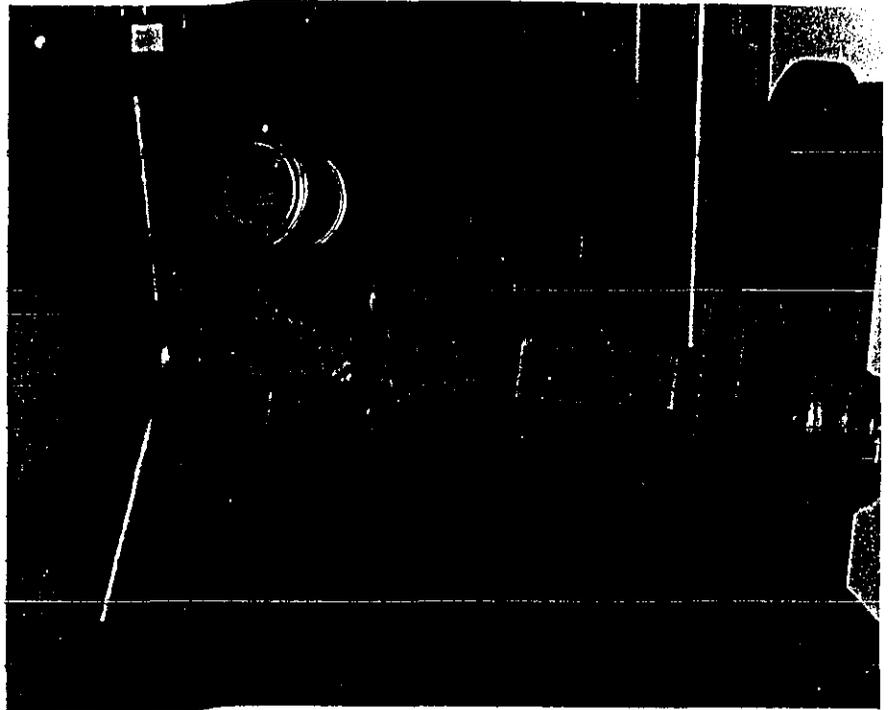
James 12-pounder cannon

folding cot known as the "strong officer's day bed," which is made of wood, leather, and canvas. In use, it folded out with collapsible supports and posts that extended upward to support mosquito netting. When not in use, it could be folded into its case. It then became a suitcase complete with handle for transporting. These were not official issue but gift items from loving families who had the wealth to send their relatives off to war in style and as much comfort as could be bought.

There is a surgeon's kit, complete with knives, saws, and tourniquets. There were many amputations resulting from the use of Minie ball ammunition (named for its inventor, French Army Captain Claude Etienne Minie) which caused massive wounds, shattered bones, and left little choice for a doctor if he was to save lives. Also shown are a trephine (which is a saw used to remove bone from the skull), bleeders, and an ivory handled tooth extractor.

A rare Confederate Napoleon 12-pounder made in 1863 in Columbus, Georgia, as well as a Union James 12-pounder made in 1861 by the Ames Company in Chicopee, Massachusetts, are on display. The James

cannon is complete with carriage and limber. There are also other rifles, muskets, pistols, bayonets, pikes, swords, a Ketchum hand grenade, and a Coehorn mortar to be seen.

Some examples of uniforms worn by both sides are also displayed, all in excellent condition. An interesting and unusual one is a rare New York State volunteer Zouave uniform. A flamboyant red, it was patterned after the uniforms of the French Zouaves who fought in the Crimea in the 1850s. (The Zouaves thought that the Civil War would be short-lived and that their service would be more fraternal than military.) Both sides had Zouave units, however, and the uniforms proved impractical and easy targets and were soon abandoned. A complete butternut uniform, also rare, is on display, as are kepis and other headwear, various insignia, epaulets, buckles, buttons, and footwear.

The weapons of the Civil War that are on display include a .50 caliber sharpshooter's rifle used by a member of Company G, 1st Battalion, New York Sharpshooters from August 1862 to June 1865, along with his bullet mold and powder flask and a packet of letters that he wrote during his military tenure. Many times in the let-

ters, he refers to the 13-pound rifle with pride. In 1862 he wrote, "We are the only company in the regiment that has got telescope rifles," and again, "Our guns are the kind of guns to have. I have got as good a gun as there is, and I can hit a man three-quarters of a mile away with it."

Many small but important miscellaneous items used by soldiers during this period are in the Museum. Among them are a handmade wooden button-polishing board that helped a soldier keep brass polish off his dark blue uniform; various entrenching tools; articles of mess equipment; lanterns; candleholders; blankets; a stove; cartridge boxes and pouches; telescopes; a small tin handwarmer; an 1865 muster for B Company of the 84th Infantry Regiment of Colored Infantry; drums; canteens; flags; handmade bone dominoes; Confederate currency; photographs; powder horns; books; posters; a dog tag; a trunk; and a duffel bag.

The collection has been studied and photographed by a number of researchers who have found items in it that they had not seen elsewhere. One such researcher was seeking information for inclusion in the Time-Life Books series on the Civil War.

The National Infantry Museum Society, formed at Fort Benning a number of years ago to assist the Museum with financial and volunteer support, is open to anyone who is interested in joining. The cost is $2.00 for a one-year membership or $10.00 for a lifetime membership.

Additional information about the Museum and the Society is available from the Director, National Infantry Museum, Fort Benning, Georgia 31905-5273; AUTOVON 835-2958 or commercial (404) 545-2958.

THE DIRECTORATE OF COMBAT Developments at the Infantry School has submitted the following items:

Lasers on the Future Battlefield. The infantryman of the future will have to be prepared to fight and survive in a laser environment. The thousands of laser rangefinders and laser designators already on the battlefield will be the least of our problems. More sophisticated and powerful lasers will also be found there, and these will present a real threat to our weapon systems and the way we normally conduct warfare.

For example, it was reported recently that the new Soviet FST-1 tank has a laser weapon system on board that can detect and locate surveillance and target acquisition optics and jam them with a laser beam, blinding the operator. In addition, several months ago, off Hawaii, a Soviet ship reportedly used lasers to jam a surveillance aircraft that was monitoring its operations.

Those who are in leadership positions must think seriously about how we are going to protect our soldiers and enable them to perform their assigned tasks against a laser threat. The progress that has begun in the area of laser hazard training must be continued, and each small unit commander must become aware of the hazards associated with the use of lasers in combat and work to develop countermeasures that will decrease their effectiveness against our equipment and personnel.

In addition, our tactics and our doctrinal "How to Fight" concepts should be reviewed with an eye toward the characteristics of laser weapon systems and the effect of these on the way we conduct our daily business. It may be necessary for us to return to some of the ways we used to do things without our sophisticated and long range optics.

Combat developers and trainers must start looking seriously at materiel improvements that will protect our soldiers and our weapon systems. Eye-safe surrogate laser weapon systems must be developed and fielded along with battle drills and tasks to train our soldiers in the techniques they will need to survive against threat lasers.

Laser warning devices should be considered for our combat vehicles, crew-served weapon systems (such as TOWs), and individual soldiers. The technology is available, but the integration of these systems into our force will take time and, more important, funds that are also badly needed elsewhere.

While we are not in a state of crisis, we are at a point where the subject of lasers on the battlefield needs serious review by all combat leaders.

LAW Night Sight. Units in the field have asked for information on how to fire the M72 light antitank weapon (LAW) at night or during periods of limited visibility. An adapter is now available for mounting the AN/PVS-4 individual weapon night vision sight on the LAW. This adapter and the M72 sight reticle for the AN/PVS-4 are shown in the AN/PVS-4 operator's manual. It can be ordered through normal supply channels: Mounting Bracket Assembly, M72A1 (NSN 5855-01-039-2841; Reticle Cell Assembly, M72A1 (NSN 5855-01-039-2844).

The use of this adapter and the AN/PVS-4 allows the LAW to be fired at night without the target having to be illuminated.

The AT-4 weapon system is being fielded as a short-range antiarmor supplement to the LAW, and the need for a night firing capability is being emphasized. The Infantry School is also currently evaluating an adapter to mount the AN/PVS-4 on the AT-4 and is investigating methods by which the adapter can be tested and fielded as quickly as possible.

VISTA (VERY INTELLIGENT Surveillance and Target Acquisition) test bed capabilities were demonstrated in April at Harry Diamond Laboratories. VISTA is designed to correct deficiencies in battlefield information processing at brigade level.

PROFESSIONAL FORUM

Infantry Issues and Lessons

JAN CHERVENAK
ERIC J. LYNAM

In observing and studying major training exercises such as REFORGER, Bright Star, Crested Eagle, and National Training Center (NTC) rotations, many Army tacticians have noted—in addition to sound applications of doctrine, tactics, and techniques--numerous examples of recurring operational problems. The following are a few examples:

• Security of the brigade support area (BSA).

• The planning and execution of fire support for both sustainment and rear area operations of heavy maneuver brigades.

• Reconnaissance and counter-reconnaissance operations.

• Defeating or defending against enemy attack helicopters in mid-to-high-intensity environments.

• The breaching of minefields under fire.

• Limited visibility operations.

• The use of navigation aids such as ground surveillance radar, visible light markers, or guides.

• Coordination between the fire support officer and the air liaison officer.

The root deficiencies in these and other problem areas may lie in doctrine, training, materiel, organization, and leadership concepts or techniques; or they may result from poor unit training, planning, or execution.

Regardless of the cause, the fact that the same problems often seem to occur over and over is a strong indication that units do not learn as much from the experiences of other units as may be possible. In other words, we fail to make the most of the lessons others have learned from their failures or their victories.

We should not overly chastise ourselves, however, because no system has been readily available to provide us with timely feedback on lessons learned. As a result, our learning too often has been based largely upon stale information.

The Army's leadership noted this need for a current source of feedback about operations, and the initial response was the formation of the Center for Army Lessons Learned (CALL), at Fort Leavenworth. The Center was given the mission of developing and distributing combat-relevant lessons learned throughout the Army.

In support of its mission, CALL has developed three main ways of distributing lessons learned to the field— two publications, *Lessons Learned Bulletin* and *NTC Newsletter,* and a telephone modem-accessible management information system called "Army Lessons Learned Management Information System" (ALLMIS).

All three of these sources are valua-

ble. Despite an extensive distribution effort on the part of the Center, however, most of the company and battalion level leaders questioned in a recent survey had little or no knowledge of them. Likewise, a check with the system administrator for the Army Lessons Learned Management Information System revealed that few TOE units (in fact, not even all of the TRADOC branch schools) have established log-on privileges with this computer system, often because the necessary modem was not available.

To help fill at least a portion of the void, the Directorate of Evaluation and Standardization at the Infantry School has developed a software package that runs on IBM PC-compatible computers. The software, called the Infantry Issues and Lessons Learned Analysis System (PL²AS), is currently being used at the Infantry School by trainers and developers of equipment and doctrine. It provides a current source of unclassified, Infantry-related observations and issues from NTC rotations, major exercises, military operations, special events, unit initiatives, historical sources, and TRADOC-sanctioned unit visits. The user-friendly software package provides easily understood menus to help a user find information pertaining to a particular subject area.

Menu options in the software system

allow the user to conduct a screen review of keyword lists—either a master keyword list or more succinct listings of keywords determined by the user from "functional areas" (leadership, doctrine, training, organization, and materiel) or "mission areas" (command and control, close combat light, close combat heavy, fire support, air defense, communications, intelligence and electronic warfare, NBC, combat service support, aviation, special operations forces, combat arms, combat support, military police). Up to five keywords are assigned to each listing to help identify the information contained in it.

Once the user has identified the keywords that pertain to his subject area, they are then used to conduct searches of the database. Entries found by these keywords are presented on the computer screen for review. (An example of the I²LAS output is shown in the accompanying figure.) Further information is available from subject matter experts who can be reached at the telephone numbers (usually AUTOVON) listed on the screen.

The hardware required to run this program is a standard personal computer being purchased throughout the Army: IBM PC-compatible computer, with 512k memory (minimum), 10 megabyte hard-disk drive, 5¼-inch floppy disk drive, and printer (optional).

The software is available to infantry units, battalion level or higher, in the Active Army, Army National Guard, or Army Reserve, and is

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OBSERVATION #:  1336
INFANTRY ISSUES & LESSONS LEARNED ANALYSIS SYSTEM (I2L2AS)


OBSERVATION DATE: 05/08/87
EXERCISE/EVENT: NATIONAL TRAINING CENTER (NTC)
SUMMARY: SOME SUCCESSFUL TECHNIQUES OR PROCEDURES TO OPTIMIZE DESTRUCTION
         (TARGET EFFECT) ON THE ENEMY FOLLOW: MINIMIZE MOVING TARGET
         ENGAGEMENTS BY MASSING FIRES IN COORDINATION WITH ENGAGEMENT AREAS
         FORMED BY THE REINFORCING TERRAIN AND OBSTACLES.  ALWAYS PLAN
         ILLUMINATION AND SMOKE MISSIONS (DAY AND NIGHT).  OBSERVERS MUST
         DEVELOP TERRAIN SKETCHES IN THE DEFENSE.  ADJUST ILLUMINATION IN
         THE DAYTIME.  STRESS COORDINATION BETWEEN THE SUPPORTED MANEUVER
         COMMANDER AND FIST PERSONNEL.  MASS FIRES WHENEVER POSSIBLE TO
         ENSURE MAXIMUM EFFECTS WHEN ATTACKING TARGETS WITH A MINIMUM
         EXPENDITURE OF AMMUNITION AND REDUCE THE FIRING UNIT'S
         VULNERABILITY TO ENEMY TARGET ACQUISITION.  ESTABLISH AN IPB
         DECISION POINT TO ENGAGE THEIR MOVING TARGET.  ENSURE THAT THE FIRE
         SUPPORT PLAN, IS BRIEFED AT COMPANY/PLATOON OPORDS.



DOC ID: NTC LESSONS LEARNED COMMANDERS COMMENTS, THE CS TEAM, 8 MAY 87
PHONE: AV 552-2255                                          PAGE: 5
BACKUP DOCUMENTATION: CATA, CALL              Press Shift PrtSc to Print
Do You Wish to Continue Search? (Y/N)
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mailed only to unit addresses. A unit requesting the software must mail ten blank floppy disks (5¼-inch) to Commandant, U.S. Army Infantry School, ATTN: ATSH-ES, Fort Benning, GA 31905-5420. Questions regarding these procedures may be directed to the Infantry Hotline, AUTOVON 835-7693, or commercial (404) 545-7693.

Once a unit is established on the I²LAS user file at the School, it will automatically receive software updates by mail.

The Infantry Issues and Lessons Learned Analysis System serves as a current source of previously unavailable Infantry-related lessons learned. The desire of the Infantry School is to improve the quantity and quality of professional information available to the Infantry community by enabling soldiers to learn from the experiences of others and develop into a more combat-ready infantry force.

Jan Chervenak is Chief, Analysis Division, Directorate of Evaluation and Standardization, U.S. Army Infantry School.

Eric J. Lynam, at the time the system was developed, was Chief, Standardization Branch, Analysis Division in the same directorate.

Equipment Discipline

LIEUTENANT DANIEL F. SULLIVAN

While many units have well-established standing operating procedures (SOPs) for equipment accountability and maintenance, not all units practice and enforce those procedures. Too often, equipment maintenance and accountability is taken for granted, and leaders usually do not get excited when something as small as a

canteen or a magazine is lost. The attitude on the part of many leaders seems to be "Don't worry about it; we'll get you another one." This leaves the field wide open for equipment loss and a breakdown of equipment discipline.

We have all heard the stories from the Vietnam era about how the enemy made use of lost or neglected U.S. equipment to support his own needs. And any time we fight an enemy in a poor country with few logistical assets, we can be sure he will also make good use of our equipment if we give it to him.

Another important issue is the standard that negligence sets for future leaders. If we accept a carefree attitude, we set a low standard. If we as leaders do not stress the absolute importance of equipment maintenance and accountability, we are grooming our future leaders to accept losses without regard to the possible consequences.

The SOP I have used for equipment accountability and maintenance in my platoon has proved successful. The unit's noncommissioned officers and I have adopted "No equipment loss" as the standard. We first concentrate on *prevention,* tying down everything from canteens to weapons, and then we conduct frequent checks and spot inspections. These actions have virtually eliminated equipment loss by the platoon's members. Although many of the older leaders feel insulted about having to tie down their weapons, this is definitely less of a headache than trying to explain to a company or battalion commander how a weapon was lost.

We have divided our procedures into four categories—Pre-deployment, In the field, During recovery, and Always--and have determined the steps we will take in each:

Pre-deployment:

• All equipment, including load carrying equipment, compass, and weapons will be tied down securely at all times.

• All equipment will be hand-receipted systematically to the lowest man in the chain (that is, platoon ser-

geant to squad leader, squad leader to individual).

• Each man will carry dog tags and identification card to the field.

• Squad leaders will conduct inspections to ensure that all items on the packing list are taken to the field.

• Squad leaders will have a record of all sensitive items (by serial number) that he is taking to the field and will keep a copy on his person at all times. The platoon leader and platoon sergeant will also have copies.

• The platoon leader and platoon sergeant will physically inspect sensitive items both before and after movement to the field.

• All platoon equipment will be taken to the field and will stay there unless otherwise designated by the platoon leader or platoon sergeant. If a man is carrying a piece of equipment and he returns to the rear, the equipment will be cross-loaded to another man. No excuses!

• Each man will carry at least four magazines, a cleaning kit, and a blank adapter.

In the field:

• Squad leaders will physically check his sensitive items twice a day— one hour after morning stand-to and one hour before evening stand-to. This schedule may be adjusted according to the tactical situation.

• Maintenance on weapons and equipment will be done daily and will be supervised and checked by the squad leaders. In addition, the platoon leader and platoon sergeant will spot check.

• Weapon malfunctions and equipment that is broken or lost will be reported to the platoon sergeant

immediately. M60s that are down must be reported to the company immediately.

During recovery:

• An ammunition shakedown will be conducted after each field exercise. All pyrotechnics, mines, blanks, flares, smoke, ball, and the like, will be turned in to the platoon sergeant. All personnel will be physically checked by their squad leaders.

• All TA-50 items will be checked by the squad leaders after each field problem. All items that are missing or that need to be direct-exchanged will be reported to the platoon sergeant for turn-in.

• Any deficiency in a weapon or a piece of equipment that will require maintenance will be recorded on a DA Form 2404 and turned in to the platoon sergeant as soon as possible.

Always:

• Before cleaning, each weapon will be cleared of ammunition. If a weapon is broken down past the bolt, it will be cleaned on a poncho.

• Key weapons will be manned in the order of importance—SAWs before M203s, M203s before M16s, M60s always!

If these simple steps are taken, even the infamous Private Murphy won't be able to lose equipment. The appropriate standard will be set for our future leaders, and the enemy will not have an opportunity to use our own equipment against us.

Lieutenant Daniel F. Sullivan is assigned to the 2d Battalion, 14th Infantry, 10th Mountain Division at Fort Benning. He is an ROTC graduate of Westfield State College.

Watch Your Pronouns

JOHN I. HARTLEY

Any grammar book will tell you that words such as *I, me, my,* and *mine* are *singular* pronouns, and that is usually true. Sometimes, though, especially in military situations, such pronouns can take on a decidedly *plural* meaning, and then there is a danger that a listener will misinterpret them.

Suppose the person using I-me-my-mine is also the leader of a squad or a platoon or a company. When he says "I am at the OP," do we think of just one person? Not at all. We think of his squad or platoon or company. One of the best known lines involving a pronoun is General Douglas MacArthur's "I shall return," but nobody who heard that ever assumed that he was returning to the Philippines alone. And he most certainly did not.

So what? What do pronouns have to do with infantry combat? Sometimes they can have a great deal to do with it, because accurate communication is crucial to the success of any mission.

I was part of a World War II operation in which the misunderstanding of a pronoun caused considerable confusion and probably some avoidable casualties as well. Our battalion had attacked over the flat open country west of the Roer River, aiming toward a village opposite the larger town of Julich. About dusk we received word at battalion headquarters that Captain ---- of Company G was in the village. Through the squawking static we heard him say, "I am in the town." At that, the battalion commander gave word to displace the headquarters and bring up Company E, which had been in reserve. Very

soon, though, we became aware that there were more Germans in the town and at its approaches than there were members of Company G.

As we withdrew, bloody nosed, we learned quite belatedly that Captain ---- was in the village all right—with six men! The rest of his company had been pretty well shot up and disorganized, but Captain ----, more of a first-scout hero type than a company commander, had managed with a small group to get into the town under cover of darkness—and then had found himself and his group surrounded by very healthy Germans. Luckily for them, they were

able to remain safely hidden until we renewed our attack and took the town.

Several things were wrong here— bad communications discipline, a too hasty interpretation of the message received, and certainly a dereliction of command duty on the part of Captain ----.

Communication depends on equipment as well as people, and the radios we had at that time were relatively primitive. Still, despite the static and the fadeouts, there should have been some way for Captain ---- to indicate more clearly in his first response to the battalion's inquiry just what his situation was. Ideally, any unit should

have some established way, in a code not quickly recognized by the enemy, of giving its strength, location, and situation. But the ideal seldom prevails in combat, and Captain ----'s first-person message was probably delivered with Germans almost literally breathing down his neck.

And how about the receivers of his message? Those of us with the battalion commander were so elated when the captain said "I am in the town" that we didn't do what a combat staff must do—which is to be skeptical. We were too quick to assume that he was there with his whole company. We all happily agreed with the battalion commander's decision to move our ragtag headquarters unit forward and to get Company E in there

to support Captain ---- and his "company."

And what about Captain ----'s action in moving into the village with only six men? No doubt it was a brave, bold action, worthy of recognition for an individual soldier. But he was not an individual soldier; he was a company commander. Once he detached himself with those six men, he could no longer do his proper job. Lacking a command focus, the company, already mauled, disintegrated into squad and platoon fragments, unable to maintain anything close to company effectiveness.

There is a long-winded old saying concerning a battle that was lost "for want of a nail," because the horse that was also lost was carrying the com-

mander whose presence could have made the difference between victory and defeat. In this small action on the Roer River, it was not a nail that was lost but a pronoun—or rather the *meaning* of a pronoun, which had been mistakenly used and wrongly interpreted.

Moral: If you command anything more than yourself, be very careful when you say "I."

John I. Hartley served as an enlisted man in World War II until 1942 when he was commissioned through the Officer Candidate School at Fort Benning. He was serving with the 29th Infantry Division at the time of this incident. After the war, he taught English at El Camino College in California and had many of his writings published.

Bridging Differences

MAJOR JAMES A. KELLEY
LIEUTENANT COLONEL FRANCIS M. GLYNN

Training to fight in combined operations alongside our allies and friends is a necessity in almost every theater of operation and throughout the spectrum of conflict, from low intensity to high.* There are naturally some challenges associated with this coalition.

General Dwight Eisenhower, for example, had the monumental task of pulling together the Western Allies during World War II. Fortunately, in the desperate situation in which they

found themselves, all the participants realized that without their mutual cooperation, the war would be lost.

By contrast, today's world often lacks a clearly definable threat that would compel friendly nations to work together. (The NATO alliance and our commitment in Korea may be the exceptions.) In particular, the developing countries are being threatened by conflicting internal interests as well as being wooed by various external factions in a highly unstable political atmosphere.

Because of its global economic and political interests, and its stature as a key defender of freedom, the United States is frequently involved in world-wide challenges. Additionally, the U.S. cannot refuse to respond to those

who would strike at its vital interests, and when it does respond, the armed forces are often the principal actors.

The commitments U.S. armed forces must fulfill in NATO, Korea, and elsewhere require them to work, train, and if necessary fight alongside forces from widely diverse nations and cultures. There are specific challenges involved in these commitments, challenges that all leaders, down to the lowest levels, at least need to be aware of. First, however, some general observations should be noted regarding existing agreements and the overall mindset governing the United States' participation in coalition arrangements.

For one thing, there may already be certain treaties, status-of-forces agree-

ments, or other host nation arrangements that outline the conduct of the relationships between U.S. and foreign units. They are just that, however—merely outlines. There remains a need, at the grass roots level, for positive action to formulate the kind of friendly psychological environment that is conducive to teamwork between differing peoples.

A second observation is that when the United States cooperates with and assists others, it often serves its own interests as well. A more stable and secure international environment fosters peaceful competition and furthers the security and prosperity the American people seek. All too often, however, we see examples of Americans who belittle their allies and friends as "takers," even in the open forum of the press. These editorial opinions are often misconstrued as official policy and destroy any cooperative spirit. They also undermine the accomplishment of the national objective we have set for a given area.

The specific challenges associated with combining allies and friends in a collective security effort (which is the basis of the term "combined operations") may arise out of differences in a number of areas—in doctrine, in equipment, and in culture. Concurrently, to succeed in countering the problems inherent in these areas of concern, certain supporting behavior patterns must be recognized and developed: understanding, communication, and mutual respect. These positive behavioral qualities must be applied constantly in an effort to solve the common problems experienced at the tactical and working level of combined operations.

DOCTRINE

One major challenge that arises when working with the armed forces of other nations is varying doctrine, or the fundamental principles by which military forces guide their actions in support of objectives.

The armed forces of different countries develop their doctrine on the basis

At Grafenwoehr, U.S. troops join German troops in a defensive training drill.

of a combination of their perceived threat, their history, their resources, and their national objectives. This doctrine outlines the way their military forces train and forms the basis for their force structure. We can no more expect our friends and allies to change their basic philosophical or doctrinal positions than they would expect us to change ours. An open mind, a knowledge of the other nation's doctrine, and a willingness to work around divergent issues all lead to the mutual refinement in tactical viewpoints that is required for successful operations.

Experiences by members of U.S. security assistance organizations in foreign countries reveal that they had to learn a great deal about how the established system operated before they could bring about any effective change. But change is not necessarily the primary objective. The ultimate goal is to mesh seemingly opposite tenets into a viable tactical response.

Another challenge is the equipment differences that can cause various technical problems. The ultimate solutions to these interoperability issues normally exceed the capability of leaders at the tactical level. Nevertheless, these leaders should be aware of this problem area and seek assistance from technical specialists. Recogniz-

ing foreseeable equipment difficulties early can alert top leaders on both sides to the need to seek workable solutions.

The exchange of liaison teams may be the answer to some of these problems, because the teams provide not only coordination but also the necessary technical expertise regarding the employment of equipment.

The final and more fundamental area of challenge is that of culture. This is the most complex and the hardest to define in terms of the differences because it deals with the intangible products of common heredity and tradition. Ultimately, it is also the most important and, particularly on the tactical level, directly affects the ability of the U.S. to mount combined operations to achieve its objectives in specific areas of the world.

When compared to the armed forces of other free world countries, those of the U.S. often seem to have more abundant resources for the conduct of operations and training. Coupled with our quest for perfection in mission accomplishment, this apparent abundance of resources can create situations during exercises in which U.S. forces appear to steamroll their allies and friends.

Our counterparts, because of their day-to-day, real world commitments, often have limited time in which to pre-

pare for training. The U.S., on the other hand, can task individual action agencies and give them the luxury of working for an extended period on little more than planning one upcoming combined exercise. With such overwhelming capabilities, we are able to "Americanize" situations with our capacity to support and the emphasis we can place on an exercise. Such actions tend to highlight our friends' limited resources and represent the U.S. as a "big brother" who overpowers his smaller partners. These images can result in gradually distancing our allies from us.

The development of interpersonal relationships is a primary cultural concern. Truly effective coordination between different cultures depends upon the personal ties formed between counterparts rather than status-of-forces agreements made at the national level. Such ties cannot be made overnight, though. It takes months and sometimes years to foster the confidence and mutual trust required to coordinate combined exercises and war plans successfully.

Liaison officers, again, are the key. They should be assigned early and the same ones should stay, not only through the completion of one project but also through the course of other endeavors.

Liaison personnel need to be handpicked for the job. In the same manner as other U.S. national representatives who will visit or come in contact with a host nation, military liaison personnel need training on the origins of the country's people, their culture, their laws, and if at all possible, their language.

Liaison officers need extensive background knowledge on the functioning, organization, and capabilities of the host nation's armed forces as well as on U.S.-host nation agreements and cultural differences. Linguistic train-

ing and cultural familiarity will allow them to function at a level that immediately enables them to begin effectively interacting with their host nation counterparts.

The cultural attunement of liaison personnel is critical, but language proficiency cannot be the driving rationale for selecting an individual for this duty. The principle of leadership that requires technical and tactical proficiency remains central to the success of liaison personnel. Interpreters are a second best choice and should be available to augment a liaison team.

INTERPRETERS

A short note about interpreters, though: Language is so intimately tied to culture that the wrong choice of an interpreter can sometimes be more damaging to interpersonal relations than no interpreter at all. For example, a large variety of Hispanic cultures lies beneath the umbrella of the Spanish language, but for various historical and social reasons not all of these cultures are readily acceptable to one another. We must therefore be attuned to the influence of prejudice, a part of the human make-up, and control its effect on our activities. Prudence calls for the decision-maker to consider these matters when choosing an interpreter.

The concept of "time" is another important cultural challenge since it represents perceptual differences in many cultures. The U.S. armed forces are often driven by deadlines and short suspenses. By nature, we seek the immediate resolution of one issue so we can quickly move to the next.

Many nations in the world, however, do not appreciate or share our sense of immediacy. In dealing with the military personnel of other nations,

we should keep this in mind as we decide on major milestones or even set schedules for meetings. From the start, planning must not only allow the host nation counterparts the critical time they need but must also help them feel that they are a part of and an influence on any project. Throughout the day-to-day development of a combined project, time must remain a consideration.

On more than one occasion in the past, our enemies have assumed that the United States would not be able to find enough common ground or experience with its allies to engage in successful combined operations. Hitler, for example, reminded his generals in 1944 that they were facing "ultra-capitalist states on one side and ultra-Marxist states on the other," and that one day "this coalition may dissolve."

Coalition can work, though, not only on the strategic level where it is a function of relationships between states but also on the tactical or working level where it is primarily a function of relationships between friends, comrades, and peoples. On this latter level is where bridges are built that span the ever-present international gaps in doctrine, equipment, and culture, and these bridges can lead to the ultimate success desired by all the nations involved.

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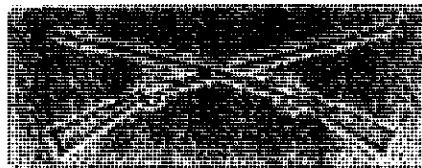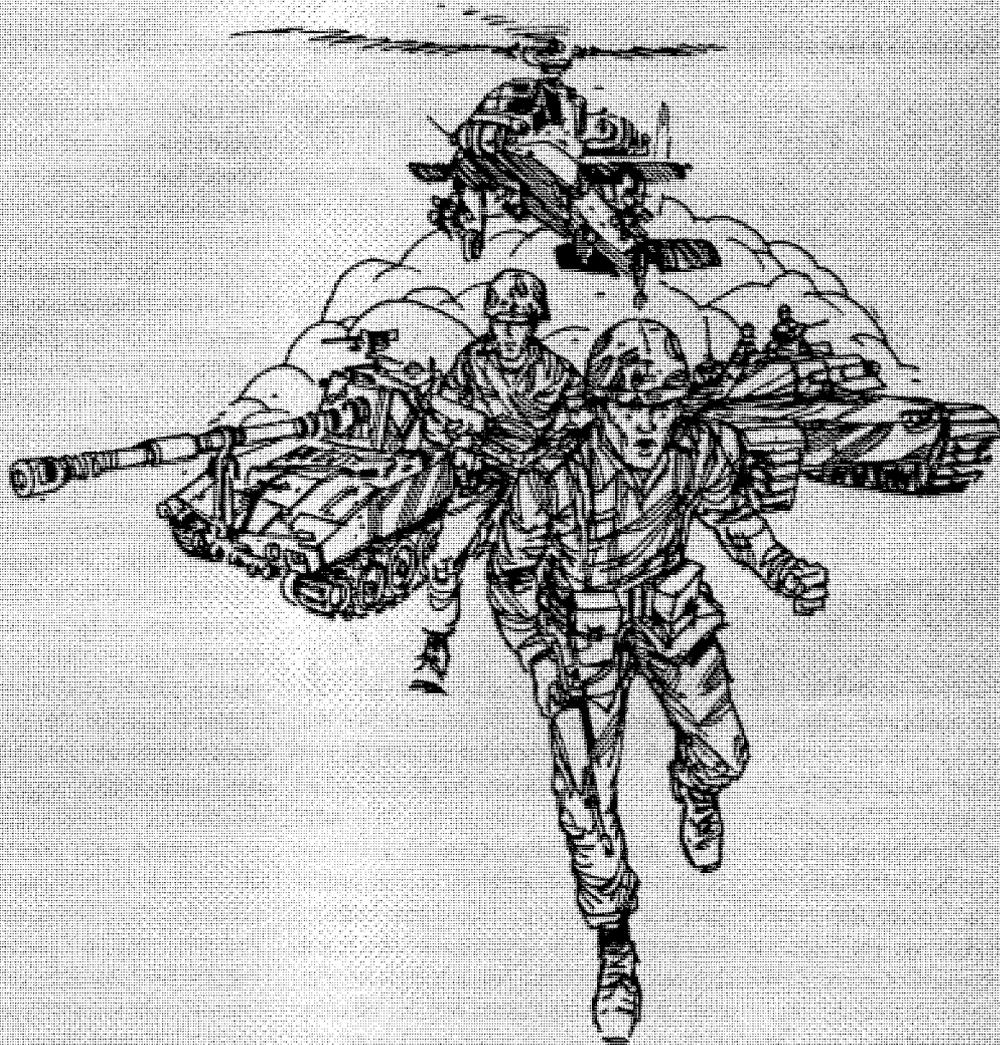
FIRE PLANNING AND CONTROL

COLONEL RICHARD F. TIMMONS

Light infantry commanders have recognized for a long time that concentrating and controlling all of their available fire support resources is fundamental to successful offensive or defensive combat operations. Fire planning and the incorporation of other combat support and combat service support elements (such as engineers, Army aviation, Air Force aviation, air defense weapons, electronic warfare, and intelligence systems) is a fully accepted principle throughout the Army. Sometimes, though, we seem to think that we are all so familiar with the details of how to knit these many complex elements together that discussing and practicing them is unnecessary. In reality, we only generalize our thoughts and plans about these AirLand Battle imperatives and would suffer serious combat setbacks if we had to do in battle the things we have so often failed to do in training.

To be sure, there are valid reasons for this superficial approach. Safety concerns, high costs, lack of accepta-

ble training areas, diversity of weapon systems, differing munitions effects, and limited time all conspire to make integrated live fire practice difficult and somewhat artificial. But all of that notwithstanding, I don't believe we conscientiously work through the fine points and on-ground coordination that is absolutely mandatory if we are to deliver concentrated firepower precisely where we need it when the fight begins. Evidence from battle analyses and results from the National Training Center have made it absolutely clear that a shallow and poorly coordinated battle plan will unravel fast once the fight begins. Understanding and avoiding this condition is particularly critical for light infantry units because their ability to react to enemy successes is normally characterized by too little too late, which therefore leads to an early defeat.

Leaders at every level—platoon, company, battalion, brigade—are responsible for studying the mission and

developing the integrated fire support plans that bring together engineers, artillery, mortars, helicopters, tanks, TOWs, Vulcans, rockets, and the rest. Everyone will agree with that. The problem that I see is that no one practices the procedures for doing this. There are several critical components that light infantry leaders must consider when calculating how to destroy an enemy force most effectively. In this case, I've chosen an engagement area (EA) as a model, but the fundamentals apply, with minor variations, in any defensive or offensive problem.

The starting point is the intelligence preparation of the battlefield. This analysis must provide a reasonable prediction of where the enemy is going to come from, what routes he will use, and how many troops and vehicles will be in his formations. Light infantry forces have no rapid battlefield flexibility, unless augmented with vehicles or helicopters, and if they are positioned in the wrong place they cannot contribute to the fight and may even be destroyed by superior mobility and firepower.

CRUCIAL SELECTIONS

The commander and the S-2 make the initial, and crucial, selections of the most probable enemy avenues of approach into and through the EA. The engagement area selected must facilitate the destruction of enemy formations and match the on-hand weapons to the terrain and the type of enemy force—motorized rifle battalion or company, tank regiment, operational maneuver group (OMG), and so on.

The identification of the formation is the key. It can describe where essential enemy vehicles are probably located (C3, air defense artillery, reconnaissance, tanks, BMPs) and the general population of enemy vehicles that will have to be destroyed. This recurring tactical template paints a picture for each leader of what he will be expected to cope with in his sector; it eliminates much of the guesswork concerning the size of the task; it identifies where light infantry must be; it makes clear calculations for stockpiling ammunition; it permits time-of-flight assessments for TOW and Dragon gunners; and, when matched against probable enemy rates of movement, it allows estimates of the number of firing systems required to do the job. Without this first analytical step, all efforts at emplacing forces around the EA and synchronizing fires boils down to blind guesswork and hope—neither of which has historically served its practitioners very well.

Once the area for the hard fighting and the most likely routes into that area have been identified, the next step is to focus on the type of enemy forces and their strength. When all of this is reasonably clear, the commander—with the S-3, fire support officer, air liaison officer, Aviation liaison officer, Engineer, and ADA officer—can begin the detailed coordination for the use of the assets allocated in the task organization.

The most important question for the commander at this point is, How much time do I have to get ready? The answer will cause the commander to be very selective in the planning and decision process and very precise in establishing priorities for work. The answer must also be based on terrain knowledge. Leaders must budget time to walk, drive, or fly over the ground to be fought on or risk quick defeat because they failed to appreciate and use the terrain to best advantage.

But the centerpiece, regardless of time, is always fire planning, and the essence of fire planning is *sequencing*. Sequencing is the timely and continuous delivery of all destructive fires to achieve the greatest possible effect on enemy forces in the EA. Decisions must be made concerning when to fire mines, missiles, smoke, illumination, tanks, TOWs, Dragons, mortars, LAWs/Vipers, and machineguns; when and where joint air attack teams and close air support are to be introduced and how targets are to be selected along with air space control considerations and ordnance mix; when demolitions firing parties will cut roads, drop bridges, and block defiles; and whether we intend for our light infantry units to be bypassed or to fight on. These decisions are tied to the actions the commander believes are essential if his unit is to dominate the battlefield, and they express how he expects the fight to unfold in the engagement area.

COMMANDER'S LOGIC

Also imperative to success is an understanding of the rationale for the use of and the sequencing of the available weapons. The following are some examples of a commander's logic:

• The reason for firing FASCAM (family of scatterable mines) at a given point in the battle must lead to a specific intent and must produce results, such as, "I want the enemy BMPs to stack up in this area because they will then be within Dragon range. Since they will be immobile, the Dragons' kill probability will be greater and faster destruction will be assured."

• Or, "I don't want to fire Copperhead at its maximum range because doing so will disclose our battery locations and alert the enemy that something is up. Fire at command, control, and communications vehicles once the formations are in the engagement area. Then shift to counterbattery."

• And, "Let reconnaissance through the standard minefields. Once two motorized rifle companies are into the standard pattern, fire FASCAM on the formations queued up behind them, then douse them with DPICM (dual-purpose improved conventional munition). After that, turn that sector over to the air battle captain and let aerial TOW and close-in Dragon fire kill those that are slowed up getting through the M21s. When the infantry dismounts from the BMPs, that's the signal to fire mortars, MK 19s, and machineguns to kill them."

The point is that a certain logic must be applied to the deliberate employment of the weapons and munitions at hand. Practical reasons must be behind the decisions as

CHECKLIST
INTEGRATED FIRE PLAN FOR AN ENGAGEMENT AREA

INTELLIGENCE PREPARATION OF BATTLEFIELD
A detailed description of:
- Enemy avenues
- Enemy routes
- Enemy formations
- Enemy vehicle numbers
- Enemy strengths
- Enemy artillery and air support
- Enemy speed of advance
- Enemy morale
- Enemy combat experience
- Engagement areas
- Defiles
- Bridges
- Trafficability
- Masking
- Contaminated areas
- Terrain obstacles

INDIRECT FIRING CONSIDERATIONS
Time, sequence, amount, position, displacement, resupply, and control measures for:
- Copperhead
- DPICM
- ICM
- APERS-T (Beehive)
- FASCAM
- Mortars
- NGF
- Smoke
- Illumination
- HEPT
- COLTs
- GT lines
- Laser footprints
- Lifting/shifting fires
- Counterbattery radars
- Priorities
- Air corridors
- Target priorities
- EW
- Minimum safe distance

DIRECT FIRING CONSIDERATIONS
Time, sequence, amount, displacement, resupply/stockpiling, and control measures for:
- TOW
- Dragon
- Tank
- 90mm RR
- 105mm (T)
- Vulcan
- LAW
- Viper
- M202 Flash
- MK 19 40mm
- 40mm HEDP
- Sectors
- Target priorities
- Stinger
- Barriers

AERIAL FIRING CONSIDERATIONS
Ordnance, number of aircraft, loiter time, ADA suppression, recognition, and communication for:
- AH-1S Cobra
- A-10 Thunderbolt
- USAF fixed-wing attack
- Air battle captain
- A2C2
- Air corridors
- AKZ
- FAC
- ALO
- Target priorities
- Minimum safe priorities
- FARP

BARRIERS
Areas to be covered, density, time to emplace, expected delay or "stack-up" time, covered by fire, obscuration, and transport of:
- Minefields
- FASCAM
- Volcano
- Wire obstacles
- Cratering
- Bridge destruction
- Deception
- Priorities of work
- Engineer execution matrix
- Time
- Class IV stockage/cache points
- Minimum safe distances

ENGAGEMENT AREA CONTROL/COORDINATION
Techniques for distributing and regulating fires directed into the engagement area:
- Fire support execution matrix
- Sequencing of fires
- Control measures/graphics
- Trigger lines or points
- Stack-up points
- Divide EA into quadrants
- Displacement plan
- Alternate positions
- Escape routes
- Friendly position markers (day/night)
- Range markers placed in EA (IR chem at night; pickets during day)
- Deception measures
- Priority of enemy vehicle kill—recon/BMP/tank/ADA/C3/etc.
- Stockpiling munitions
- Volley firing from smaller weapons
- Coordination with adjacent units
- Supplementary positions
- Massing fires

COMMUNICATIONS
Detailed coordination for frequency exchange, change-over time, call signs, retransmission means, distances, alternate frequencies, codewords, and back-up methods must be worked out for:
- FM, HF, TACSAT
- COLTs
- Reconnaissance elements
- Air battle captain
- Artillery
- CAS
- Higher headquarters
- Engineers
- Units with direct fire systems
- Pyrotechnics
- Aviation
- EW assets
- ADA
- NBC
- Naval gunfire support

SOVIET Landmine Operations

Part 2

The Soviets believe that the key purpose of a minefield is not so much to inflict damage on attacking vehicles as to slow enemy forces and channel them into predetermined kill zones and fire sacks that are covered by massed artillery fire and long-range antitank missiles. They consider a defensive operation a temporary measure intended to gain time, and consolidate forces before resuming the offense. The fewer mines emplaced in the defense, therefore, the fewer obstacles there will be to clear when returning to the attack.

The extent of minelaying will depend upon the Soviets' intentions, the tactical situation, and the engineer support available. In the same vein, the difference between a hasty and a prepared defense will be primarily a function of time. If only a temporary halt or defensive action is planned, then small protective minefields will be laid by mechanical means on the surface of the ground to facilitate their rapid recovery and reuse. If better prepared defensive measures are necessary and more time is available, then the Soviets will emplace denser, more extensive, and better camouflaged minefields. In either case, the Soviets stress the importance of covering minefields with long-range antitank weapons.

Mine warfare platoons are considered valuable assets and are used selectively. Soviet maneuver commanders commit minelaying assets first to the axes of advance that are most vulnerable to enemy counterattack. It is unreasonable, then, to expect that most maneuver battalions or companies would benefit, at least immediately, from the services of the mine warfare platoons and their minelaying equipment when assuming the defense. In setting up a prepared defense, the troops of all units are likely to be involved in preparing obstacles and laying mines.

In spite of the capability of the PMR/PMZ minelaying trailers or the GMZ tracked, armored vehicles to plant mines underground, the Soviets normally lay them on the surface, except in prepared defenses. Mechanical minelaying platoons are trained to operate under radio silence using flags and light signals for communication. They also frequently use smoke screens to obscure their actual minelaying operations from enemy observation.

Since a regimental engineer company has only limited transport capability (eight or nine general purpose trucks carrying a variety of engineer equipment), mines must be pushed forward by truck to the maneuver forces from higher levels.

The Soviets generally lay minefields in a predictable linear, parallel fashion. (An exception to this rule is scatterable minefields, whose configurations are much less predictable.) These simple minelaying practices allow relatively inexperienced personnel to emplace mines, and they also expedite both the installation and the retrieval of minefields. Bent (non-linear) mine rows are rarely used unless they are hand emplaced on a small scale.

Minefields are not normally continuous but are employed along with other obstacles and terrain features as part of a total obstacle plan. Tilt-rod mines are rarely used, because they are not compatible with high-speed, mechanized emplacement techniques. Antitamper devices and antipersonnel (AP) mines are not normally included in antitank (AT) minefields, since they would slow down recovery operations.

The Soviets occasionally speak of laying a certain number of mines per kilometer of frontage, but they are not necessarily saying that every minefield will be a kilometer in length. Rather, these figures represent the norms for mine density.

Officially approved U.S. literature distinguishes between two major forms of Soviet minefields—"hasty" and "deliberate"—but these designations are misleading and somewhat inappropriate. The implication is that a hasty minefield is one that is almost always randomly laid, with no specific pattern or density and little forethought as to how its emplacement supports the operational plans of parent or higher units.

In practice, all Soviet minefields are to some extent

"deliberate"; that is, Soviet commanders are not indiscriminate about using or placing them. They carefully calculate how minelaying assets can best be used in the total scheme of offensive or defensive operations. Unlike U.S. practice, there is little evidence that Soviet tanks, armored personnel carriers, and infantry fighting vehicles carry mines for the purpose of emplacing local hasty, protective minefields. Sub-units are dependent on parent or higher units for mine delivery and minefield protection.

A better way of distinguishing Soviet minefields is by the amount of time needed to emplace them and the different types of mines that will be found in them. For purposes of this article, therefore, minefields can be divided into two principal categories: those that are rapidly laid and those that support prepared defensive positions.

Both rapidly laid minefields and minefields that protect prepared defensive positions are marked for friendly passage. An alternate method for allowing friendly passage of a minefield is to use "controlled minefields," which can be armed and disarmed remotely.

Rapidly Laid Minefields

Rapidly laid antitank minefields in support of Soviet maneuver operations or hasty defensive positions are the ones the Soviets will most likely use on the future battlefield. Such minefields are distinguished from minefields that protect prepared defensive positions in that rapidly laid minefields are almost always laid on the surface of the ground by mechanical minelayers and normally do not include antipersonnel or tilt-rod mines.

In addition, rapidly laid minefields are usually made up of only one or two minebelts in contrast to the two or three belts used for protecting a prepared defensive position. A rapidly laid field, therefore, has fewer mines, and its overall area of coverage is smaller. The TM-62M AT mine is the one most frequently used in such fields.

A rapidly laid AT minefield supporting a hasty defensive position will contain about 500 mines per kilometer (or one every two meters) of frontage. According to

Soviet combat engineer doctrine, a typical AT minefield has a frontage of 200 to 300 meters or more and a depth of 60 to 120 meters or more. Therefore, if a one-belt AT minefield 250 meters long is laid, it would contain about 125 mines. The mines are placed in three rows per belt with 20 to 40 meters between rows. The mines are separated from each other by a distance of four to five and one-half meters for anti-track mines such as the TM-62M (Figure 1).

Rapidly laid minefields are used for flank protection and hasty defense and are laid by GMZ vehicles, PMR-3/PMZ-4 trailers, or chutes.

Some Soviet engineer literature holds that it is more expedient to emplace mines in small concentrations of about 50 to 100 AT mines with a density of not more than 60 mines per 100 linear meters of minefield. Rather than lay one minefield with 300 mines covering a zone of up to 600 meters, some Soviet engineers believe it is sometimes more effective to place five minefields of about 60 AT mines in each, with gaps of 100 to 150 meters between the fields. In this way, an area of 1,000 meters or more can be covered.

The normal sequence when mechanically laying mines is for the minelayers to emplace the forwardmost belt or row first and to work back to their own defensive trenches or positions. The reasoning is that this is the safer method. If an enemy suddenly attacks, the minelayers can withdraw without risking running into a previously laid belt or row. The distance of the far boundary of the minebelt from Soviet defensive positions is determined by the maximum effective range of the available direct-fire weapons.

The boundaries for mechanically laid minefields are marked for friendly forces, and their positions are reported to subordinate, adjacent, and higher units. Records for the individual mines within a minefield can be less precise, of course, particularly if they are laid while the Soviet unit is in close contact with the enemy.

Maintaining high rates of minelaying requires an adequate number of towing vehicles, conveniently situated mine stockpile sites, and very efficient reloading operations.
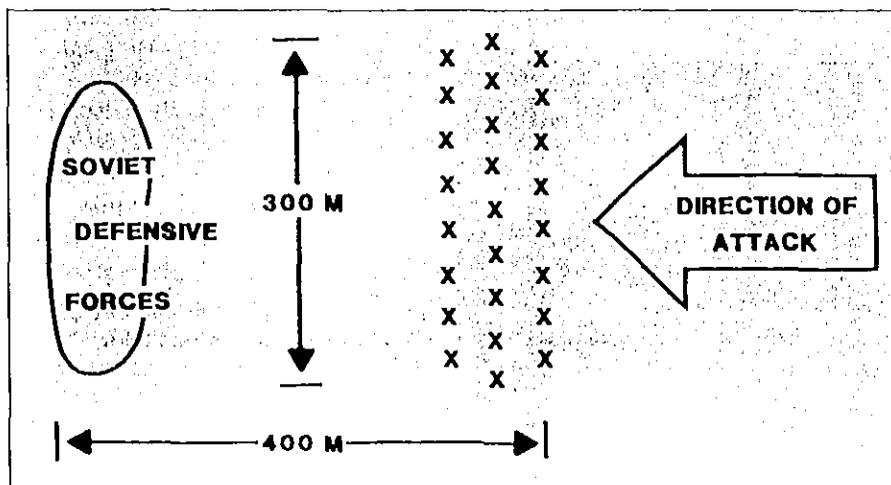

Figure 1. Rapidly laid antitank minefield.

Because of the limited number of towing vehicles organic to a minelaying platoon, additional vehicles from other units are often required, but it is unclear which units would provide them.

Minefields in Support of Defensive Positions

Minefields in support of prepared defensive positions are different from rapidly laid minefields in the following principal ways:

• Their purpose is to protect a defensive position the Soviets intend to maintain for some time. Much more time is taken to bury and camouflage the mines, and greater consideration is given to integrating the minefields into the total scheme of the obstacle/barrier plan.

• Mine density is also greater—about 550-750 anti-track mines or 300 to 400 anti-hull mines to each kilometer of minebelt frontage. Such a minefield sometimes has up to three separate belts, with the forwardmost belt extending to just within the effective range of the defending unit's long-range antitank weapons (Figure 2).

• A greater variety of mine types is represented. One out of every five AT mines is the plate-charge, anti-hull TMK-2 mine. Antipersonnel mines are also widely used, although AP and AT mines are not usually mixed within a row.

Since more time is devoted to preparing these minefields, non-engineer soldiers are often used to help combat engineers lay the mines. While most Soviet two-year conscripts are trained in the handling and emplacing of mines, they usually do not do so without engineer support and supervision. Motorized rifle or tank troops, for example, may assist the engineers when a minefield is being laid manually, but the engineers will probably be responsible for the most critical stages of the process such as fuzing and recording.

While AT mines are the primary means by which the Soviets wage mine warfare, they also use AP mines in a defensive role, particularly in support of prepared defensive positions. The AP mine obstacles then serve primarily to protect the AT mines that are placed behind them. AP minefields can be composed of high-explosive mines

(PMN and PMD-6) and fragmentation mines. In areas that are not suitable for tank operations, AP mines may constitute the majority of mixed-mine obstacles.

Soviet combat engineer doctrine prescribes the following mine densities and dimensions for AP minefields: Depending on their purpose, antipersonnel minefields can be emplaced with a front of 30 to 300 meters or more and to a depth of 10 to 50 meters or more. There are usually two to four rows in such a minefield. The distance between the mines in a row is at least one meter for high explosive mines and one to two times the lethal radius for fragmentation mines. The density of AP mines per kilometer of minefield is 2,000 to 3,000 for PMN or PMD-6 high-explosive mines and 100 to 300 for OZM-4 or POMZ-2M fragmentation mines.

Manual Emplacement of Mines

Antipersonnel minefields and other minefields that support prepared defensive positions are often manually emplaced. Although this process is much more time consuming than mechanical minelaying, it is necessary when a unit is in direct contact with the enemy and when a division's armored GMZ minelayers are not available.

Normally, the Soviets manually emplace minefields after the maneuver commander and the engineer sub-unit commander assigned to him carefully coordinate their planning. It appears that the Soviets may lay manually emplaced minefields much closer to their defensive positions than those laid mechanically.

The Soviets also manually emplace a minefield when there is no contact with the enemy and mechanical minelayers are not available or when their use is not advisable because of terrain restrictions. Soviet engineer literature claims that an engineer platoon can hand-lay between 200 and 300 AT mines in one to one and one-half hours. If more mines are delivered forward to maneuver forces, up to 600 AT mines can be laid within four or five hours after a unit goes over to the defense. This would be enough to protect up to half the frontage of a battalion from an enemy surprise attack.

Soviet doctrine states that manual emplacement is not

Figure 2. Minefield in support of a prepared defensive position.

to be used in maneuver-type operations or when time is short. Manual emplacement also requires a large number of personnel and cannot be used during daylight or when there is direct enemy fire. In recent years, mechanized emplacement and remote minelaying methods have become more and more prevalent.

When hand emplacing mines, the Soviets stress making careful and detailed records of the mine positions, and marking minefield boundaries for friendly forces. Mines should be recovered whenever possible. A mine warfare platoon can recover about 200 AT mines an hour.

Clustered Minefields

The Soviets sometimes manually lay mixed minefields in a clustered configuration. Since an AT mine weighs about 10 kilograms (22.2 pounds), Soviet combat engineers have developed special barrel-shaped cassettes and carts that they claim can considerably reduce the time for laying a clustered minefield. The cassette, for example, carries four AT and 12 AP mines and is rolled forward perpendicularly from the trenches.

A typical clustered minefield is sown using the TM-62M AT mine and the PMN or POMZ-2 AP mine. A cluster of three AP mines are laid around each AT mine. The distances and spaces between AT mines and rows in a clustered minefield are similar to those in a general defensive AT minefield.

Remote Minelaying

The Soviets continue to develop methods of remote minelaying that include delivery by air and artillery. Remote mining is offense oriented with maneuver forces using this technique to protect their flanks from an enemy counterattack. The Soviets write that remote minelaying can also be used against columns and areas of enemy concentration, command posts, firing positions, and other enemy objectives. The key to success in employing mines, in their view, is the element of surprise, which leads to great losses in enemy manpower and equipment.

They sometimes use helicopters fitted with minelaying chutes, particularly MI-8 "Hips," to lay an AT minefield quickly on the surface of the ground. When laying mines, helicopters fly in pairs at a speed of four to six knots and at a height of six meters above ground level. A flight of two Hips can lay a two-row minebelt of 800 AT mines in five minutes. The MI-4 "Hound" can carry 200 mines, and its chute can lay one mine every two seconds.

The principal advantages of helicopter mine delivery over ground delivery are earlier arrival at the area to be mined and greater tactical flexibility. A division commander can have mines laid rapidly to protect his flanks and can have them laid deep in the enemy's area to inhibit the enemy's movements.

One of the disadvantages of this method is that minelaying helicopters must fly at a low speed, which makes them vulnerable to approaching enemy formations. In addition, the mines are not buried, which limits their effectiveness in open terrain, and the fields may not be covered adequately by fire.

Laying Scatterable Mines

Helicopters and close support bombers can deliver scatterable antitank mines for use in an interdictory or area denial role. (The BM-27 multiple rocket launcher can also deliver scatterable antitank mines.) Scatterable mines give the maneuver elements an on-call system that can be used rapidly at any location on the battlefield. In contrast with conventional densities of 2,000 AP mines per kilometer of frontage, scatterable mines in densities of 4,000 per kilometer have been reported. The Soviets have widely used helicopter-delivered PFM-1 AP mines in Afghanistan.

Because of logistical constraints, the Soviets will not use these systems indiscriminately. Motorized and tank divisions have an organic helicopter squadron of 18 helicopters, some of which may be called upon by a division commander to perform minelaying missions. On the other hand, these helicopters will probably have a variety of other missions that will take priority over minelaying. Similarly, helicopters and air assets at front and army levels may be preoccupied with higher priority demands. Problems with marking and neutralizing scatterable and remotely laid minefields may also reduce Soviet freedom of movement and affect the use of these systems.

The perception that the Soviets will often employ extensive, echeloned minefields is inconsistent with their current doctrine, which stresses maintaining fast-paced and continuous offensive operations. Elaborate minefields were common in World War II when the Soviets were forced to fight great defensive battles with siege-like qualities, such as those of Leningrad, Stalingrad, and Kursk. The Soviets' current employment of minefields is determined by the tactical situation and the available ground assets.

The dimensions and densities of Soviet minefields are not rigidly set. While the length of a rapidly laid minefield is typically 300 meters, for example, its actual dimensions will depend more upon the particular tactical conditions and the available engineer support. If an AT minefield 100 meters long is considered sufficient to block a potential enemy flank attack, the Soviets will not waste time and resources laying a larger one.

While Soviet soldiers are not known for personal initiative, they certainly can be expected to make the most of the mines and minelaying equipment that they have.

Infantry In Action

RIFLE COMPANY AT BREST, FRANCE

Early in August 1944, General George S. Patton's Third Army broke out of the Normandy beachhead at Avranches and struck to the east, the west, and the south. Advance was so rapid that the German defensive positions and plans were useless and the demoralized enemy resorted to concentrating his forces at key points in an effort to delay as long as possible. Some of these key points were the port cities of St. Malo, Brest, Lorient, and St. Nazaire. Of these, Brest was the most important.*

Brest, a city with a peacetime population of approximately 85,000, is located astride the Penfield River on the southwest tip of the Brittany Peninsula (see Map 1). The city is divided into two sections by the river. East lies the old city, ringed with an ancient moated wall constructed in the 17th century by Louis XIV as protection against possible invasion by England. This wall contained many bunkers, pillboxes, and heavy gun emplacements. The old portion of the city is undermined by many tunnels and passageways, which were used by the Germans as hospitals, storerooms, and underground headquarters. West of the river, in the new city, is the suburb of Recouvrance, which is as large as the old city. Because most of the naval installations are located in Recouvrance, it is bordered by a long chain of coastal defenses extending to the tip of the peninsula. South lies the harbor in the mouth of the Landerneau River. It is protected and partially enclosed by the Crozon Peninsula, which is also heavily fortified for coastal defense.

Outside the wall which surrounds the old city lies the more modern part of Brest, with a large business district extending to the east and ending in the suburb of St. Marc. Beyond St. Marc to the east is a series of ridges and hills which dominate the approaches to the city.

The VIII Corps, Third Army, under Major General Troy H. Middleton, made an attempt to reach and seize Brest before enough German forces could be assembled within its fortifications to man its defenses. However, because of stiff German resistance this proved to be impossible. When elements of the VIII Corps arrived in the vicinity of the city on 6 August 1944, they found it defended by a fanatical enemy prepared for a long and costly


Map 1.

siege. (It was later learned that the commander of the Fortress of Brest had been ordered by Hitler to hold the city for at least 90 days in order to deny the Allies the use of this large port.)

The port of Brest had been developed by the French until it was their chief naval port, and when taken over by the Germans, it had been further developed into a mighty submarine base. Therefore, the immediate capture of Brest and its port facilities was considered highly desirable by the Allies for two reasons:

- A large port for the landing of troops and supplies was necessary for the continuance of the European campaign.
- The enemy submarine base was a definite threat to Allied shipping.

German forces within Brest consisted of the 2d Parachute Division, at approximately 35 percent of its normal strength, and the 266th and 343d Infantry Divisions. Reinforcing these divisions were naval and marine units. Artillery in support of the garrison was estimated as 11 battalions—mostly 88mm and 105mm—including the

Map 2
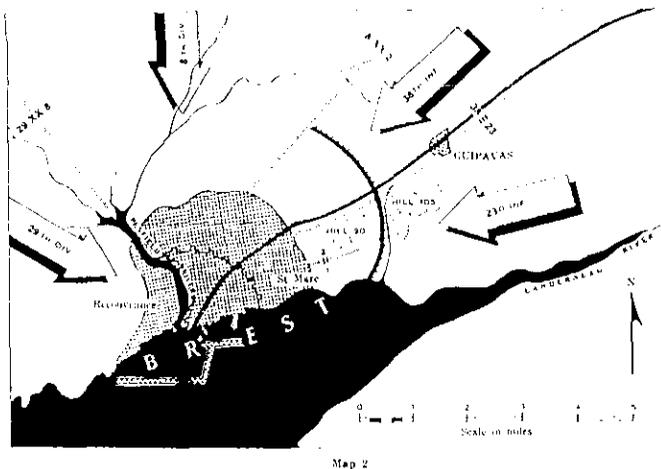
artillery regiments of the three divisions. Also, heavy coastal guns were pointed inland to aid the defenders. The total strength of the German forces was estimated to be 50,000 men and these were under the command of Major General Herman V. von Ramecke, former commander of the 2d Parachute Division.

The U.S. VIII Corps, which was to attack Brest, consisted of the 2d, 8th, 29th, and 83d Infantry Divisions and the 6th Armored Division. Three of these divisions were disposed to form an arc around the city, with the 29th Division on the right (west), the 8th Division in the center (north), and the 2d Division on the left (east).

The corps plan of attack was for these three divisions to attack Brest simultaneously while two task forces were committed to clear the Crozon and Daoulas Peninsulas. The attack was to be preceded by a 20-minute artillery preparation. For the final phase of the attack the 2d Division was designated to mop up the city.

During the period 19 to 25 August, the 2d Division moved into position for the attack and began to feel out the enemy defenses. Task Force B was assigned the mis-

sion of clearing the Daoulas Peninsula so that the coast artillery guns could not be fired into the flank of the 2d Division as it moved in on Brest.

On 25 August an attack was launched upon the outer ring of fortifications. On 5 September, VIII Corps was detached from Third Army and assigned to the newly activated Ninth Army under Lieutenant General William H. Simpson, but the corps mission was unchanged. By 8 September the outer defenses had been cracked, and the 2d Division was in position to launch a drive into St. Marc and Brest.

2d Division Plan of Attack

The division plan of attack was to strike to the west with the 23d Infantry Regiment on the left, the 38th Infantry Regiment on the right, and the 9th Infantry Regiment in reserve (see Map 2). The assault regiments were to push through St. Marc up to the wall of the old city and then prepare for a final assault on that strongly held position.

The 23d Infantry Regiment planned to attack with two battalions abreast, the 1st Battalion on the left and the 2d Battalion on the right. The 3d Battalion was to be in reserve.

The plan for the 2d Battalion, 23d Infantry Regiment, was to attack with Company F on the right, Company G on the left, and Company E in reserve (see Map 3). One

Map 3
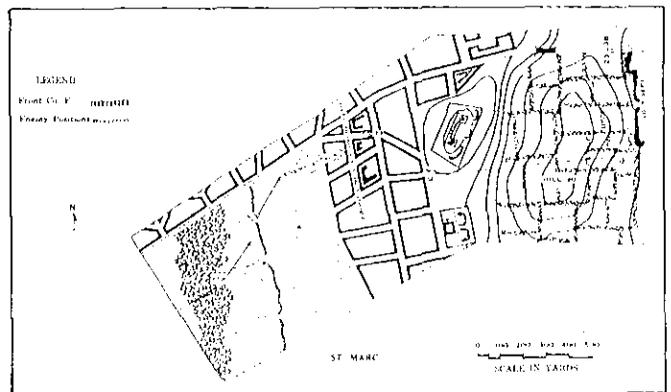
platoon of heavy machineguns from Company H was attached to each of the two assault companies. The 81mm mortar platoon was in general support of the battalion. The battalion's initial objective was Hill 90 just outside of St. Marc. After securing this hill the attack was to continue into St. Marc upon order from the battalion commander.

Situation of Company F, 23d Infantry

On 8 September 1944, Company F, 23d Infantry Regiment was occupying a defensive position on Hill 105, for which, six days before, it had fought a bitter two-day battle. At about 1800, orders were issued effecting relief of the 2d Battalion by the 3d Battalion, 23d Infantry. The

2d Battalion was ordered to move to an assembly area in rear of the eastern slope of Hill 105 and, during hours of darkness, to relieve the 2d Battalion, 38th Infantry Regiment, which was located on the low ground between Hill 105 and Hill 90.

By the time the relief between the 2d and 3d Battalions, 23d Infantry, was accomplished and the move to the assembly area completed, darkness had set in and it was impossible to make a complete reconnaissance of the area in which the night relief of the 2d Battalion, 38th Infantry Regiment was to take place. The relief was to be company for company; thus, Company F, 23d Infantry was to relieve Company F, 38th Infantry.

While Company F was moving forward under the command of the company executive officer, the company commander went forward and contacted the commander of Company F, 38th Infantry. He made arrangements for guides from each platoon in position to lead the platoons of the relieving company into position and to orient them on the situation before withdrawing from the area.

Company F, 23d Infantry moved into the area occupied by Company F, 38th Infantry at 2115. A great deal of confusion existed because both companies were designated as Company F. Control and communication were difficult in the darkness. The officers and noncommissioned officers of Company F, 23d Infantry, who did not have time to reconnoiter the area in daylight, were wholly dependent on the guides furnished by the unit they were relieving. To make matters more difficult, many of the noncommissioned officers of the unit being relieved had little or no knowledge of the enemy situation or the terrain to the front. The relief was finally completed at 2300.

The strength of the company at this time was about 170 enlisted men and seven officers. Approximately 30 percent of the company were veterans who had landed at Omaha Beach on D plus 1. The other 70 percent were seasoned replacements who had seen considerable combat in Normandy and Northern France.

Of the seven officers, the company commander was the only one who had landed with the company at Omaha Beach on D plus 1. The rest were replacements but they were combat seasoned, courageous, and capable. Morale, discipline, and esprit de corps were excellent. The company had been very successful in all its previous combat operations and the men had developed a deep sense of pride in and loyalty to the unit.

Orders to attack at 0630 the following morning were received soon after Company F, 23d Infantry, occupied its new position. Since the scheduled hour was before dawn and since the men had no visual conception of the terrain to the front, it was difficult to plan the attack. Another disadvantage was the fact that, although the company was to engage in a major attack, the men were unable to get much rest, because it was so late when the relief was completed. However, preparations for the attack were completed in the early morning hours and Company F was ready to move out at 0630, 9 September.

The line of departure was a hedgerow which extended across the front and perpendicular to the direction of the attack (see Map 3). The company formation was to be two platoons abreast, with the 3d Platoon on the right and the 2d Platoon on the left. The 1st Platoon, in support, was instructed to follow the 3d Platoon by bounds, keeping under cover as much as possible. One light machinegun squad from the weapons platoon was attached to each of the two assault platoons. The 60mm mortar section was to remain in position and support the company by firing on targets that appeared after the attack started. Because it had no positions from which to fire, the attached platoon of heavy machineguns from Company H was told to follow the support platoon. There was to be no artillery preparation on Hill 90 prior to the attack, because surprise was desired.

The Attack

At 0630, 9 September, Company F crossed the line of departure. The men moved out slowly, and then cautiously worked their way through German barbed wire entanglements which had been blasted by artillery on previous days. As the advance continued and no opposition was encountered, they moved forward more quickly, encouraged by the prospect of taking Hill 90 without a battle. As the leading elements neared the crest, a few scattered shots were fired, but the troops continued to advance and soon reached the top of the hill. The assault platoons found that the Germans had withdrawn during the night leaving only a few men as a covering force. Some of this force surrendered and the remainder withdrew to the next line of defense.

Companies F and G arrived at the top of Hill 90 simultaneously and prepared to consolidate their positions behind the hedgerows running along the crest of the hill. The Germans had withdrawn across a deep draw with almost perpendicular sides and had occupied positions on the high ground in the eastern fringe of St. Marc. At this time the assault companies along the top of Hill 90 were subjected to a heavy volume of machinegun and rifle fire. German artillery also opened up on the newly won positions, but most of the rounds landed in front of or behind Company F.

At about 0900, Company F received orders to continue the attack and move into St. Marc. Elements of the 38th Infantry on the right of Company F were across the draw and almost into St. Marc. In fact, their left flank was about even with the enemy positions to the direct front of Company F. The commander of Company F moved the attached heavy machinegun platoon into position with the two front-line platoons and directed all available firepower on the German positions. At the same time, he sent the support platoon around the right slope of Hill 90 to cross the draw behind the left flank of the 38th Infantry and to attack the enemy positions from the flank. This maneuver was successful, and the 1st Platoon obtained a strong foothold on the left of the 38th Infantry, thus

eliminating some of the fire on the other platoons. The 3d Platoon was directed to shift to the right behind a hedgerow and infiltrate across the draw to join the 1st Platoon.

The main German position was in and around a large chateau that stood on a knoll. With the 3d Platoon as a base of fire, the 1st Platoon assaulted this chateau and captured or killed all of the defenders. Among the 24 prisoners taken were two German officers who were in charge of the defense of the portion of the line in Company F's sector.

With the taking of this position the outer ring of the enemy defense was pierced and the way into St. Marc was open.

Company G, 23d Infantry, was still on Hill 90 and was unable to move forward in its zone because of German fire from positions in a large cemetery across the draw. To support the advance of Company G, the 2d Platoon, Company F, moved to the left (south) and succeeded in getting behind the Germans. From this position the men concentrated their fire on the flank of the German position and inflicted heavy casualties. Company G, however, was still unable to cross the draw.

In order to make the most of the successes already attained, Company F continued the attack into St. Marc, guiding to the left of the street which was the boundary between the 23d and 38th Infantry Regiments. At this time Company F, 23d Infantry and Company L., 38th Infantry were the only two attacking units in St. Marc. The other companies had been held up by the defenders.

To exploit Company F's advances, the battalion commander ordered Company E, then in reserve, to follow Company F into St. Marc, extend on the left flank of Company F, and perform the mission originally assigned to Company G. Since Company G was unable to overcome the German resistance in the cemetery, it was ordered to bypass the cemetery and follow Company E.

Company F moved into St. Marc with two platoons abreast, the 3d Platoon on the right, the 1st Platoon on the left, and the 2d Platoon in rear of the 1st Platoon to protect the exposed left flank. Houses and other large buildings in the area made it difficult to maintain control and at the same time search out the defenders' positions and hiding places. The German units to the front seemed to be withdrawing, though, and Company F advanced

steadily. Approximately 200 prisoners, mostly Italians, Poles, and Russians who were in the German Army, were captured during this advance.

By 1700, Company F had advanced 1,200 yards and was ordered to halt and prepare to defend for the night (see Map 3). These preparations consisted of placing platoons and squads in houses and buildings from which they could cover the streets running across the front and the streets and alleys leading into them. The heavy machineguns of the attached machinegun platoon were brought forward and placed in windows and doorways from which they could cover the streets to the front. The company command post was located in a cellar at the rear of the defended area.

Company E moved into position on the left of Company F just before dark, and the two companies coordinated their defense. Thus, Company F had protection on both flanks and a company frontage of about 400 yards. In conformity with the company SOP, additional communication equipment was brought forward and installed before dark. The equipment consisted of two SCR-300 radios, one small eight-drop switchboard (German), five German telephones similar to the EE-8, twelve sound-powered telephones, and six SCR-536 radios. This equipment, with the exception of the radios, was carried on the quarter-ton truck and trailer that also carried the extra ammunition and closely followed the company. The truck was under the control of the company supply sergeant.

The communication system was operated by the communications sergeant and eight men from company headquarters. When the company halted, wire communication was established with all platoons and from platoon headquarters to their squads and outposts. Any disturbance along the company front was immediately reported, through the platoons, to the company command post. When installed, the company switchboard and the platoon headquarters phones were constantly attended by personnel on duty. The lines were checked every half hour during the night, and if a line went out radio contact was established until repairs were made.

HOT FOOD

In keeping with the policy of serving the men a hot meal as soon as possible after halting for the night, supper was brought forward from the regimental train bivouac area and was taken to the platoons by carrying parties. Hot coffee accompanied the food, and water was brought up to fill canteens. Extra ammunition was delivered to the platoon areas and distributed under the supervision of the platoon guides.

At about 2300 an outpost established by the 3d Platoon reported German activity to its front. A few minutes later a strong German element forced the outpost to withdraw to the platoon defense area. Fortunately, the company had been alerted by the outpost and was ready to meet the attack.

A heavy volume of rifle and machine-pistol fire accompanied by a shower of hand grenades came from buildings across the street. The 3d Platoon returned the fire and retaliated with fragmentation grenades. This exchange lasted for approximately 30 minutes, then ceased abruptly as the attackers withdrew.

The platoon leader reported that casualties within the platoon consisted of two men killed and three slightly wounded. Unfortunately, the men killed were the platoon sergeant and the platoon guide. The death of these two men was a great loss to the unit, as both were battle-wise veterans who had landed with the company on the Omaha beachhead as privates. Their positions were filled by the two senior squad leaders.

At about 0430 orders were received to continue the attack at 0900. Company E was to attack on the left and Company L, 38th Infantry, on the right. Since the 3d Platoon had been hit rather hard by the loss of its platoon sergeant and platoon guide, the company commander decided to pass the 2d Platoon through the 3d Platoon when the attack started. The 3d Platoon would follow closely in support to assist in mopping up behind the two assault platoons.

SLOW PROGRESS

At 0900, 10 September, the company moved forward and succeeded in crossing the street and moving into the buildings without opposition. The company front at this time extended across two rather small blocks of buildings, all joined together and solidly built.

Progress was slow due to difficulty in finding doorways or passages from one building to another. The streets running in the direction of advance were swept by enemy machinegun fire and covered by snipers. The only way to cross the street was to throw a smoke grenade and then dash through the cloud of smoke to a covered position on the other side.

After advancing about 200 yards, the company moved through the building area and faced a large, open expanse of lawn and shade trees. This park was approximately 800 yards wide and extended completely across the front of Company F and part of Company E on the left.

It was evident that the Germans had set up a strongpoint on the far side of the park. A large structure which appeared to be a concrete pillbox with a system of trenches extending on either side could be seen with binoculars. To feel out the position, a volley was fired, and the enemy returned fire from the pillbox and other points all along the trench system. The park appeared to be a strong defensive position, and there was absolutely no cover or concealment for attacking troops. After looking over the situation, the company commander requested artillery on the position.

Artillery fire was placed on the German defenders but it seemed to have little effect. A section of tank destroyers with three-inch guns was attached to the company and ordered to move into position in the rear of the assault

platoons. The officer in charge came forward, and the pillbox and other likely targets were pointed out to him. The tank destroyers then moved into firing position and placed direct fire on the German position. The company moved forward under cover of the fire of the tank destroyers and a platoon of heavy machineguns which had been placed on the second floors of the buildings that had just been cleared.

Under cover of the supporting fires, the two assault platoons succeeded in reaching the pillbox and the trenches. They quickly mopped up the defending troops in the area, killing many and taking a few prisoners.

The 1st Platoon then came under fire from another concrete emplacement about 200 yards to the front. The platoon sergeant contacted one of the tank destroyers and directed its movement into position to fire on this new threat. The German position was completely destroyed by the powerful gun of the tank destroyer.

Again the company moved forward through a small wooded area and up a gradual slope to a highway that branched to the south from the main street and formed the boundary on the right. In this advance, assault fire was used, and all rifles, submachineguns, and automatic rifles spouted a stream of lead into possible German positions to the front. As a result of this protective fire, very little resistance was encountered as the leading elements advanced into the area of large buildings.

The company crossed the road and moved into the buildings, and the advance was halted temporarily for reorganization. Because the SCR-536 radios did not function properly inside buildings, it was necessary to lay wire forward to the assault platoons to provide a dependable method of inter-company communication.

As the company resumed the advance, German snipers in the higher buildings to the front and in basements with windows facing open areas and road junctions, became very active. The Germans were attempting to hold some buildings in the center of the block, and the fighting was almost hand-to-hand within the contested buildings. In this kind of fighting, submachineguns and fragmentation grenades were very effective.

By 1800 the company had cleared several blocks of buildings and was facing a large walled cemetery that occupied more than a city block. The cemetery had wide streets around its walled area and was flanked by long rows of high buildings on all sides. The assault platoons encountered fierce resistance from positions within the cemetery and along the streets, and from the upper floors of the surrounding buildings (see Map 4).

After a total gain of about one mile during the day's fighting, Company F was forced to go into a defensive position for the night. Casualties within the company had been light, but heavy losses had been inflicted upon the defenders. About 40 prisoners had been taken, including naval, paratroop, and air force personnel.

At about 2000, German coast artillery guns shelled the company position with large caliber shells, judged to be about 280mm. Several houses were completely destroyed, and hits on buildings containing men from the 2d Platoon
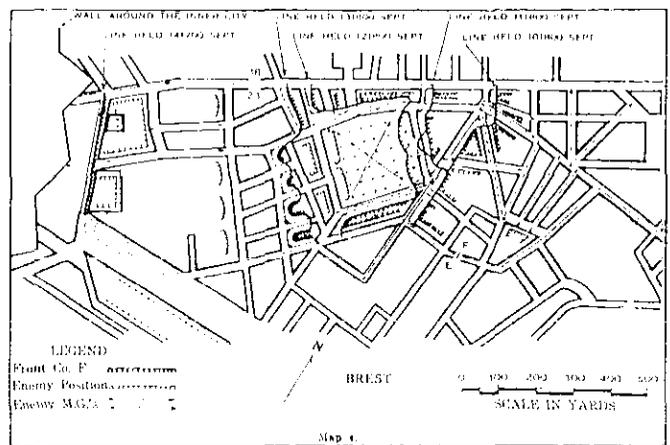
caused several casualties. This was reported to battalion headquarters and supporting artillery soon replied with counterbattery fire that silenced the German guns.

Orders were received at 0700 on 11 September to continue the attack at 0900.

Prior to the attack, the 81mm mortar platoon and the company 60mm mortar section fired concentrations in and around the cemetery, but due to the heavy wall and the well-protected positions occupied by the defenders, the fire was not very effective. At 0900 the company attacked. The 2d Platoon's objective was the right half of the cemetery and a row of buildings further to the right. The 1st Platoon's objective was the left portion of the cemetery and the row of buildings on the left. The 3d Platoon, in support, was to assist in mopping up. The machineguns were to support the attack from positions on the upper floors of buildings. However, their sectors of fire were limited by the heavy wall around the cemetery.

Both assault platoons were initially successful in gaining footholds in the buildings on both flanks, and a squad from each platoon moved into the edge of the cemetery through gaps that had been blown in the wall during the night by the heavy shells from the German coastal artillery guns.

Here the advance was stopped by heavy fire from German positions in the far edge of the cemetery. Some of the German weapons were emplaced in large stone burial vaults built above the ground, while others were dug in along the streets and at the corners. German machineguns commanded the street to the front and also crossed fire along the walks within the cemetery. These walks traversed the cemetery at all angles and thus provided the defenders with excellent fire lanes. Ricochets from the tombstones and flying splinters from the granite slabs, which entirely covered the surface of the cemetery, caused several casualties and forced the two squads within the cemetery to withdraw to the protection of the wall at the outer edge.

The advance through the row of buildings on either side was halted by a lack of doorways or passages between the buildings, and the streets were impassable because of German machinegun fire. Heavy firing by both sides con-

tinued throughout the day but no further advance was made. At 1800 Company F was occupying small sections in the buildings on the right and left flanks and had two squads just within the cemetery wall.

Company E on the left and Company L, 38th Infantry, on the right had also been held to short gains during the day. All assault companies were generally on a line.

The plan for the attack on 12 September was for the 1st and 2d Platoons to capture the buildings to the right and left of the cemetery, while the 3d Platoon maintained steady fire on the German troops in the cemetery.

A plan to move through the interior of the buildings by blasting holes in the partitions was agreed upon, and four demolition men from the Ammunition and Pioneer Platoon of Battalion Headquarters Company were attached to Company F. A large supply of TNT was moved into the company area during the night, and preparations for putting the plan into effect were completed.

The attack was resumed at 0900 the next day, 12 September, and fierce resistance was again met all along the front. The plan of blasting holes in the interior walls of the buildings on the right and left met with remarkable success. As quickly as the holes were blasted the men poured through into the next section, often taking the defenders by surprise, then advanced to the next barrier where the blasting operation was repeated. Although this method was comparatively slow, it resulted in fewer casualties than would have been incurred in a direct frontal attack.

By late evening the 1st and 2d Platoons had gained control of the buildings on both sides of the cemetery as far forward as the streets at the far edge of the cemetery. After seizing the buildings which commanded a view of the cemetery and the streets leading into it, the two platoons had a sniper's holiday picking off German soldiers whenever they exposed themselves. However, a small German force held out, and Company F spent the night of 12 September in the buildings surrounding the cemetery.

Except for the friendly artillery which fired relentlessly on the inner city, the night passed quietly. In the darkness it was difficult to get food and ammunition to the two forward platoons because the carrying parties had to thread their way through many doorways, passages, and holes. Carrying parties from company headquarters and the support platoon worked far into the night moving the necessary supplies forward.

The attack continued the next morning, 13 September, at 0900, with the 3d Platoon advancing through the cemetery against slight resistance, thus straightening the company front. The 1st and 2d Platoons started to advance abreast through the buildings in the next block. Progress was slow because it was still necessary to blast holes through the walls of the buildings--the streets to the front were still covered by German machinegun fire. Small isolated groups in strongpoints and snipers in the windows of tall buildings continued to resist.

In an attempt to support the advance of the 1st Platoon,

the 81mm mortar platoon fired several concentrations of high explosive ammunition on enemy positions. One of these concentrations fell short, and several rounds landed within a courtyard in the 1st Platoon area. The platoon leader and one of his squad leaders were slightly wounded, so an unassigned officer in the company was placed in command of the 1st Platoon.

Tank destroyers were used to fire on buildings at street intersections, to dislodge snipers, and to knock out machineguns, which were usually emplaced so they could maintain grazing fire for several blocks down the street and across intersections.

The advance continued slowly but steadily for two blocks, but then the assault platoons were halted by a series of burning buildings across the entire front. In a desperate effort to halt the advance, the Germans had set fire to the buildings in the path of advance. Since it was impossible to move through the blazing buildings, the troops were halted until the fires burned out. Fortunately, the area occupied by Company F did not catch fire or it would have been forced to withdraw. The fires burned all afternoon and most of the night; meanwhile, the company rested and prepared to continue the attack when it could.

At 0845 on 14 September, the company advanced through the burned area, which was about one block in depth and extended the width of the company front. The buildings were still hot and smoldering, but some areas were passable. The walls which were still standing provided protection for the men as they advanced.

After crossing the burned area, the company moved into an area of buildings where groups of Germans still controlled the street intersection from well-emplaced positions. One of these positions was a large church with a high dome, and it afforded concealment for many riflemen. This building, about one block from the wall of the old city, was believed to be the last German stronghold outside the wall.

By 1000, Company F was halfway through this block, but progress was slow and much demolition was necessary. In the 1st Platoon sector it was necessary to blast through seven walls to destroy the last enemy position.

By 1300 all the area in front of the wall, with the exception of the church on the right, was held by Company F. An assault on the church by the 2d Platoon was successful, and by 1700 the church was cleared of enemy and Company F was facing the wall of the inner city.

Just before dark the 3d Battalion, 23d Infantry relieved the 2d Battalion, with Company K relieving Company F. The relief was completed by 2130 and the men of Company F marched back through the streets for which they had fought. Their part in the battle for Brest was ended, and they moved into an assembly area in St. Marc.

Four days later, on 18 September, the German defenders of Brest capitulated and all resistance ceased. The fortress city which was to be held for 90 days, fell in 21.

TRAINING NOTES

TOW Training Strategy

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During the past year there has been much discussion about the performance of the TOW at the National Training Center (NTC) as a part of the combined arms team. The lower than expected probability of hit (Ph) data with TOW MILES and the basic TOW that has been collected at the NTC has led the Infantry School to ask the following questions:

• What is a reasonable standard of performance for the TOW as a part of the combined arms team?

• Why is there a variation between the desired standard of performance and the current TOW performance at the NTC—and at the newer Joint Readiness Training Center (JRTC) as well?

• What training strategy do we need to get us to the desired standard?

Today, the band of performance for the TOW at the NTC ranges between a .2 Ph for TOW MILES and a .4 Ph for the live basic TOW missile. These hit probabilities are much lower than the Ph called for in the TOW and TOW MILES requirements documents and have led to many questions concerning the effectiveness of the infantry's antiarmor capability. The School believes that somewhere between the standard called for and the actual hits on the NTC's simulated battlefield lies the desired standard for TOW as part of the combined arms team.

In coming up with that acceptable standard, the School has had to consider many factors, such as established Phs and probabilities of kill (Pks), the addition of the man/crew/unit operating under stress, the battlefield obscurants used, the type of TOW system employed, the ammunition used, the tactical mission performed, and especially the limitations of TOW MILES. (The TOW MILES cannot penetrate obscurants; it has a fixed time of flight—12 seconds—that is not range dependent; it does not cue the gunner when the 12 seconds have elapsed; and it cannot be collimated with the night sight.

Considering all of these factors, a reasonable standard for TOW MILES performance at the NTC (force on force and live fire) should be about .5 Ph under conditions of moderate obscuration. Variables that will increase or decrease a unit's ability to achieve this standard include the unit's training, its application of doctrine, its maintenance posture, and the METT-T (mission, enemy, troops available, terrain, and time) conditions it encounters on the simulated battlefield.

In an effort to zero in on lucrative areas for improvement, the Infantry School has designed a TOW training strategy that is intended to do the following:

• Improve individual/crew/section/platoon TOW MILES gunnery under battlefield conditions.

• Increase leader proficiency in TOW unit employment.

• Increase soldier and leader confidence in the TOW system.

• Improve the performance of TOW MILES at the combat training centers.

• Ultimately obtain more TOW kills in war.

We are beginning to understand what TOW MILES can and cannot do for us, but we still believe that it is a satisfactory simulator for the basic TOW missile. Units must be proficient with TOW MILES because, like it or not, TOW MILES will continue to be used to measure unit proficiency at the combat training centers.

There are some initiatives in progress that will make it better in the future. These include an improved MILES laser, a built-in end-of-missile-track indication (which will tell the gunner when his required 12 seconds of tracking time is up), and a TOW night sight collimation improvement scheduled to begin soon.

The School's proposed TOW training strategy will add to the present requirement for TOW gunners—which is to qualify on the M70 training device—by introducing a series of MILES gunnery tables and situational training exercises (STXs) that will qualify individuals and crews.

These tables and STXs (see chart) were designed to be sequential and progressive with specific, measurable standards for the qualification events. They also provide for the integration of the precision gunnery training system (PGTS) and advanced gunnery. If the strategy is fielded, a TOW gunner will be required to fire Table 5 successfully to be qualified or verified. This table, which contains a mix of Tables 2-4, is a pure MILES gunnery table containing six TOW MILES shots at armored vehicle targets that are at various ranges and moving at variable speeds. It is best when used on the multi-purpose range complex (MPRC) but is adaptable to almost any home station situation. Four of six hits for qualification should be a reasonable indicator of gunnery proficiency on a clear battlefield and a logical building block to

the higher levels of proficiency. The M70 training device will continue to be used to train and sustain tracking and point-of-aim skills.

The focus of the crew qualification STXs is on gunnery, battle drills, and tactics. The scoring of the STXs is

TOW Tables and STXs	
Table 1:	Gunnery Training (M70)
Table 2-4:	Preliminary Gunnery Qualification Tables (MILES)
Table 5:	Gunner Qualification (MILES)
Table 6:	Advanced Gunnery (PGTS, when fielded)
Table 7:	Squad Intermediate STX
Table 8:	Squad Qualification STX
Table 9:	Section Intermediate STX
Table 10:	Section Qualification STX
Table 11:	Platoon Intermediate STX
Table 12:	Platoon Qualification STX

based upon the successful accomplishment of individual, crew, and leader tasks.

An in-house validation is now being conducted at Fort Benning on the proposed MILES tables and STXs. Part of this validation will involve the use of live TOW missiles to confirm that the new strategy will result in more live missile hits against uncooperative moving targets than are achieved with the present strategy.

If the new strategy does show a significant increase in TOW effectiveness with live missiles, we will begin an external validation process: A light MTOE unit and a heavy MTOE unit will be asked to use the strategy in preparing for their rotations through the JRTC and the NTC, respectively. Then, while the units are at the training centers, their TOW performance will be compared with that of like units that have not used the strategy. (Additional information on the TOW training strategy is available from the Enlisted Training Branch, DOTD, USAIS; AUTOVON 835-1612/1788.)

If this external validation proves that the new strategy does lead to the attainment of higher TOW standards, it will be implemented throughout the Army in 1989.

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Light Infantry FDC

LIEUTENANT HOWARD G. WATERS
STAFF SERGEANT WILLIAM M. TOPKA

In an infantry battalion mortar platoon, its fire direction center is also its nerve center. If the FDC is to provide responsive and effective indirect fire support, it must be configured so as to facilitate the rapid and accurate computing of fire control data.

With the advent of the light infantry concept and the introduction of the

high mobility multi-purpose wheeled vehicle (HMMWV), the FDC in a light infantry battalion was moved from the M561 Gamma Goat to the HMMWV but without a specific configuration or standing operating procedure for its organization in that vehicle.

The mortar platoon of the 4th Battalion, 27th Infantry, 25th Infantry

Division (Light) has developed an FDC structure that not only meets the battalion's needs but also complements the light infantry's streamlined, rapid deployment characteristics.

In developing an effective FDC configuration for the HMMWV, the battalion had to meet a number of key requirements:

- First and foremost, the FDC had to be functional for the mortar computer personnel.
- After modification, the vehicle had to be as deployable as the original standard HMMWV model.
- All available space had to be used to the fullest, because the vehicle had to accommodate its entire crew and all its equipment.
- According to battalion SOP, the FDC also had to be able to serve as the alternate battalion tactical operations center (TOC) in emergencies.
- All of these requirements had to be met without any structural changes that might cause permanent damage to the HMMWV.
- Finally, no programmed funds were allocated for the development; modifications had to be paid for with the unit's existing funds.

The most significant modification the platoon made to the HMMWV was the addition of a double work desk along the right side of the entire cargo area. The desk consists of two side-by-side work stations separated by a storage cabinet. The chief computer occupies the left or forward station and the check computer works at the right or rear station. This allows for an easy comparison of data between the two computers.

Each station desk top is built at approximately a 30-degree angle to provide optimum work space for the computers. The electronic mortar ballistic computers (MBCs) are mounted at the lower right corner of each work station desk top, which leaves the left and center of each station for manuals, papers, and the like. Frames made of wooden molding prevent the MBCs from shifting or falling while the vehicle is in motion but allow them to be removed easily.

The upper half of the desk top of each work station is hinged to allow access to the personal equipment storage areas inside. As only the upper half opens, this does not interfere with computing or other work. Beneath the desk at each work station is a secure storage area for the M16 plotting boards that are kept as backups for the MBCs.
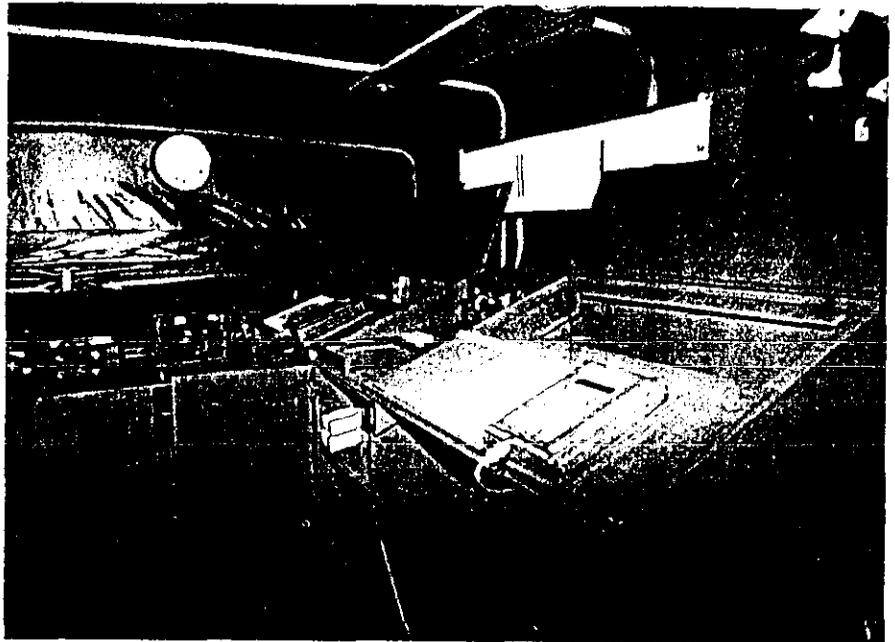
Interior of FDC vehicle showing double work desk, storage areas, and battalion information board.

The storage cabinet between the work stations is ideal for storing PVS-5 night vision goggles, manuals, computer records, and any additional supplies required to run an efficient FDC. The TA-312 telephone to the firing guns, located on top of the storage cabinet between the two computers, is mounted in the same manner as the MBCs. The top of the storage cabinet also makes an ideal location for pencils, pens, paper, and other expendable supplies.

Above the desk, mounted to the canvas support bows, is the FDC's battle information board. All pertinent data and information such as call signs, unit locations, ammunition levels, and gun squad status are conveniently kept here. The board is divided into three sections and hinged for storage during transport.

Two 24-volt lights, controlled by an on-off switch to the vehicle batteries, are mounted on a board above the desk to provide ample light where it is needed. (These lights were secured from a "washed-out" maintenance contact van.)

Opposite the desk and mounted on the left canvas wall of the vehicle is a mapboard (covered with acrylic plastic), which is used for recording targets and plotting reference points and unit locations. A swing-arm, 24-volt lamp, purchased locally from the post exchange, is attached to the top of the mapboard and is also connected to the vehicle's electrical system.

Forward of the mapboard behind the driver's seat is a weapon rack for storing the crew's four M16 rifles. The rack, originally in a Gamma Goat, is held in place with one-and-one-half-inch cotton tie-down straps and can be removed easily. A battery-operated clock on the canvas behind the cab completes the interior modifications.

The platoon also made several additions to the exterior of the vehicle to speed the mortar platoon's occupation and setup process. A removable canvas cover (SOP for all battalion vehicles) attaches to the front windshield with velcro straps. This is vital when the vehicle must be camouflaged or light discipline must be enforced. Similar covers for the driver and passenger windows attach in the same way. Steps from a two-and-one-half-ton truck were cut down and clasps added so that a small ladder easily attaches to the rear of the HMMWV.

A DR-8 roll and an RL-39 spool mounted on a one-by-two-foot board are hung on the right rear of the vehicle as soon as the vehicle moves into position. A preset hot loop, already

Exterior of vehicle showing canvas covers on windows and spool of wire on right rear.

the exception of the swing-arm lamp, were obtained through the supply system. An additional AN/GRC-160 radio (with a secure capability) was added to the FDC vehicle not only to allow the platoon to operate on the battalion command net but also to give a built-in redundancy if the FDC has to be used as the alternate battalion TOC.

This FDC vehicle effectively fills the needs of the battalion's mortar platoon. The FDC now has a place for everything, and when fully loaded, everything is in its place. The final product is a highly mobile, versatile, and efficient fire direction center that is easily deployable, cost effective, and built for the sustainment of combat operations.

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spliced into the wire, allows the platoon's wire communications net to be set up within minutes of arrival. This hot loop attaches to the TA-312 telephone mounted inside the vehicle. The vehicle panels immediately behind the driver and passenger doors were replaced with plywood doors to provide additional storage space for the crew's rucksacks, rations, water cans, and fuel cans.

All of these modifications to the HMMWV were completed in less than 40 man-hours, and all materials, with

Resistance to Interrogation

CAPTAIN P. J. MULLINGS, British Army

If a soldier suddenly finds himself a prisoner of war, his first reaction usually is incredulity. He says, "This is not possible." But possible it certainly is. At this point, he is suffering from what is known as "the shock of capture."

Nobody has ever told him much about what to expect if he is captured. He may have been told that only Special Forces and Rangers need to concern themselves with that sort of thing. He may have heard someone mention the Geneva conventions and name, rank, serial number, and date of birth, but it's all a little vague. Anyway, what does it matter? He doesn't have any information of value anyway.

It seems a shame that highly trained, well motivated troops are so sadly lacking in training in "conduct after capture," as it is called in the British Army. How ironic for a highly trained paratrooper floating earthward, adrenaline pumping, ready to go "all the way" to land in the teeth of the enemy and find that his training stops there.

The shock of capture is not a disease

that can be prevented, but a little knowledge of its existence may help soldiers overcome what can turn out to be the most dramatic part of the war for them.

The idea of interrogation usually conjures up visions of the Spanish Inquisition and Vietnam era newsreels showing pallid, sunken-eyed pilots running a gauntlet of rabble-roused peasants. Or mental pictures of terrorist-type "Black and Decker" knee jobs and the connection of electric cattle prods to the testicles.

But these preconceived ideas could not be further from the truth. Torture causes pain, and a soldier in pain will concentrate on it to the exclusion of everything else until he will eventually say anything at all to make it stop. This gives the interrogator the onerous task of separating fact from fiction. Therefore, an interrogator may use the psychological fear of pain instead, because the fear is more effective than the actual pain.

No, the days of torture are long gone in real terms, as are the days of drugs and hypnosis. Today's military tactical questioner may speak impeccable English and will have done his homework. He will be able to identify a "talker" quickly and begin the conditioning process. His first step will be to ensure that the shock of capture is maintained, using various methods—cold, squalid conditions; deprivation of food and sleep; stressful positions; and loud, electronic squelch (white noise) in between periods of silence.

Under the terms of the Geneva conventions, and in particular the one that deals with the treatment of prisoners of war, the only information a prisoner is required to give is his number, rank, name, and date of birth (commonly known in the British Army as "The Big Four"). Thus, "What is your date of birth?" can elicit an answer, but "How old are you?" cannot, even though the meaning is quite similar. A soldier who does answer the latter question finds himself on the slippery slope to the next unauthorized question.

It is important to remember that telling lies is almost invariably unsuccessful, mainly because one lie leads to another and the liar, even in ideal conditions, needs a good memory. Therefore, under stress it is virtually impossible to lie and get away with it (as most of us can recall from incidents in childhood).

A safe answer to all other questions is "I cannot answer that question, Sir (Madam)." (This response is British policy.) In this context, "cannot" could mean "will not because I am stubborn," or "cannot because I do not know," or "cannot because the Geneva convention says I do not have to." "Cannot" is therefore a word weapon on the soldier's side. He can be absolutely certain that any experienced interrogator will know this and will try to short circuit his system.

In real terms, even though the information a soldier knows may be low level, it will be of value in the short

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A prisoner is a tongue.
(Old Polish Proverb)

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term, so the interrogator has to work fast. To get this information, he will use a variety of ploys, including the following:

Threats. He may threaten all manner of atrocities and inhuman treatment or may try to get a reaction by threatening the soldier's family.

Insults. Going for the soldier's integrity as an officer or accusing him of cowardice is a sure-fire method of getting a reaction, as is calling his wife a whore.

Blackmail. He may threaten to tell the soldier's comrades that he has talked or threaten to have one of them shot if the soldier does not tell what he knows.

Sympathy. This is a useful technique, especially if the soldier has a wound that requires medical attention or has some other pressing personal need.

Of course, there are innumerable

other techniques an interrogator may use. This means that an important question must be asked: How much training in resisting interrogation, and what type of training, is every one of our soldiers entitled to?

There can be no doubt that the practical application of this sort of training can be dangerous in the wrong hands. Accordingly, all practical training must be conducted under strict medical supervision, because it is not for the fainthearted. To those who are considering this problem in the warmth and relative security of their homes or offices and saying to themselves, "I'd never talk," just try it for a few hours and then try to tell your brains that it is only an exercise.

Although the practical side has hurdles that must be overcome, theoretical training is possible. With a little imagination, a knowledge of the subject, and a liberal smattering of training aids and films, much can be achieved. This kind of training will not eliminate capitulators (willing or unwilling), but it will open the door to awareness at all levels. Hopefully, soldiers will at least be able to recall this valuable part of their training and will remain aware of what is happening to them from the first stages of capture, through their initial screening and questioning, and finally to the prisoner of war camp.

The modern-day experiences of captives such as those held in Lebanon may tell us more. Although one might suppose that a terrorist will not abide by conventions, he will apply the same principles. Knowing that, there is much a prisoner can do to alleviate the mental pressure exerted by a captor.

As one example, in the early 1970s the British Ambassador to Uruguay, Geoffrey H.S. Jackson, was held captive by Tupemaro guerrillas. He had warned both the Foreign Office and his wife that he felt he was about to become a hostage and made his wife promise to leave the country as soon as she knew he had been taken. This she did, and it deprived the guerrillas of a lever; no matter how many times the ambassador's captors told him that

she was also a captive, he knew that she was safe in England and he was therefore able to resist the pressure. (Ambassador Jackson's book *People's Prison* makes interesting reading.)

Every single officer and soldier from the task force commander to the chaplain's assistant has a right to be told what to expect if he is taken prisoner and what he can do to resist the many and varied interrogation techniques that will be used against him. With the advent of advanced collective training facilities such as the National Training Center and the Joint Readiness Training Center, maybe we should come to terms with this fact and make room in this training to practice (in a controlled environment) this most important part of our soldiers' training.

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Chemical Warfare

MAJOR MICHAEL D. HESS
CAPTAIN H.A. RUSSELL III

The prospect of fighting on a chemical battlefield is still viewed with horror by many soldiers and commanders alike. But this perception may be based upon a general misunderstanding of the *why* of chemical warfare. It has been established that chemical weapons are a major threat only to those who are unprepared for their introduction on the battlefield, as has been the case, for example, in Southeast Asia, South Yemen, Iran, and Afghanistan.

In order to prepare himself and his unit to meet this eventuality, an infantry commander needs to understand certain basics in regard to infantry operations in a chemical environment --how to avoid contamination, how to protect his men and equipment against chemical agents, and how to decontaminate them.

Contamination Avoidance

Avoiding contamination, whenever it is tactically feasible, is the most important principle for a unit to follow when it operates in a chemical environment, because this allows for continued operations at a reduced level of mission-oriented protective posture (MOPP). The longer soldiers can avoid using their protective masks, the more functional they will be and the less physiologically stressed. Avoidance will also, obviously, preclude time-consuming decontamination.

The first step in avoiding contamination is to present the least attractive target to the enemy. This requires stringent communication security and full attention to the passive defensive measures of dispersion, cover, and concealment. Anything a unit can do to avoid detection is important to its survival.

The basics of avoiding contamination are detecting it through advance warning and reporting, identifying it through chemical reconnaissance, and then marking it so that other units can also avoid it.

Advance contamination warnings can be obtained through various nuclear, biological, and chemical (NBC) reports, starting with the basic NBC-1 (Chemical) Report and progressing to the more detailed NBC-5 (Chemical) Report. These reports identify when and where a unit was attacked and the limits of any subsequent chemical contamination. A simple and workable NBC warning and reporting system can be used to inform all subordinate, neighboring, and higher units of a chemical attack or the results of a chemical survey (Figure 1).

The proper use of such a warning and reporting system can do much to save a unit valuable resources and time, because it gives advanced predictions of chemical hazards and enables a commander and his staff to make intelligent decisions on tactical movements and logistical support.

As for chemical reconnaissance, any unit that has an M256A1 chemical detection kit can do it. This kit is dispatched with a unit's advance party or lead elements in tactical situations, since chemical reconnaissance should be considered an ongoing operation along with tactical maneuvering and day-to-day unit employments.

Additionally, all reconnaissance efforts should consider chemical as well as nuclear and biological contamination as part of the overall mission. This will give a unit an incentive to identify the potential threat and will

allow it to adjust to specific mission requirements as they develop.

Before conducting a chemical reconnaissance, however, a commander should find out from local inhabitants and friendly units (including allies and higher headquarters) about any actual or suspected enemy use of chemical munitions. Once a commander has gathered all the necessary information on his intended area of operations, he should apply his unit standing operating procedures and reports for conducting a reconnaissance.

If the presence of chemical weapons only is indicated, MOPP-2 is sufficient protection for soldiers conducting a chemical reconnaissance (Figure 2). The current MOPP-3 requires that soldiers wear protective masks, and there is no need to diminish their performance with masks before the presence of chemical agents is actually confirmed. In other words, soldiers should not be required to mask until it is really necessary, but masking should be ordered at the slightest suspicion. Soldiers should not be made to feel that chemical reconnaissance is a suicide mission. The U.S. Army has the best NBC defense equipment and the most comprehensive doctrine on the subject, and both should be used.

Chemical Protection

If chemical agents are encountered, a commander should do the following:

• Take individual and unit protective measures (assume MOPP-4, sample the area with the M256 kit, and the like).

• Determine the type of chemical agent present and the extent of the contamination, if possible. This will help him assess the probable duration of the chemical hazard.

• Try to find a path through or around the contamination to the objective.

• Locate "clean" areas upwind of the chemical attack to use for rest and relief sites.

Once an area of chemical contamination has been identified, it should be
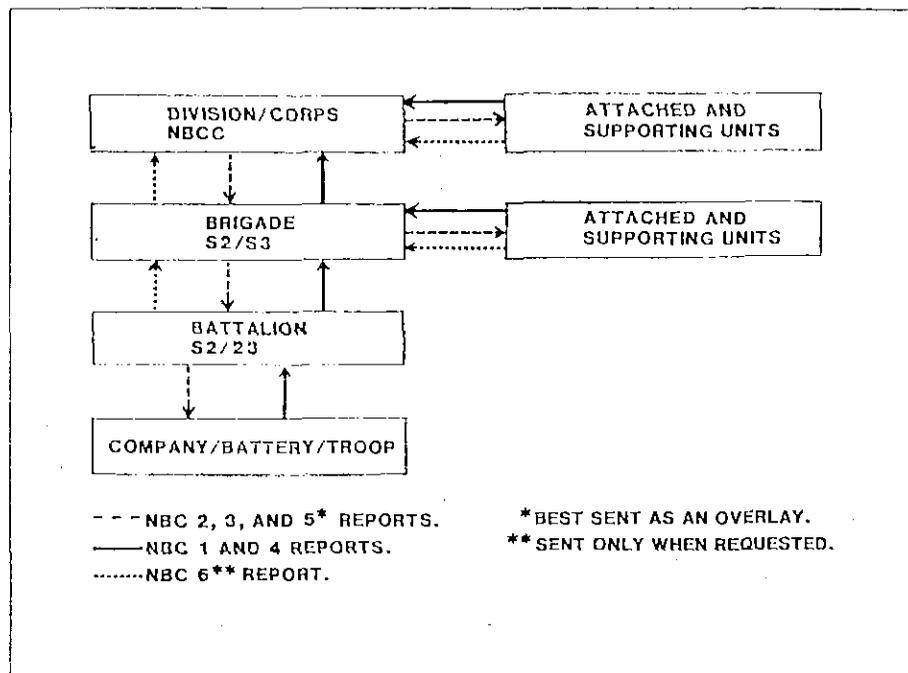
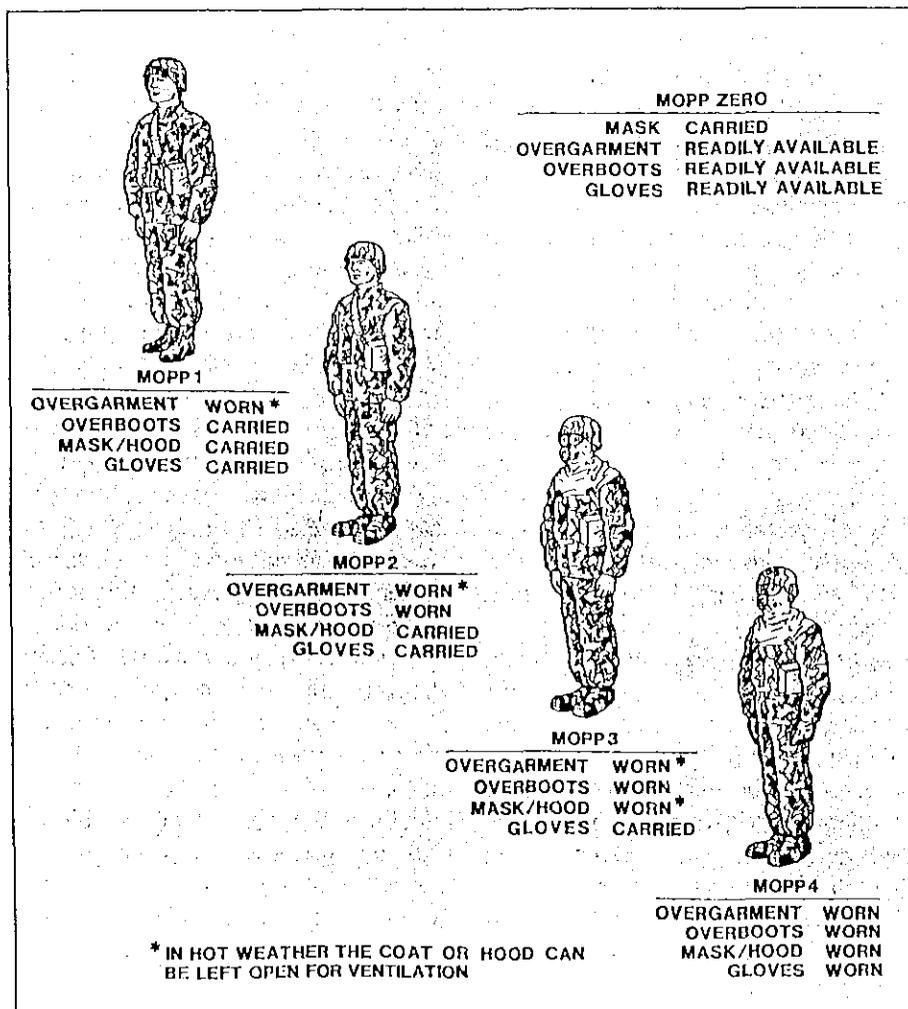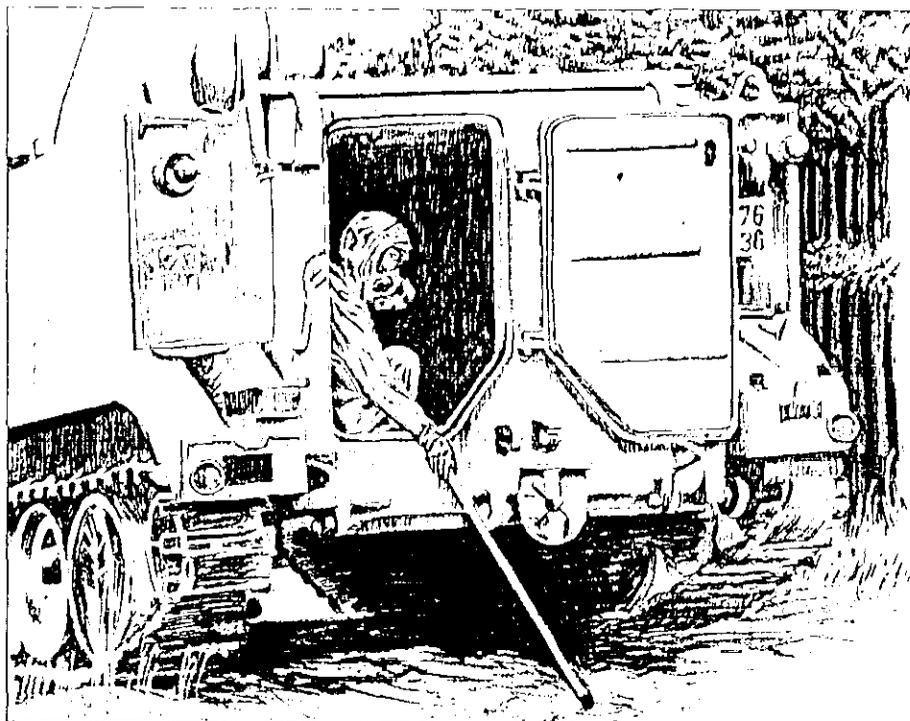

Figure 1. NBC Reporting System.

Figure 2. Current MOPP levels.

You don't have to dismount to check for chemical contamination.

marked with the triangular yellow gas markers so that another unit will not inadvertently wander into it. The front of each chemical marker should be marked with the type of agent, the date and time it was discovered, and how far from the marker the contamination begins. Additionally, the unit's chemical detection team should mark only the logical avenues into the contamination and advise the commander of the type of agent. If it is a persistent agent, for example, the unit will probably have to avoid the area entirely.

If chemical protection becomes necessary, a commander is concerned with two types—individual and collective.

Individual protection includes everything that can be done to prevent chemical agents from incapacitating or killing a soldier. A commander's first concern is the individual soldier's chemical protective mask, protective clothing, boots, and gloves. The chemical protective equipment in MOPP-4 conditions will protect soldiers from the effects of known chemical agents. Six hours in MOPP-4, however, which is a minimum requirement, will place extreme stress on individual soldiers, particularly when there is heat build-up.

Collective chemical protection involves vehicles or shelters that can give groups of soldiers long-term protection from the effects of chemical weapons. This protection can be anything from an overpressure system (which only the M1A1 Abrams tank has) to collective protection equipment for use inside a bunker or basement-type structure.

Current protection by way of a ventilated facepiece is the standard in U.S. fighting vehicles other than the Abrams. This method of protection forces the crew to wear a mask and protective clothing even inside a buttoned up armored vehicle. Although this reduces breathing resistance, there is still the problem of trying to operate a vehicle weapon system while wearing a protective mask.

Another form of collective protection involves a fixed structure equipped with an overpressure system, which can be used as a rest station or as a command and control center. The advantage of using this system is that it is not susceptible to the effects of shrapnel as the current M51 inflatable shelter is.

Decontamination

Chemical contamination should be removed from an individual or equipment (or neutralized) as soon and as far forward as possible. The three types of decontamination are basic soldier survival, hasty, and deliberate.

Basic soldier decontamination consists of skin decontamination using the M258A1 kit for immediate survival; personal wipedown to remove or neutralize contamination on a soldier's chemical protective ensemble and personal weapons; and operator's spraydown to remove or neutralize chemical agents that are on surfaces soldiers must touch frequently to carry out their missions.

Hasty decontamination limits the contamination transfer hazard by removing gross contamination from vehicles using power-driven equipment to conduct a vehicle washdown. Personnel contamination is reduced by an exchange of MOPP gear after the vehicle washdown. Through these measures, soldiers are able to fight longer and sustain their mission although contamination is still present.

Deliberate decontamination consists of detailed troop and equipment decontamination to reduce the contamination to negligible levels. These operations, for logistical reasons, are normally conducted at brigade, division, and corps support areas.

A commander should decontaminate only to the extent necessary to return his soldiers, equipment, or vehicles to combat. Chemical contamination should never adversely affect a mission. Unless a commander understands the proper procedures now, however, his first brush with chemical weapons in a future conflict may be his last.

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Captain H. A. Russell III is assistant division chemical officer, 6th Division. A 1977 graduate of OCS at Fort Benning, he has previously served in chemical officer assignments in the 9th Infantry Division and I Corps.

Supporting Light Infantry

MAJOR JAMES H. SILCOX

Battalion and brigade task forces from the 25th Infantry Division (Light) deploy to locations throughout the Pacific Ocean areas to participate in joint and combined exercises. These exercises provide superb training in environments that pose both low- and mid-intensity threat scenarios.

While training is certainly the primary objective in all exercises, logistical planning and support for such exercises are also challenging and equally important in terms of contingency training. This is particularly true during deployments to countries where there is no in-country U.S. military support structure, no status-of-forces agreement, and a 7,000-mile air line of communication (ALOC) to Schofield Barracks.

For the past few years, the 25th Infantry Division has participated in Exercise Cobra Gold--an annual exercise held in the Kingdom of Thailand. In July 1987, the division deployed an 850-man battalion task force to Thailand, the largest conventional Army force ever to participate in Cobra Gold. Unlike other training exercises in the Pacific, Cobra Gold requires that the battalion task force plan as well as execute a two-phased program -Phase I is a two-week, combined cross-training period focused on a basecamp; Phase II is a three-week combined field training exercise. This was a superb training opportunity for the staff officers since it presented a variety of challenges in providing support to light infantry forces.

The 25th Division's experience in Cobra Gold 87 is offered here as an example of the logistical planning and support required for an exercise of this kind. Other units can adapt the techniques to suit their own needs.

In addition to the infantry battalion, the task force included an artillery battery, an engineer platoon, a joint preventive medicine detachment, a 50-man Marine Anglico unit, military police, divisional tactical satellite operators, an air defense artillery section, Reserve Component linguists, nine helicopters, a forward support team, and a laundry unit.

PLANNING

The planning began six months before the exercise was scheduled to begin. Contact was made with the agencies that were designated to constitute a logistical support network for the task force: the exercise representative of the U.S. country team, an officer assigned to the Joint U.S. Military Advisory Group (JUSMAG) in Thailand; the U.S. Embassy's commissary/exchange manager in Thailand; a senior logistical officer from the Thai Army; a contracting officer from WESTCOM, the division's major U.S. Army command (MACOM); a logistical planner from WESTCOM who was to serve as a support liaison officer at the JUSMAG during the exercise; and a divisional forward area support coordinator (FASCO) for the battalion task force. The battalion executive officer had overall staff coordinating responsibility. (A similar roster of logistical planners would be appropriate for any such deployment.)

By TOE (table of organization and equipment), a light infantry battalion has little inherent maintenance or transportation capability. Moreover, with no in-country support base, all classes of supply would depend upon the initial quantities deployed, local contracting, or a long ALOC using commercial aircraft. Commercial air would pose host country customs challenges, however, and was planned only as a back-up or emergency resupply system. Another restriction, of course, was the amount of airlift allocated to the exercise and how much of it could be used to transport supplies.

The planning process included two formal conferences and one informal visit during the six-month period. The first step in planning for the support of any exercise of this scope is to study the historical data. In this case, the after-action reports produced by Cobra Gold battalion task forces in the past were vital documents for the follow-on planning effort. (They also underscored the need for such detailed historical analysis.)

Either before or during the initial planning conference (IPC), the logistical planners representing the task force had to identify the aircraft and the MILVANs (dismounted containers) that would be available for the deployment. This data, historical documents, command guidance, and the two nations' interoperability objectives roughly determined the task force's composition.

Before the IPC, the infantry battalion's XO and S-4, the major command and division logistical planners, and

the FASCO drafted a logistical memorandum of agreement (MOA). The MOA addressed each class of supply; transportation requirements (including tanker, wrecker, and crane support); ammunition storage and residue disposal; provision for and reimbursement of Class III (including JP4 fuel); Class VI supplies (for the mini-PX at the basecamp); the use of electricity; basecamp improvements in accordance with AR 350-28; Class I supplements; potable and non-potable water supply; customs clearances; combined medical evacuation (MEDEVAC) procedures; use of host nation medical facilities; helicopter maintenance and recovery procedures; emergency leave routing; mail; allocation of imprest funds; and responsibilities for handling important visitors.

Additional topics for the MOA included the host nation's preparation of range and cross-training facilities; the provision and upgrading of the vehicle motor pool and wash rack; the provision of host nation linguists; the preparation of bilingual signs; helicopter ramp space and air traffic control coordination; host nation barber support; the hosting and funding of social events; the use of host nation athletic and recreational facilities in the basecamp; host nation basecamp security; the provision of cold storage facilities and refrigerator vans; and refuse removal.

Many of these issues had to be coordinated with several agents before an effective MOA could be developed. For example, during Cobra Gold 87, 20 Thai trucks were provided by the Royal Thai Army (RTA) to support the task force. Clearly, the RTA representative who signed the MOA was involved, as were the FASCO, the task force XO and S-4, the JUSMAG representative (as liaison between the RTA and the task force), and the WESTCOM signer who coordinated with U.S. Pacific Command to provide Title 10 funds for reimbursing the Thai costs.

After coordinating the MOA at the initial planning conference, task force representatives focused on our own support efforts. These included

morale support measures, finance team support for currency exchange and check cashing, coordination with U.S. customs representatives to clarify our redeployment procedures, purchase of expendable supplies, coordination for multi-denominational religious support, public affairs coverage, and task force augmentation by U.S. linguists.

Once the final task force composition—rolling stock, personnel, helicopters—had been determined, the task force logistical planners began to look at aircraft use; use of MILVANs; requirements for in-country local purchase and the consequent imprest funds needed by the task force (in accordance with AR 350-28); and the shipment of ammunition. (Ammunition had to be confirmed six months before the exercise start date, since the Military Sealift Command and the Military Airlift Command channels require a great deal of lead time to prepare for ammunition shipments.)

The conservation of airlift to move our soldiers and rolling stock was crucial. We made every effort, therefore, to use MILVAN space and to procure locally the items that would cost more to ship than to purchase (Class IV, for example). Arms racks, office supplies, Quartermaster equipment, paper products, field furniture, batteries, Class VIII, water and fuel drums, and concertina wire were

shipped in MILVANs.

During the intermediate planning visit 90 days before the exercise, a preventive medicine survey of the exercise area was conducted to evaluate the medical threat to deploying soldiers. (Ideally, this should be a combined effort including the host nation's medical representatives.)

For Cobra Gold 87, the preventive medicine effort included a division representative, as well as preventive medicine officers from Tripler Army Medical Center, the U.S. Pacific Fleet, and the U.S. Armed Forces Research Institute of Medical Sciences in Bangkok. As a result of the preventive medicine survey, immunizations for task force soldiers, Class III requirements for the deployment, and available medical facilities in the exercise area were identified.

Once the logistical planning at the operational level had been completed (following the final planning conference), logistical preparation and execution at the tactical level had to be carried out. For the most part, this amounted to the management and allocation of the resources and services that had been coordinated during the planning process. (In other exercises, it may also include creative efforts to arrange support that has not been anticipated.)

Supporting a light infantry task force in the field during such an exer-
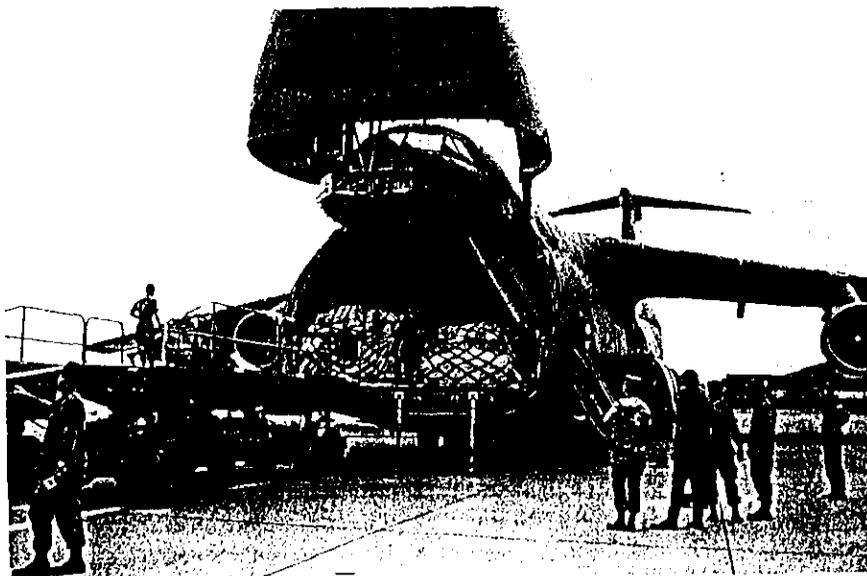
Unloading supplies at Korat, Thailand, Cobra Gold 87.

cise requires precise logistical wargaming, taking into consideration the effects of METT-T (mission, enemy, troops, terrain, and time) on both the likely and the conceivable support challenges. A number of techniques within MTOE constraints and the doctrinal limits of FM 7-72 will succeed. The ones pointed out here are only one such set of techniques.

It is critical for a light infantry task force, for example, to be augmented with truck support from the host nation. In most such exercises, even those that have been allocated a generous amount of airlift, only about half of a battalion's organic vehicles will be able to deploy. Accordingly, a truck master from the FAST should be part of the task force to coordinate the use of organic and supporting transportation assets. And the trucks provided by the host nation should be tactical vehicles, if possible, to support field training events.

In Thailand, the extreme heat and the threat of torrential rains made water resupply and pre-planned slingload operations vital. A potable water point in the exercise area and a dedicated water purification team within the support platoon were the keys to an ample, uninterrupted supply of water. Commercially bottled water was not an economical or prudent option.

Water and fuel drums must be deployed along with enough slings and cargo nets to lift water, fuel, rucksacks, rations, ammunition, or vehicles. Poor secondary road systems, restrictive terrain, severe weather, and extreme heat can make slingload operations a tactical necessity, however, and they must be included in the planning.

A successful technique used during Cobra Gold 87 placed the battalion's headquarters company XO and battalion motor officer at the combat trains in charge of slingload and MEDEVAC

FIELD TRAINS	COMBAT TRAINS	MAIN CP
Support Platoon Leader	Bn XO -------------	Bn XO
FAST OIC/NCOIC	Bn S-4	HHC Cdr
S-4 NCOIC	Bn S-1	HHC 1SG
Ammo NCO	HHC XO/BMO	
COMSEC Custodian	Bn Surgeon	
Wireman	Bn PA	
Reenlistment NCO	Med Plt Ldr	
PAC Supervisor	Mod PSG	
TACCS Operator	Chaplain	
Legal Clerk	Bn Maint Sect	
Mail Clerk	Wire Team	
	Spt PSG	
	HHC Armorer	
	Co Supply SGTs	
Mess Section ---------	Mess Sect	
(depending on the tactical situation)		

operations, the trains area and its security, and forward vehicle maintenance. The field trains were run by the FASCO with slingload and CDS operations managed by a rigger-qualified noncommissioned officer.

The support platoon leader pushed all classes of supply 40 miles from the field trains to the combat trains, as well as 5 miles from the water point to the combat trains. The S-4 and the S-1 ran the administrative-logistical operations center in the combat trains, which also served as the alternate tactical operations center. Company supply sergeants with unit HMMWVs (high-mobility multi-purpose wheeled vehicles) and trailers handled resupply from the combat trains to the unit logistics release point. (A typical breakdown of key logistical personnel in a battalion task force augmented by a forward area support team is shown in the accompanying chart.)

Medical evacuation must be planned from the point of incident to the home station medical facility, including facilities for stabilizing patients enroute. During Cobra Gold 87, evacuation was by HMMWV to the aid station at the combat trains, then by helicopter from the combat trains to the Thai hospital in Korat (in the vicinity of the field trains). Theater medical evaluation procedures included

using stabilizing facilities in Bangkok (which exceeded the capabilities at Korat), U.S. Air Force C-9A aircraft evacuation to Clark Air Force Base in the Philippines and then, if necessary, to Tripler Army Medical Center in Honolulu. Although the task force experienced neither death nor serious injury, every leg of this system was used during the exercise.

Supporting light infantry is a difficult task anywhere. This is especially true in the austere environment of a developing host nation when the strategic lift limits the number of organic vehicles participating in an exercise. Performing this task successfully requires thorough, detailed planning and coordination followed by flexible, creative execution.

In spite of the many support challenges of such an operation, an orderly approach to the task that emphasizes historical lessons learned, and that coordinates the diverse logistical players, will result in excellent support for a deployed task force.

Major James H. Silcox is executive officer, 4th Battalion, 22d Infantry, 25th Infantry Division, in Hawaii. He has served as platoon leader, company commander, and brigade S-3 in the 82d Airborne Division and as an instructor at the United States Military Academy.
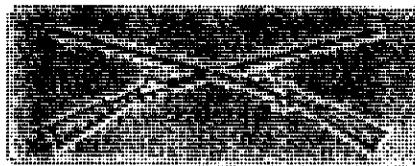
ENLISTED CAREER NOTES

AIRBORNE SOLDIERS NEEDED

Infantry Branch, U.S. Total Army Personnel Agency (TAPA), is looking for soldiers who are airborne qualified and want to be assigned to the 82d Airborne Division at Fort Bragg, North Carolina.

TAPA has identified soldiers who have updated their records to reflect their airborne qualifications and have given them airborne assignments. Others who are airborne qualified but whose records do not reflect this should contact the Infantry Assignment Branch at TAPA.

Any soldier who is not airborne qualified but who is interested in attending Airborne School at Fort Benning should contact his battalion personnel actions section and submit an application.

Further information is available from the assignment managers or career advisors at Infantry Assignment Branch—AUTOVON 221-8056; commercial (202) 325-8056.

OFFICIAL FILES

TAPA receives numerous letters and telephone calls requesting information and microfiche from Active Army soldiers. The Official Military Personnel Files (OMPFs) for all active duty enlisted Army personnel are maintained at Fort Benjamin Harrison, Indiana, however, not at the Enlisted Personnel Management Directorate in Alexandria, Virginia.

Information on OMPFs should be directed to Commander, USA Enlisted Records and Evaluation Center, ATTN: PCRE-FRS, Fort Benjamin Harrison, IN 46249. Each letter must include name, grade, social security number, and organization of assignment, and the request must be signed.

The Enlisted Career Management Individual Files (CMIFs), which are maintained within the branches of EPMD, TAPA, are used strictly for assignment and professional development purposes.

SUGGESTIONS FOR SOLDIERS

Recently it has come to the attention of Infantry/Armor Branch at TAPA that some soldiers think their assignments are made in the Pentagon, when, in fact, they are made in TAPA, Hoffman Building #1, 2461 Eisenhower Avenue, Alexandria, VA 22331-0452.

Enlisted soldiers who want to visit TAPA and speak with their respective Professional Development NCOs should check in with the security guard in Hoffman #1 regarding appropriate parking spaces and then report to Room 212.

Sometimes, though, problems can be solved on the telephone without a soldier having to spend time and money traveling to TAPA. Collect calls cannot be accepted, but there is a toll-free line for soldiers stationed in the continental U.S. and outside the Virginia area. The number is 1-800-ALL-ARMY (1-800-255-2769).

When a call is received, it is referred to the branch that handles the soldier's MOS, and that branch replies directly to the soldier.

OFFICER CANDIDATE SCHOOL

The next OCS selection board is scheduled for 10-14 October 1988. Cutoff date for applications to arrive at TAPA is 9 September 1988.

Applicants who are selected will attend either OCS Class 3-89, starting 12 February 1989 and graduating 22 May 1989, or OCS Class 4-89, starting 23 April 1989 and graduating 1 August 1989.

OCS applicants who want to be considered for Aviation branch must have approved flight physicals by the Aeromedical Center at Fort Rucker and a FAST test score sheet attached to their OCS applications.

All OCS applicants must have secret security clearances before applying, and they will not be considered by the selection board if this clearance is not indicated in their applications.

Soldiers who will have more than 10 years of active federal service by 21 May 1989 are ineligible to apply for OCS. Soldiers who will be 35 years of age before 21 May 1989 are also ineligible to apply. Neither of these requirements can be waived.

NEW NCO-ER FORMS

In using the new noncommissioned officer evaluation report (NCO-ER) form (DA Form 2166-7), some people are separating pages 1 and 2 by tearing the perforation at the bottom of page 1. This perforation was designed only to make it easier to fold the form. These two pages are NOT to be separated.

Since the form is designed for use on automatic data processing equipment, it is published in continuous feed format. Once separated, the report becomes invalid and remains invalid even if it is stapled or taped back together. Reconnected forms will not be accepted for processing.

When reports are submitted to the Enlisted Records and Evaluation Center for processing, they will be folded flat, with pages 1 and 2 back to back with marginal perforations (pin-fed) strips removed.

PREFERENCE STATEMENT

Enlisted Ranks Update 13 to AR 614-200 has eliminated the enlisted preference statement (DA Form 2635) and established the CONUS area preference code and the overseas area preference code, which are on the Enlisted Master File, as the TAPA assignment managers' primary source for soldier preference data.

These codes will be updated in accordance with Procedure 2-12, CONUS/OVERSEAS Area of Preference transaction, DA Pamphlet 600-8-2.

The deletion of DA Form 2635 does eliminate the requirement for its use with any personnel action, and this form will be removed from the career management individual file (CMIF) maintained at TAPA in the near future.

Soldiers are encouraged to communicate with their career branches by telephone, letter, or personnel action request (DA Form 4187) to express their individual needs, problems, or concerns.

DRILL SERGEANT ASSIGNMENTS

The drill sergeant team at TAPA is trying to select for drill sergeant school and duty more soldiers who are stationed overseas and due to return to the continental United States (CONUS) in the next eight to 12 months. The intent is to save money by cutting the number of permanent change of station moves within CONUS.

Soldiers who are already stationed at drill sergeant installations remain the top priority for drill sergeant replacements, with overseas returnees second. Soldiers stationed in the U.S. at non-drill sergeant installations are now the lowest priority for these assignments.

Overseas soldiers who are interested in the drill sergeant program should contact their personnel staff NCOs for details. Applications must be submitted so that they arrive at TAPA eight to 12 months before the soldier's date of estimated return from overseas.

TAPA will not curtail a soldier's overseas tour to assign him to drill sergeant school or duty. Those who are approved for drill sergeant school are usually scheduled for a class that begins 45 to 90 days after their dates of estimated return.

Soldiers stationed at CONUS non-drill sergeant installations may still apply for the drill sergeant program. Applications will be approved, however, only for soldiers who have been stationed at their current installations for at least 48 months, and only when a drill sergeant requirement cannot be met with a qualified overseas returnee.

OFFICIAL PHOTOGRAPHS

There appears to be some confusion in the Infantry community concerning official photographs.

In reviewing official photos, members of the Infantry Branch at TAPA have found that a number of NCOs are wearing Infantry blue cords, blue background disks, leadership tabs, and foreign awards not permanently authorized for wear in official photos.

AR 640-30, Photographs for Military Personnel Files, states that soldiers will report to the photo facility dressed in the Army green uniform with basic branch insignia and all *permanently* authorized ribbons, badges, and tabs correctly displayed. The shoulder sleeve insignia (patch) and distinctive unit insignia (crest) are the only authorized deviations from this rule.

VOLUNTEERS NEEDED FOR RANGER TRAINING

TAPA is seeking volunteers for Ranger training and assignment.

Not just any soldier can complete Ranger training and join a Ranger battalion. To become a Ranger, a soldier must go through tough, realistic training in all kinds of weather and all environments. The Ranger Course is 58 days long and is conducted in four phases at Fort Benning; Dahlonega, Georgia; Dugway Proving Ground, Utah; and Eglin Air Force Base, Florida.

Soldiers who complete the training and qualify as Rangers will be assigned to the 75th Ranger Regiment.

Letters went out several months ago to soldiers in critical specialties asking them to consider volunteering for Ranger training. But others are also encouraged to apply, even those not in the combat arms.

Anyone who is interested should check with his personnel NCO about eligibility criteria and application procedures, or call the Ranger career advisor at TAPA: AUTOVON 221-5493/5494, commercial (202) 325-5493/5494.

LINGUISTS NEEDED

The Army needs good linguists in some specific military occupational specialties. The MOSs involved are mostly within Career Management Fields 96 (Military Intelligence) and 98 (Electronic Warfare/Cryptologic Operations). Most of the languages needed are difficult ones, such as Korean, Arabic, Russian, and Persian.

Soldiers in the linguist field can earn as many as 25 semester hours of college credit, depending on the language and MOS they learn. In addition, selective reenlistment bonuses apply to almost all soldiers in this field.

To qualify for classification into one of these MOSs, a soldier must meet the following criteria:
- Be a U.S. citizen.
- Be a high school graduate.
- Have a Skill Technical (ST) score of 95 or higher.
- Qualify for a top secret security clearance with sensitive compartmented information access.

Interested soldiers who meet these qualifications should contact their installation career counselors or personnel service centers for assistance.

OFFICERS CAREER NOTES

BRANCH CHIEF'S NOTES

The Officer Evaluation System is a subject that evokes as many opinions and emotions as there are officers in our Army. And that comes as no surprise to anyone, because officer evaluation reports (OERs) have a direct effect on our careers. They affect an officer across a spectrum of both intangible and tangible outcomes—from an individual's perspective of self-worth to his selection for promotion and schooling. It is therefore only reasonable to ask, "How well does the system work?" as Captain Thomas M. Jordan did in a recent INFANTRY article (March-April 1988, pages 16-17).

As Chief of Infantry Branch, I am convinced that the system does work, but it is not perfect—few systems are. It is only as good as its users. This means that we in the officer corps must ensure that we use the system correctly.

DA Pamphlet 623-105 provides us with specific guidance in our roles as rated officer, rater, and senior rater. Command climate and leadership style may influence the interaction of these three key players but do not relieve them of their responsibilities. And within the Infantry community it appears that most officers are living up to these responsibilities.

We at Infantry Branch review 500 to 1,000 OERs each month, talk with officers and their commanders about OERs, and make frequent briefing trips to the field to discuss OER trends. This dialogue is important because it is in the interest of all of us to make the system work.

Infantry assignment officers discuss specifics with individuals, but the following general points are made in formal briefings:

• All officers should adhere to DA Pamphlet 623-105.

• If a rated officer is due a report and doesn't know how he stands with his rater and senior rater, it is in his best interest to arrange an office call with each before the OER is written. (This advice is offered in recognition of the unfortunate reality that some commanders fail to counsel.)

• Raters and senior raters should not hesitate to call Infantry Branch assignment officers to discuss any matter concerning OERs—trends, senior rater profile philosophy, and the like.

It is also important for Infantry officers to understand clearly the role that OERs play in our careers. It is fine to say, "Do every job well," because this is accurate advice. But more precisely, there is no substitute for doing well with troops, especially when in command. As Infantrymen, we must focus on the troops. Our soldiers deserve the best leaders we can give them. Consequently, officers who do well with troops will have subsequent troop assignments and, as long as their manner of performance remains high, they will be competitive for selection for schooling and promotion. Officers who do poorly with troops most likely will not remain competitive and, with Congressionally mandated officer reductions, may in some instances be faced with leaving active duty.

This is stark reality. But it is recognized that we have an outstanding and talented group of Infantry officers in today's Army, and competition is fierce.

Briefly stated, Infantry officers must seek the tough jobs, in particular those with troops, and do well in order to remain competitive with their contemporaries. All of us are responsible for ensuring that manner of performance is accurately portrayed in the OERs of the officers we rate and senior rate,

because it is through OERs, ORBs, and photographs that selection board members develop a picture of each officer and evaluate him with his peers. If we have done what's right, our Army benefits; if not, we have failed and let our soldiers down in the process.

LTC Franklin L. Hagenbeck

VOLUNTARY EARLY RELEASE/ RETIREMENT PROGRAM

Selected officers may volunteer for separation or retirement under the provisions of the Voluntary Early Release/Retirement Program. Early release from active duty must occur 29 September 1988 or earlier. Retirement must occur on or before 1 September 1988.

Requests for resignation, release from active duty, or retirement must be forwarded through channels to Headquarters, Department of the Army. Details of the program were outlined in TAPA message, 231800Z February 1988, subject: FY 88 Officer Voluntary "Early Release/Retirement" Program.

Officers who are interested in the program should coordinate with their servicing personnel service centers at the earliest possible date to determine eligibility and required application procedures.

INSTRUCTOR DUTY AT THE INFANTRY SCHOOL

There has been a tremendous upgrade in the quality of instructors at the Infantry School over the past three years. With the inception of small group instruction in all of the School's leader courses, however, the need to have the best and brightest officers and

noncommissioned officers in the School has been magnified.

In short, the School needs the very best warriors to serve as instructors in the future. Their task will be to prepare our young leaders for worldwide infantry assignments. They will contribute immeasurably to the infantry force while also being personally groomed for future command and staff positions.

INFANTRY OFFICER ADVANCED COURSE

The Infantry Officer Advanced Course (IOAC) has evolved over the years. Before 1975, it was a 36-week course designed to prepare officers for command and staff positions at battalion and brigade level, with emphasis on the exercise of command at battalion level. Then the course was revised to become a 26-week course designed to prepare captains to command companies and to serve as battalion and brigade staff officers.

In 1985, the course was shortened to 20 weeks, but its scope remained unchanged. The small group instructor concept was implemented in 1986 and is in use today.

Prospective students should be aware of the demanding requirements and be prepared to devote themselves to 20 weeks of rigorous, rewarding, career-developing training.

SEPARATE INFANTRY BRIGADE REFRESHER COURSE

The Infantry School conducts a one-week course each fiscal year to provide unit refresher training to Army National Guard and Army Reserve separate infantry brigade commanders and staffs in the application of current doctrine and staff procedures.

The course for Fiscal Year 1988 is scheduled for 31 July to 5 August 1988; the one for Fiscal Year 1989 is scheduled for 4-9 December 1988.

The course provides an update on the changes in infantry doctrine and organization over the past three years,

with the emphasis on the Army's operational concept and subsequent changes in the doctrinal base. It also includes threat force, infantry weapons, and other related infantry subjects. The focus of all instruction, however, is on doctrinally correct operations as a part of the AirLand Battle team.

Those who attend should be commissioned officers or senior primary staff noncommissioned officers assigned to National Guard or Army Reserve separate infantry brigades.

Additional information is available from Commandant, U.S. Army Infantry School, ATTN: ATSH-I-V-C-O; AUTOVON 835-2783/4052, or commercial (404) 545-2783/4052.

RC ADVISORS TO SCHOOL

The Chief, National Guard Bureau, and the Chief, Army Reserve maintain permanent officer representatives at the Infantry School. These officers serve as liaison between the School, the National Guard Bureau, the Army Reserve Personnel Center, the states, and the major commands in the management of assignments, military schooling, and career planning for the students in the Infantry Officer Candidate School, the Officer Basic Course, and the Officer Advanced Course.

Each advisor is the single point of contact for all units for information pertaining to the status of officers or officer candidates attending Infantry School classes, follow-on courses for officers attending the basic and advanced officer courses, and delays of officers caused by course failures, slippages, or medical problems.

The current Army National Guard Advisor is LTC Richard Wright, AUTOVON 835-1159, or commercial (404) 545-1159. The current U.S. Army Reserve Advisor is COL Allan W. Keener, AUTOVON 835-7113, or commercial (404) 545-7113. The address for both is Commandant, U.S. Army Infantry School, ATTN: ATSH-IP (name), Fort Benning, Georgia 31905-5401.

AGR OFFICERS MUST UPDATE ORBs

Army Reserve officers on Active Guard Reserve duty who want to be considered for reassignment and professional development must keep their officer record briefs (ORBs) up to date.

This key document is used by personnel management officers at the Army Reserve Personnel Center in St. Louis. It is also used by commanders who are considering officers who have been nominated for assignments.

An officer should update his ORB each year on his birthday and any time there is a significant change in his status, such as completing mandatory education or changing positions.

To complete the form, an officer must use AR 640-2-1, the governing regulation, and can also use DA Pamphlet 640-1 as a guide.

Copies of updated ORBs should be sent to an officer's servicing personnel service center and to his personnel management officer at ARPERCEN at this address: Commander, U.S. Army Reserve Personnel Center, ATTN: DARP-ARO, 9700 Page Boulevard, St. Louis, MO 63132-5200.

LIAISON PROGRAM FOR IRR OFFICERS

Individual Ready Reserve (IRR) officers may earn participation points and pay at their home stations by serving as recruiters for the United States Military Academy and for ROTC scholarships.

Applicants must not be in a troop program unit, must never have been passed over for promotion, and must have four years before mandatory removal.

Details are available from Superintendent, United States Military Academy, ATTN: MAAR-L, West Point, New York 10996-5000.

BOOK REVIEWS

Here are a number of books you should find of interest; they have been selected from a large stack of publications we have received in recent months:

• MASK OF COMMAND, by John Keegan (Viking, 1987. 368 Pages. $18.95). The author is a widely known British military historian. In this book he presents his views about generals and generalship as he feels the men and the methods of generalship have developed down through the ages. He believes "that the generalship of one age and place may not at all resemble that of another" and "that the warfare of any one society may differ so sharply from that of another that commonality of trait and behavior in those who direct it is overlaid altogether in importance by differences in the purposes they serve and the functions they perform."

He also believes that a successful military leader, much like leaders in religion, politics, business, and education, "can show himself to his followers only through a mask, a mask that he must make for himself, but a mask made in such form as will mark him to men of his time and place as the leader they want and need."

He uses the lives and careers of four men—Alexander the Great, the Duke of Wellington, U.S. Grant, and Adolf Hitler—to demonstrate the differing leadership roles each was called on to play because of the changing nature of society and of warfare itself—"heroic," by Alexander; "anti-hero," by Wellington; "unheroic," by Grant; and "false heroic," by Hitler. (It is difficult to visualize Hitler being placed in the same category as the other three, and the author really does not bring this off too well.)

The author decries the call for "heroic" leadership in our times, and uses his last chapter to argue that in the

nuclear age that kind of leadership can easily destroy civilization. He would prefer to see "an inactive leader, one who does nothing." But one wonders: Can a person be called a leader who does nothing?

This book is really several books in one. Its central theme is difficult to find, and to follow. It is filled with material that seemingly has little to do with the central purpose, whatever that is. Still, there is enough solid military history in it to warrant reading, plus some absolute gems about generals and military leadership. There are 10 lines on page 233, for example, that by themselves almost make the book worthwhile. Give it a try.

• THE KOREAN WAR, by Max Hastings (Simon and Schuster, 1987. 389 Pages. $22.95). The author, a British journalist, has never cared much for the U.S. Infantryman as a fighting man or for the leadership qualities of senior U.S. ground commanders. He has expressed his feelings on several occasions, most notably in his book on the World War II Normandy campaign. In this book, he virtually repeats himself. In his usual style, he does not give a complete picture of the war but only an overview, hitting certain high (and low) spots along the way. (Did you know that the U.S. treated its Chinese and North Korean prisoners as badly as U.S. prisoners were treated in North Korea?) He praises the U.S. Marines and, quite naturally, the British and Chinese soldiers who fought in Korea. If you keep in mind that this is not an objective piece of work, you may find some items of interest in it.

• GREAT COMMANDERS AND THEIR BATTLES, by Anthony Livesey (Macmillan, 1987. 191 Pages. $39.95). This book is similar in layout and design (quite attractive, in short) to its two immediate

predecessors— Great Battlefields of the World and Great Battles of World War II. The author is a British historian who has frequently lectured on staff organization and troop management. In this book, he discusses 20 battles that were won by 20 of history's most successful field commanders, from Alexander the Great to Moshe Dayan. The computer-generated maps and the numerous illustrations add greatly to the reader's understanding of the battles, while the brief biographical sketches of the opposing commanders that are found at the end of each battle narrative serve to indicate what was transpiring on the "other side of the hill."

• THE COMPLETE BOOK OF U.S. SNIPING, by Peter R. Senich (Paladin Press, 1988. 280 Pages. $34.95). In this fact-filled, profusely illustrated book, the author traces the development of the U.S. sniper effort and U.S. sniping weapons from the time of the Civil War to the present. He is a recognized authority in his field and has previously written on the German sniper effort between 1914 and 1945 and the development of the German assault rifle between 1935 and 1945. All infantrymen should spend some time with this book, for it contains a wealth of information not only about sniping weapons, but about silencers, scope and sight developments, and night vision sights.

• VIETNAM CHOPPERS: HELICOPTERS IN BATTLE, 1950-1975, by Simon Dunstan (Osprey, 1988. 203 Pages. Softbound). Several years ago, the author brought out his well received book titled Vietnam Tracks in which he used a good, tight narrative and hundreds of photographs to tell the story of armor in Southeast Asia as it was used between 1945 and 1975. He follows the same pattern in this book. After a brief

introductory chapter, he discusses the use of U.S. Army, Navy, Air Force, and Marine Corps helicopters in Vietnam; the development of airmobile tactics and techniques; dust-off operations; and the major capabilities and limitations of each type of aircraft.

• COMMANDING GENERALS AND CHIEFS OF STAFF, 1775-1987: PORTRAITS AND BIOGRAPHICAL SKETCHES OF THE UNITED STATES ARMY'S SENIOR OFFICER, by William Gardner Bell (Center of Military History, 1987. USGPO S/N 008-029-00125-0. 187 Pages. $20.00). This is an updated edition of the author's book, which was first published in 1983. As such, it includes portraits (one is a photograph rather than a painting) and biographical sketches of the most recent Army Chiefs of Staff. The author's lengthy introduction explains the evolution of the office from that of Commanding General of the Army to Chief of Staff of the Army and the problems faced by each of the 51 occupants in carrying out his responsibilities. There are two appendixes as well as an index and a select bibliography. Together with the author's previously published *Secretaries of War and Secretaries of the Army,* this book does much to improve our understanding of the Army's past.

• THE ARMY OFFICER'S GUIDE, 44th Edition, by Lawrence P. Crocker (Stackpole Books, 1988. 608 Pages. $17.95, Softbound). The revisor is a retired U.S. Army officer who has worked on previous editions of this most useful publication. The guide has served the young Infantry officer well over the years, and this edition will serve him equally well. It is divided into five major parts—selecting the Army as a career, your life and family, building your career, regulations at a glance, and the organization of the Army—and contains an additional duty guide, a list of acronyms, an index, and for the first time, every badge, decoration, and medal currently awarded by the Army is shown in full color. Another addition is a chapter on the Army's warrant officer career field and the

probable future of the corps. We recommend it most highly to all junior and senior Infantry officers.

• MILITARY UNIFORMS IN AMERICA, VOLUME IV: THE MODERN ERA, FROM 1868, edited by John R. Elting and Michael McAfee for The Company of Military Historians (Presidio Press, 1988. 139 Pages. $40.00). This book completes the four-volume series, the previous volumes of which were titled *AMERICAN REVOLUTION, YEARS OF GROWTH,* and *CIVIL WAR PERIOD.* The editors selected 64 color plates for this volume from the Company's print series; each is accompanied by a full page of text that explains and describes the evolution of uniform style and material as well as the circumstances and service of the featured unit. Because the book covers more than 100 years of our country's military history, the number of plates devoted to each era had to be limited. And it is important to note that the editors have included plates that depict the uniforms of other countries such as Canada, the Philippines, Japan, Mexico, and Germany. All four of the mentioned volumes are recommended most highly; this is illustrated military history at its best.

• DICTIONARY OF THE VIETNAM WAR, edited by James S. Olson (Greenwood Press, 1988. 603 Pages. $65.00). This is an outstanding reference work, for it has more than 900 brief descriptive essays on most of the people, legislation, military operations, and controversies that surrounded U.S. participation in the Vietnam War. The editor, a professor of history at Sam Houston State University, prepared the bulk of the entries and called on other scholars to do the remainder. The entries are arranged in alphabetical order, and references at the end of each give additional sources of information. The six appendixes are valuable in their own right—the population of South Vietnam by province in 1971, the minority groups of South Vietnam as of 1970, acronyms and slang expressions associated with the war in Vietnam, a selected bibliography, a

chronology of the war in South Vietnam from 1945 to 1975, and a selection of maps of South Vietnam. The book also contains an index and a list of the contributors.

• THE FLAGS OF THE CONFEDERACY: AN ILLUSTRATED HISTORY. By Devereaux D. Cannon, Jr. (St. Lukes Press, 1407 Union Avenue, Suite 401, Memphis, TN 38104, 1988. 128 Pages. $9.95, Softbound). Drawing on a variety of primary and secondary sources, the author tells of the development of the three official flags used by the Confederate States of America, of the numerous unofficial flags that were created and carried into battle by various Confederate commands, and of the various state flags that flew during the period 1861-1865. The three official flags were the "Stars and Bars" (adopted 4 March 1861), the "Stainless Banner" (adopted 1 May 1863), and a revised version of the "Stainless Banner" that was adopted on 4 March 1865. The author has had a deep and abiding interest in the flags of the Confederacy and has actually made many reproductions of the originals for use in battle reenactments. Perhaps the most famous of all Confederate flags was the so-called "Southern Cross," which was the Army of Northern Virginia's battle flag. Sixty-seven color illustrations and numerous black-and-white drawings complement the narrative nicely, as do the several appendixes.

• THE WAR POETS, by Robert Giddings (Orion Books, Crown Publishers, 1988. 192 Pages. $24.95). Infantrymen do not usually read poetry. At least, not many will admit to doing so. But all Infantrymen should get hold of this book and read it. Robert Giddings is a literary critic who specializes in the literature of war. In this book, he recaptures—through the words of the war poets and through the judicious use of contemporary paintings, cartoons, and photographs—the horrors that will always be associated with World War I and with life in the frontlines that was known only to the lowly Infantryman. The book is divided into six roughly

equal parts, each devoted to a specific year from 1914 to 1919. It also has short biographies of the poets, a bibliography, and an index. The realities of war have never been better expressed than by the men and women whose words appear here.

Now here are a number of our longer reviews:

VIETNAM AT WAR: THE HISTORY, 1946-1975. By Lieutenant General Phillip B. Davidson, United States Army Retired (Presidio, 1988. 838 Pages. $27.50). Reviewed by Doctor Joe P. Dunn, Converse College.

None of the previous memoir-histories — by such senior officers as Westmoreland, Sharp, Bruce Palmer, Walt, and Momyers—or the interpretative accounts like those written by Colonel Harry Summers and General Dave Palmer approaches the value of this massive volume, the finest military history of the war now available.

An astute military historian, Davidson served as MACV J-2 between 1967 and 1969 under Westmoreland and Abrams. The insight this position afforded him is evident throughout his remarkable book, the product of 11 years of work.

Davidson debunks myth after myth as he explains how and why the war was fought as it was, the mistakes that were made, the successes and failures, and the misinterpretations rendered by the media, political figures, and other commentators.

He offers rare insight into the Olympian Westmoreland and the mercurial Abrams. He is equally perceptive about such figures as Presidents Lyndon Johnson, Richard Nixon, and Nguyen Van Thieu; Robert McNamara; Henry Kissinger; Robert Komer; and Vietnamese generals on both sides. General Vo Nguyen Giap, however, whose career the author analyzes through three wars between 1946 and 1975, receives the greatest attention. In fact, one of the book's strongest aspects is the material about the communist side gained from captured documents, interrogation of former enemy soldiers, and recent North Vietnamese publications.

Candid, incisive, fair, and marvelously written, this is a fascinating book that I could not put down. The author speaks forthrightly, but the shrillness, rancor, and absolute sureness found in many high ranking memoirs is absent. His concluding chapter on why the United States lost the war is one of the best analyses that I have seen on the subject.

Not everyone will agree with everything in it, but, this cogently argued book is outstanding military history, and is recommended for both scholar and layman.

ANTHONY WAYNE: SOLDIER OF THE EARLY REPUBLIC. By Paul David Nelson (Indiana University Press, 1985. 368 Pages. $27.50). Reviewed by Captain Michael E. Long, United States Army.

The author, a professor of history at Berea College, has written an exciting and informative biography of one of the most colorful heroes of the Revolutionary War, "Mad Anthony" Wayne.

Wayne participated in some of the most critical campaigns of the war and was given his nickname because of his daring and reckless courage. He was the hero of the recapture of Stony Point, New York, a British post located on the Hudson River.

The author also gives us a complete picture of Wayne's early life—his early training as a surveyor and his involvement in surveying and settling the area now called Nova Scotia. When the Revolution began, Wayne was recognized for raising a Canadian regiment, and he later served at Fort Ticonderoga. Toward the end of the war, he was with the Marquis de Lafayette during the Yorktown campaign.

This work is thoroughly researched and documented. It is also well illustrated with prints, photographs, and accurate maps that depict the major battles of the war. It is worthy of examination by all students of the American Revolution.

DUEL FOR THE GOLAN. By Jerry Asher, with Eric Hammel (Wil-liam Morrow, 1987. 288 Pages. $17.95). Reviewed by Lieutenant David B. Des Roches, United States Army.**

Perhaps at no time since its inception had the fate of Israel been as threatened as it was during the October 1973 war. A massive surprise attack by the Syrians, who were later reinforced by Iraqis, Jordanians, and Moroccans, almost succeeded in capturing the vitally important Golan Heights, which commanded the close and vulnerable cities of Israel. This is the story that is detailed in this book.

Asher, an Israeli, did the research and his coverage of the Israeli participants in the battle is exhaustive. Unfortunately, the years he spent in his research were primarily limited to Israeli sources. Hammel, a professional military writer, was brought in by the publishers to add life to the narrative. The product is a fast-paced, panoramic account of human struggle, determination, and heroism.

The tactical and strategic discussions are held to a bare minimum. It is the human accounts that will amaze the general readers and will probably make professional soldiers wonder about their own character.

This is not a balanced account of the war and its causes, but it is a quick and enjoyable read.

NAPOLEON'S MARSHALS. Edited by David G. Chandler (Macmillan, 1987. 560 Pages. $35.95). Reviewed by Lieutenant Colonel John C. Spence III, United States Army Reserve.

The era of Napoleon's military exploits continues to attract widespread interest in contemporary military history writings and studies.

One of the more fascinating aspects of this era is how Napoleon rewarded his subordinates not only with military honors but often with principalities to govern as well. One primary reward involved the granting of the status of a marshal, with the issuance of a symbolic baton.

In this book, David Chandler, head

of the Department of War Studies at the British Royal Military Academy, Sandhurst, has edited an informative and well-written series of essays on the 26 men who carried the symbolic baton.

Each essay writer is an expert in military history, and each essay is a concise but adequate analysis of the career of the individual about whom he writes. The Marshals themselves came from a wide range of social backgrounds—the aristocracy, the 18th century bourgeoisie, and the working class. All were honored by Napoleon. Some died heroic deaths on the battlefield. Others, such as Ney and Murat (Napoleon's brother-in-law), suffered the degradation of death before firing squads. One, Marshal Soult, survived long after Napoleon's final fall; he served as minister of war during the monarchic restoration.

Each essay also contains an analysis of a major battle in which, for better or worse, the marshal figured prominently. These are well-written descriptions of the battles, with accompanying maps that reflect the dispositions of the opposing forces.

The military institution of marshal existed in medieval and monarchic France long before the advent of Napoleon, and it continued into the Bourbon restoration and into Republican France. In fact, as reflected in the appendix, the last such designation was made in 1984, posthumously, for Pierre Joseph Koenig, a World War II hero of the Free French. But the institution of marshal undoubtedly was at its apex during the Napoleonic era.

HISTORY OF THE OFFICE OF THE SECRETARY OF DEFENSE: THE FORMATIVE YEARS, 1947-1950. By Steven L. Rearden (Office of the Secretary of Defense, 1984. USGPO S/N 008-000-00405-6. 700 Pages. $25.00). Reviewed by Doctor Charles E. White, USAIS Historian.

This is the first volume in a series that will eventually provide a detailed history of the Office of the Secretary of Defense (OSD). As the title of this volume suggests, it examines the beginnings of the defense establishment, and, specifically, the unification of the armed forces under a central head and the development of policies and programs that would have a lasting effect on this country's national security.

It is a richly documented book, and the author has drawn on a wide range of primary and secondary sources, including many oral history interviews, to focus on the larger problems and issues of national security, the major personalities of the early years, and the intense rivalries between the services.

The massive 1947 reorganization of the defense structure caused considerable tension among the three armed services, and a bitter struggle soon broke out among the services over their roles and missions, an issue still without clear resolution. It was also during those early years that most service people began to see themselves as true professionals and not as followers of a special trade. All of these conditions made those years indeed "formative."

While this book is more narrative than analytical, it does tell a good story (which is what history means) and presents some interesting interpretations and conclusions. For the Infantryman, particularly one embarking on a tour at the Pentagon, this work can provide a basic understanding of our defense establishment. Most of the challenges facing staff occupants in Washington today have changed little since the "formative years."

GENERAL A. P. HILL: THE STORY OF A CONFEDERATE WARRIOR. By James I. Robertson, Jr. (Random House, 1987. 382 Pages. $24.95). Reviewed by Major Don Rightmyer, United States Air Force.

A. P. Hill—his name reputedly was among the last words spoken by both Robert E. Lee and Stonewall Jackson, yet he has been referred to by one biographer as "Lee's forgotten general." This new biography of Hill makes clear why he was considered so important by the generals under whom he served and helps better document his role in the South's fight.

"Little Powell" Hill, as he was called by those who knew him, was a native Virginian, born in Culpeper. A member of the West Point class of 1847, Hill saw combat action during the Mexican War and counted among his friends such later important Union figures as George B. McClellan and Ambrose P. Burnside.

Hill entered the Confederacy's military service as a colonel in the 13th Virginia Infantry and just missed seeing his first Civil War action at First Manassas. That experience came during the battle of Williamsburg in the Peninsula Campaign.

Promoted to brigadier general in early 1862, Hill was in Richmond when the new commander of the Army of Northern Virginia, R. E. Lee, assumed his position. Hill served closely with Lee from the Seven Days' campaign around Richmond until he was killed during the last week of the war.

The author, who has written extensively on the Civil War, provides here the same type of interesting, well written history that he has become so well known for during the past 30 years. He combines valuable insight into Hill's combat performance with a thorough investigation of the records concerning a venereal disease that Hill contracted while on leave from West Point. Hill remained in the field with his troops on many occasions when he was apparently in great pain and discomfort from the disease's advanced stages.

This is a welcome look at one of Lee's chief lieutenants and an excellent study of Civil War command and leadership.

THE FIRST PEACETIME DRAFT. By J. Garry Clifford and Samuel R. Spencer, Jr. (University of Kansas Press, 1986. 320 Pages. $29.95). Reviewed by Captain Harold E. Raugh, Jr., United States Army.

Americans were shocked when the

From The Editor

UNIT DESIGNATIONS

In several cases during the past year, units on our appropriated fund (free distribution) mailing list either disappeared from the Army's rolls or were redesignated. Sometimes it takes us quite a while to discover what happened to those units, particularly when their issues are returned with "Address Unknown" stamped on the envelopes.

We have a pretty good idea which Active Army units will go off the rolls or be redesignated under the new regimental system. But we do not always know when Army Reserve or Army National Guard units will be reorganized or redesignated. In fact, many Reserve Component units make drastic organizational changes that we are not aware of until someone happens to mention them to us.

Therefore, if your unit is scheduled for a reorganization in the near future, or if it is planning to move to another installation or armory or be rebranched, please let us know. In that way, your unit will not miss any copies of INFANTRY, and we will not waste a lot of the Government's postage money in our attempts to find you.

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