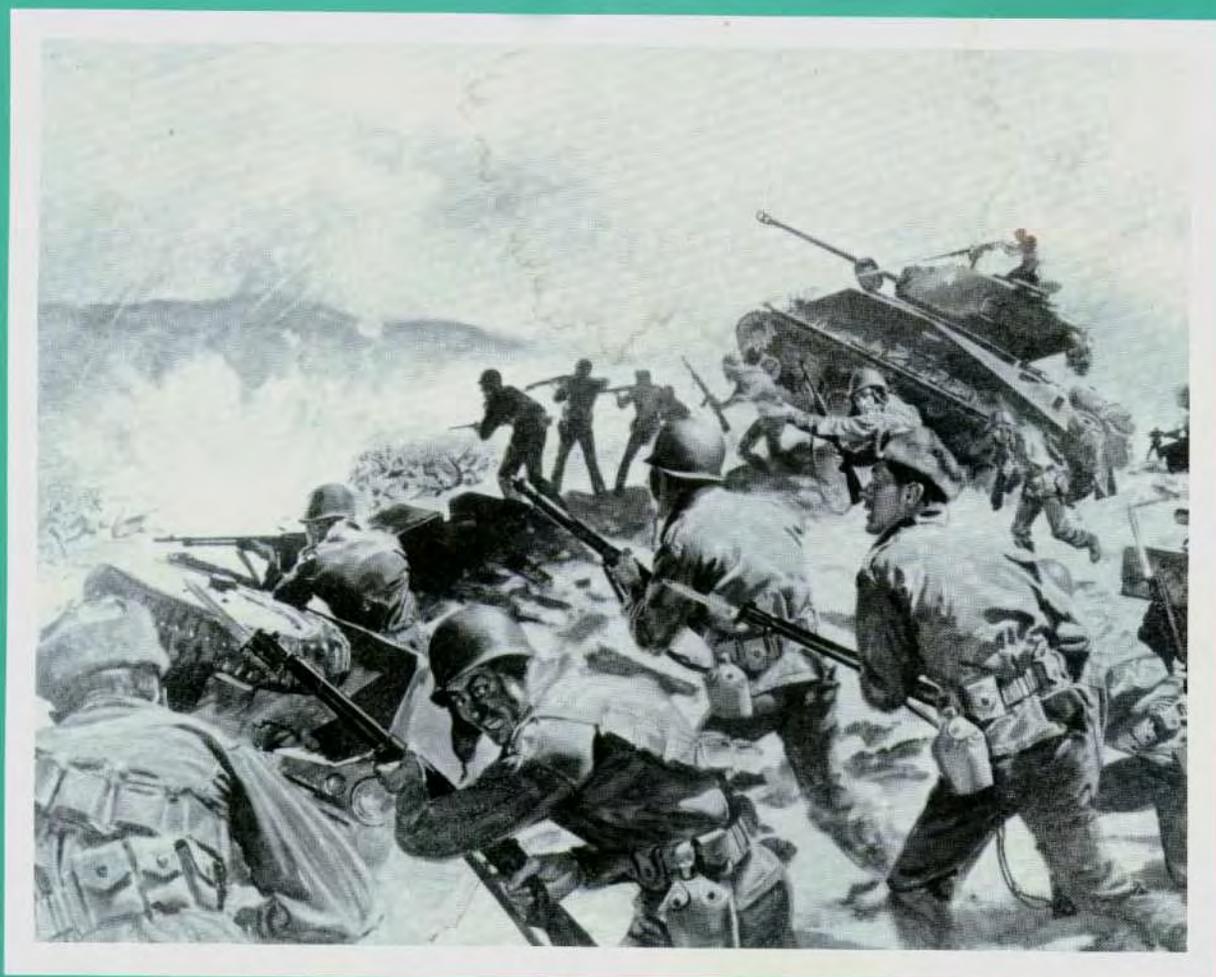


Infantry



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MICHAEL P.W. STONE

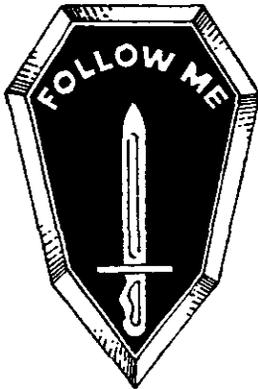
Secretary of the Army

MG JERRY A. WHITE

Commandant, The Infantry School

RUSSELL A. ENO

Editor, INFANTRY



This medium is approved for official dissemination of material designed to keep individuals within the Army knowledgeable of current and emerging developments within their areas of expertise for the purpose of enhancing their professional development

By Order of the Secretary of the Army

GORDON R. SULLIVAN
General, U S. Army
Chief of Staff

Official:

MILTON H. HAMILTON
Administrative Assistant to the
Secretary of the Army

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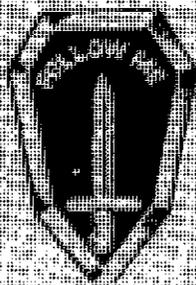
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Commandant's NOTE

MAJOR GENERAL JERRY A. WHITE Chief of Infantry

TAKING CARE OF THE SOLDIER - TRAINING HIM

In the January-February 1992 issue of *INFANTRY Magazine*, I talked about taking care of the soldier by providing him with the best equipment industry can produce. In this issue, I will address the topic of taking care of the soldier by providing the best possible training, and specifically individual training.

Clearly, these two concerns are linked under the larger topic of taking care of our soldiers. Our success or failure in future conflicts will depend upon how well they are equipped and how well they are trained to use their equipment. The success of infantrymen and infantry units during *JUST CAUSE* and *DESERT STORM* is a positive reflection of our progress to date in both of these critical areas. Our success in recent battles underscores the importance of training as we will fight, and of replication in exactly as possible those conditions under which we could expect to deploy. In this regard, we must also continue to bring both vehicle crews and mechanics together. Units deployed into Southwest Asia had their trucks and a panel off in combat. The emphasis on night operations proved to be equally critical to success, so we will continue to build upon our experience in Grenada, Panama, and the Gulf War to enhance our dominance of the night. In these and other areas there remain, however, many improvements to be made, and many battles to be won in a time of shortage and force structure and technical constraints.

We are all convinced that conflicts in reality

and manpower could jeopardize the Army's readiness. General Gordon O. Sullivan, Chief of Staff of the Army, cautions us not to allow anyone to "Fisk Force Number," referring to the unprecedentedly poorly trained, and inadequately equipped lead unit in the Bosnian conflict.

This is not an idle challenge, so we search for ways to reduce costs and, simultaneously, to maintain the high standards of readiness in the infantry force. In training commitments alone, we may see cuts as high as 50 percent; we will therefore need innovative training programs for everything from basic rifle marksmanship to company and battalion level live fire training. Simulators and training devices for the Infantry force will become even more important to training and maintaining proficiency, but even these will train only some of the tasks. Simulators will be a useful and cost-effective element of our training, but the Infantry will still require tough creeper and light training to develop the fundamental, skilled warriors our missions will demand. We are looking to ways of supporting the industry's rifle marksmanship skills - at both long range and close in engagements, with moving and stationary targets, and under day, night, and NBC conditions. The major challenge in such a program will necessarily be addressed by the available range facilities, devices, and ammunition.

As new equipment is fielded, we systematically apply the criteria set forth on this page that will be training it and the soldier who will be operating

in. We also take a systematic look at the new individual soldier tasks and at all the steps it takes to accomplish each of them. This directly affects our decisions on which tasks are to be included in later editions of the soldier's manual for that particular military occupational specialty (MOS).

In the same fashion, as doctrinal manuals are published to tell the field how to fight at the squad, platoon, company, and battalion levels, we also develop and publish mission training plans (MTPs) and their books that support them. These publications, which are read directly by the field, annually describe how to train units and how to evaluate their training. Right now, our focus is on producing AICTEP 7, JTBODD, the Bradley Fighting Vehicle equipped infantry, and AITEP 7, SMTE, for infantry rifle platoons and squads.

The transition from the Skill Qualification Test (SQT) to the Self-Development Test marks a significant shift in our approach to measuring a soldier's job knowledge. The most noticeable change is that the new test includes questions on initiative and leadership and focuses on uncommissioned officers at Staff Levels 2 through 4. Although the MOS-related questions will be drawn largely from questions previously used in the SQT, the test will now be broad based rather than graded.

The number of MOS-related questions has been reduced to about 60 and they appear in a format different from that of previous tests. The questions are grouped by subject area and are preceded by a sentence that soldiers must apply in selecting an answer. Junior-rated soldiers will still have such events at the Common Tasks Test

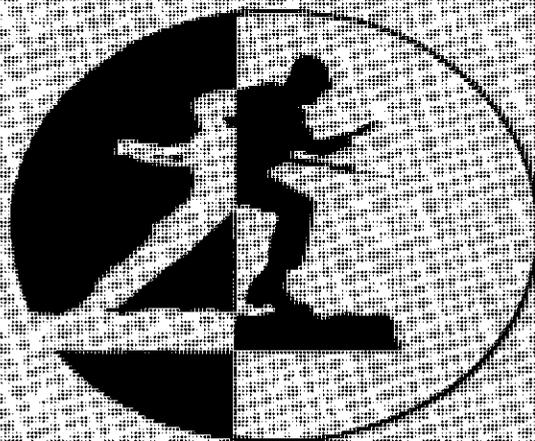
and the Expert Infantryman's Duties Test to challenge their mastery of individual skills.

The Infantry School is committed to ensuring the changes do it affects the infantry at large as closely and rationally as possible. We will continue to provide the force with the best quality individual training through our 22-month program and our many correspondence programs. We will also provide the most authoritative information possible in the 90-plus manuals we publish.

There are only some of the innovative approaches to the challenges facing us. But as a result of these and other actions today, the 5 units will be the best equipped, the best trained, and the most capable fighting force our nation has ever fielded. Their soldiers deserve leaders who are mentally and physically tough, who can set and enforce high standards of training and discipline, and who lead with their words. The Ranger course is specifically designed to develop such competent staff and leaders. It will become an increasingly important element of our leadership training as the Army advances while still preparing to conduct contemporary operations around the world.

This is indeed an exciting and challenging time for our Army. The changes we make will affect the force into the next century. Your thoughts and concerns are important, and we need your input at the Home of the Infantry. Keep writing **INFANTRY Magazine** for the latest information on changes that affect our branch, and write to us as what you think.

FOLLOW ME!



INFANTRY LETTERS



NIGHT CLIMB

I have read the article "Tactical Night Climb," by Lieutenant Colonels William M. Menning and Stephen R. Sands (INFANTRY, September-October 1991, pages 40-42). It is good that units such as theirs perpetuate the military mountain spirit, but I do have several questions and suggestions based upon my experience in the mountains.

I served in mountain infantry units during World War II and did reconnaissance for our company before our night assault on Riva Ridge. At the end of the war I served in several mountainous regions. As a district ranger, I trained rangers, national ski patrol, sheriff's and fire departments and rescue groups for 30 years. In the nine years since my retirement, I have continued to train these groups in search and rescue and survival. I have designed and invented mountain and cave rescue equipment (brake bars, cable winch systems and litters).

Here are some suggestions that may help mountain units:

- Have instructors use color-coded ends of rope to teach knots, using large-diameter rope and standing sideways so the training group has the same view of the knots as the instructors.

- To train knot-tying for night or day, have the troops tie knots while blindfolded, in darkness, or behind their backs.

- In training, have each trainee carry two three-foot lengths of parachute shroud in their pockets so they can practice tying knots.

- Have the soldiers double check each others' knots and harnesses for correctness and safety.

- In the instruction area, have an exhibit of anchors and litters rigged with all the correct knots. Then have all the rope and equipment available to do a mirror of the rigging for practice.

- Teach the soldiers how to tie knots with one hand. One of them may have an injured hand or may have to hang onto a cliff or belay a fall with only one hand free.

I question the use of night vision goggles by climbers. I went down to our local National Guard unit and tried them out. I found them not good for depth perception; they give one tunnel vision. I contacted my local eye surgeon about adjusting one eyepiece near and one far. He said that only about five percent of all people could handle the near-far adjustment and that the others could experience eye fatigue and other problems.

NVGs or NVG scopes could, however, be used to advantage by a well-trained climber observer across the valley from the route to help a team stay on route (using radio to the team leader).

A good oblique aerial photo of cliff sections would be handy for both the cross-valley observer and the climbers. The photos should be gridded.

Is it possible for NVG laser beams to pick up small reflective patches on the backs of the climbers' helmets? During World War II we used one-inch square reflective patches on the backs of our helmets to maintain night contact. This would also help a cross-valley observer pinpoint locations.

I hope some of this will be useful.

BOB FRAUSON
Columbia Falls, Montana

KEEP TO ARMY STANDARDS

I would like to comment on the article "Informal NCO Contract," by Lieutenant Mark D. Butler and Command Sergeant Major Angus A. Gray (INFANTRY, November-

December 1991, pages 11-13). While otherwise interesting and professional, the article is disturbing because it highlights a prevalent tendency to ignore Army standards and to substitute personal opinion.

Specifically, the authors contend that the standard for success in the physical fitness portion of the noncommissioned officer evaluation report (NCO-ER) is to score 270 or better on the Army Physical Fitness Test (APFT). This is not correct. The proper Army standard for success is 180 points on the APFT. If a rater wants to recognize outstanding performance short of excellence, the proper thing to do is to put it down as a PT bullet on the NCO-ER.

My guess is that the authors are trying to make the point that there may be an informal agreement between the rater and the NCO to achieve 270 points. This is, of course, commendable. I am not one to argue that "the minimum is the maximum." Everyone should excel on the APFT. But honoring an informal agreement should not be confused with a formal standard for "success." By this confusion the authors have established a meaningless, non-regulation, and unenforceable standard.

They could even generate a successful NCO-ER appeal. For example, a lieutenant and an NCO might agree that the NCO will score 270 on his APFT. If he scores 250, he has not "succeeded" by the contract and "needs improvement." I suppose anyone who does not score 300 on the APFT needs improvement, but I know of no commander's inquiry that would sustain that argument.

WILLIAM M. SHAW II
MAJ, Military Intelligence
Hollis, New Hampshire

HELMET SHAVING BASIN

What ever happened to ingenuity? In these days of defense cuts and "build-down," the proposal to expend funds for an 18x18-inch, two-mil, plastic bag to be inserted in the PASGT helmet and used as a "shaving basin" seems a bit much (INFANTRY, November-December 1991, page 3.)

One problem with the brief news item is the suggestion that heating water in the old "steel pot" over an open flame was ever authorized. It was done, of course, but it wasn't authorized.

The other problem is comprehending why soldiers can't carry an empty MRE bag with them to be used as a wash basin. The MRE bag is durable enough to withstand hot water. Instead of being torn into unusable pieces, it could be cut down the side or across the top. The proposed gimmick just seems wasteful and, frankly, I can't imagine those clean "users"—the Air Force, Navy, and Coast Guard—springing for a share of the bill.

BOB HAMMACK
PSG, U.S. Army Reserve
Farmington, Missouri

MILITARY REVIEW WRITING CONTEST

The commandant of the U.S. Army Command and General Staff College has announced the 1992 *Military Review* writing contest.

Entries on the topic "The U.S. Army in Joint, Combined, and Coalition Warfare" will be accepted through 1 July 1992. The author of the winning manuscript will receive a \$500 cash award, and the manuscript will be published in *Military Review* in the fall of this year. Second and third place winners will receive \$200 and \$100, respectively, and all entries will be considered for publication.

The broad topic area is intended to encourage coverage of a wide range of related issues. Subjects that would be considered appropriate include current and future roles and missions, doctrine,

historical perspectives, service relationships, recent operational lessons, and education and training. The common thread should be consideration of current and future joint, combined, and coalition warfighting capabilities. Entries will be judged for research, scholarship, and relevance to current Army needs.

Manuscripts must be original and not previously offered elsewhere for publication. They should be between 2,000 and 2,500 words and typed double-spaced. Entries must indicate clearly that they are contest entries. A writer's guide is available upon request.

Entries should be sent to *Military Review*, U.S. Army Command and General Staff College, Funston Hall, Fort Leavenworth, KS 66027-6910.

STEVEN F. RAUSCH
COL
Editor in Chief
Military Review

U.S. FORCES, JAPAN FORMING ASSOCIATION

A number of former service people are interested in forming an association based on our former command, United States Forces, Japan.

Anyone who is interested may contact me at 2107 Applegate Drive, Corona, CA 91720.

ROBERT E. RAYFIELD
COL, USAF (Retired)

LETTERS HOME BOOK PROJECT

Last May I began a project to raise money for the children of service men and women killed while serving in Operation DESERT SHIELD/DESERT STORM. Specifically, I am attempting to compile a collection of letters for a book to be published entitled *Letters Home...The Persian Gulf Experience*, with all profits going to help these children.

So far, I have received about 85 letters, most of which are replies of

service personnel to senders of "To Any Serviceman" letters. These letters tell a tale of varied emotions and experiences encountered during their tour of duty. Yet they do not paint the full picture. I need more letters.

Anyone who would like to contribute items to the book should send a copy of the letter received, along with the soldier's first name, age, service branch, rank, and home state to Letters Home, P.O. Box 6929, Affton, MO 63123.

JESS TAYLOR

FIRST DIVISION REUNION

The Society of the First Division (Big Red One) will hold its 74th Annual Reunion from 26-30 August 1992 in Chicago, Illinois. The Society is composed of soldiers who served in World War I, World War II, Vietnam, Operation DESERT STORM, and in peacetime.

For further information, please contact me at 5 Montgomery Avenue, Philadelphia, PA 19118; or (215) 836-4841.

ARTHUR L. CHAITT
Executive Director

21st INFANTRY REGIMENT

The 1st Battalion, 21st Infantry is looking for two members of Task Force Smith to become Honorary Colonel and Honorary Sergeant Major of the Regiment. Interested Task Force Smith members should direct questions to Company A, 1st Battalion, 21st Infantry, Schofield Barracks, HI 96857, or call (808) 655-0556.

In addition, the battalion is searching for former commanders of the regiment who served from September 1945 to February 1957, January 1963 to February 1974, and April 1974 to 1988. These commanders may write or call the same address and telephone number.

DARRYL W. SHARP
2LT, U.S. Army

INFANTRY NEWS



CHIEF OF INFANTRY UPDATE

EDITOR'S NOTE: Infantrymen are encouraged to comment on the items that appear here and to suggest topics they would like to see covered in the future. Address suggestions to Commandant, U.S. Army Infantry School, ATTN: ATSH-TDI, Fort Benning, GA 31905-5593, or call DSN 835-2350/6951 or commercial (404) 545-2350/6951.

THE TRADOC SYSTEM MANAGER, Antitank Missiles, has provided the following update:

Improved Target Acquisition System (ITAS). The ITAS is designed to improve the dedicated antitank system (HMMWV-TOW) in the light forces. The backbone of all improvements is increased detection and recognition range under all battlefield conditions. Increased range will result in a more lethal weapon that offers more survivability through standoff and less potential fratricide through improved resolution.

Other primary improvements include automatic target tracker, laser range finder, integrated sight, direct view optic, automatic boresight, built-in test/built-in test equipment, and embedded training. The ITAS will be compatible with all present TOW missiles and will also be the target acquisition and fire control for the Advanced Missile System-Heavy (AMS-H).

A Department of the Army in-process review was conducted in January 1992, and the ITAS program was approved. The fielding of ITAS is projected for FY 1997.

The POC is CPT John Roth, DSN

835-1766 or commercial (404) 545-1766.

Advanced Missile System-Heavy (AMS-H). The AMS-H, the follow-on to the TOW family of missiles, will offer more range and less time of flight. The TOW-sized AMS-H is designed to be fired from all TOW launchers with increased lethality and gunner survivability. AMS-H will use the ITAS target acquisition and fire control systems.

AMS-H is in a technology analysis phase. The best technical approach has identified multiple technologies that may meet user requirements. Fielding for AMS-H is projected for 2002.

The POC is CPT John Roth, DSN 835-1766 or commercial (404) 545-1766.

Javelin (AAWS-M). The Advanced Antitank Weapon System-Medium has been designated the "Javelin" by the U.S. Army. The Javelin replaces the current Dragon antitank weapon system on a one-for-one basis. The Javelin missile attacks its target using state-of-the-art imaging infrared (IR) sensors and automatic in-flight target tracking.

The Javelin program is about 30 months into engineering and manufacturing development (EMD). A recent acquisition decision memorandum restructured the EMD phase of the program from 36 to 54 months. The extended EMD reduces the technical risk associated with the weapon's focal plane array (FPA) technology.

On 8 November 1991, the Javelin scored its fifth hit in as many firings. The latest hit came against a stationary T-72 in the open at 545 meters.

Although the Javelin's required weight is 45 pounds, the Army has

agreed to accept a weight of 49.5 pounds at the first-unit-equipped date.

The POC is MAJ Love, DSN 835-5510 or commercial (404) 545-5510.

Non-Line-of-Sight-Combined Arms (NLOS-CA). The NLOS-CA is a multi-mission area system capable of destroying threat armored vehicles, rotary wing aircraft, and such high priority targets as command and control vehicles and bridging equipment. It will allow a maneuver commander to fight the extended close battle beyond the line-of-sight of threat weapon systems. It can engage masked, dug-in, or defilade ground targets and hovering or maneuvering rotary aircraft at ranges of more than 10 kilometers from a defilade firing position.

The NLOS-CA also has the potential for use by other services. It will be mounted on a host vehicle that can carry at least six ready-to-fire missiles on board. The system will have dual-launch capability and will be day or night capable.

The previous NLOS program has been in development for the past 10 years. In December 1990, the NLOS program was midway through the full-scale development (FSD) phase when development was cancelled because of contractor cost overruns. The current guidance is to develop a low-risk, low-cost system that will meet basic combined arms requirements and that can be fielded rapidly. The basic requirements were developed by a special task force that included representatives from the materiel and combat development communities.

Further development and early unit testing are scheduled, and the projected first-unit-equipped date is the second

manual is scheduled for publication and distribution by April 1992.

FM 7-8, Infantry Platoon and Squad. This manual provides tactics, techniques, and procedures on the way infantry rifle platoons and squads fight. It is aligned with the Army's AirLand Battle doctrine and should be used as a guide to training and combat operations. It is scheduled for publication and distribution by June 1992.

Coordinating drafts of the following manuals were recently fielded for review and comment:

FM 23-10, Sniper Training. This

manual provides information to use in training and equipping snipers, and to help snipers in their missions and operations. It discusses equipment, weapon capabilities, and fundamentals of marksmanship. It should be used as a reference when conducting sniper training.

FM 23-31, 40mm Grenade Launcher, M203. This manual provides technical information on the M203 grenade launcher, along with training and combat techniques. This information can be used to integrate the weapon into combat operations.

FM 23-33, 66mm HEAT Rocket, M72A1 and M72A2 (LAW). This manual discusses the LAW's characteristics, nomenclature, functioning, and employment. It also includes a training program and briefly discusses tactical employment procedures.

FM 57-38, Pathfinder Operations. This manual describes the procedures pathfinders use during various operations and includes the training and capabilities of pathfinder-qualified personnel. It serves as a ready reference on the organization, training, and employment of pathfinders.

THE LEADER BOOK described in Appendix B of Field Manual 25-101, Battle Focused Training, 1990, provides an easy way for leaders to manage training in individual Military Occupational Specialties (MOSs). In the Leader Book, a junior leader records some administrative data and the common task performance for each member of his unit. The book is especially helpful in keeping track of the specific MOS-related tasks a soldier has successfully completed and those he has yet to master.

The leader begins by recording in the book the tasks each soldier learned in advanced individual training. These tasks should be in each new soldier's training packet, recorded on DA Form 5286-1-R. Soldiers who became qualified in their MOSs at Reserve Forces schools receive the list of successfully completed tasks on DA Form 87. If these forms are missing, they can be reconstructed through information from the appropriate school.

After transferring these tasks to the Leader Book, the leader should determine which of the untaught tasks left in the Skill Level 1 Soldier's Manual apply to the unit's mission essential task list (METL) and add these to the Leader Book.

Although units may find this administrative task burdensome, it must be done if the Leader Book concept is to be effective. Leaders should look for

ways to reduce the effort of this task through the use of pre-printed forms, or automation.

A leader should not overlook other sources of training that teach specific MOS tasks, such as local on-post troop schools (Basic NCO Academy, NBC School, and Unit-Level Logistics System certification course, for example) and the training provided in conjunction with the fielding of new equipment. When these are added to the tasks taught during "sergeants' time" on the training schedule, the number of tasks that have to be taught can be whittled down.

The Leader Book allows a leader to keep track of individual soldiers' MOS proficiency, and helps him with periodic counselling, efficiency reports, and planning. It also shows that he knows the training status of each of his soldiers.

(This item was provided by LTC Harry A. Stumpf, Inspector General, U.S. Army Forces Command, Fort McPherson, Georgia.)

WHEN SOME UNITS IN KOREA received their new M2A2 Bradley fighting vehicles last fall, the soldiers did not know that changes had been made in the "sliding" damper reservoir piston assembly on the M242 chain gun. As a result, many crews reported problems with the damper assembly.

For years, some gunners had been

using an informal check (one not found in the manual) for the presence of damper fluid. They simply pushed in on the red piston rod that points to the rear of the gun assembly. When they tried the same test on their new equipment, they found the rod did not resist when they pushed on it.

In the new guns, produced after serial number 6200, the damper reservoir piston *does not resist* when pushed in; it moves back and forth on the indicator rod. This modification was made because of the increased operating temperature and rate of wear when the gun is used in its air defense configuration. Although the gun on the M2A2 Bradley still has a high rate of fire of 200 rounds per minute, the same gun can be adapted to fire 500 rounds per minute.

The soldiers in other units receiving new Bradleys need to be advised of this difference and then follow the guidance of the Bradley New Equipment Training Teams in testing the damper fluid.

THE STOCK FUNDING Depot-Level Repairables (SFDLR) Program will bring about a dramatic change in maintenance operations and day-to-day operations.

In the past, when a unit replaced a major engine, for example, procurement funds picked up the bill. Under the SFDLR program, the cost of an engine will be charged to the unit's budget.

The actual cost will be the Army Master Data File (AMDF) price for the item, reduced by the turn-in credit. Because it is usually cheaper to repair a piece of equipment than replace it, most maintenance and repair will take place at the lowest possible level.

The program has three main purposes—to improve discipline and visibility of depot-level repair; to realize the benefit of a single source for funding; and to make it easier to identify the costs associated with weapon systems.

The SFDLR Program goes into effect on 1 April 1992.

AN OPTIC SIGHT is being added to the M16A2 rifle. This sight will give infantry soldiers increased first-round hit probability and extend the distance at which they can begin engaging hostile targets to as much as 600 meters. The weapon, generically type-classified as the M16A3, places a 3- to 4-power magnification optic sight on the modified upper receiver of the M16A2.

The sight will straddle a mounting ramp, replacing the carrying handle now on the M16 family of rifles. A quick-change feature, however, will allow soldiers to use the conventional iron sights mounted on a snap-on carrying handle without any special tools.

The modified M16A3 rifles are scheduled to be fielded in 1992. The designers also plan to use the same sight, hardened against lasers, on the M249 squad automatic weapon.

THE FAMILY OF MEDIUM Tactical Vehicles (FMTVs) are now in production. These 2½-ton and 5-ton trucks will be manufactured in 15 different configurations. Such variations as wreckers, cargo trucks, vans and dump trucks, as well as troop carriers, will be produced.

Newly designed axles and suspension systems, electronically controlled automatic transmissions, and “on-the-fly” adjustable tire air system will improve operation in snow, sand,

swamp, or rough terrain. Air lift and air drop models will provide rapid deployment capabilities. Aerodynamically reinforced high-strength structures, high visibility, fully electronic controls, and user-friendly operation will improve the driver’s working environment. Generous wheel travel and advanced spring technology will improve ride and handling characteristics.

AN ARTILLERY BATTERY in the 6th Infantry Division in Alaska has been designated as airborne qualified—Battery B, 4th Battalion, 11th Field Artillery.

The new status of the battery, one of three firing batteries in the battalion, means the 6th Division can now parachute 105mm howitzer crews and their weapons into combat situations. Once on the ground, they will provide fire support to the infantry as they secure the area, conduct an ambush, or engage in other tactical maneuvers.

The battery will work closely with the division’s airborne infantry unit, the 1st Battalion, 501st Infantry, and can be deployed with it, should the need arise.

AN EXPERIMENTAL ROBOT HMMWV (high mobility multipurpose wheeled vehicle) can follow a road and avoid obstacles without manual assistance.

The vehicle, dubbed Nav Lab II, is an ambulance version of the M998-series HMMWV that has been modified to operate as an autonomous road-following vehicle. Using the same automotive components as its standard counterpart, Nav Lab II has computer-controlled actuators that control acceleration, braking, and steering.

This vehicle can travel farther and faster and can be programmed to enact a wider range of tasks than its predecessor, Nav Lab I, built in 1986. In operation, on-board cameras view the scene ahead of the vehicle and feed the images into a computer. The computer then analyzes these images to find the edges of the road and automatically

generates driving commands that enable the vehicle to follow the road and avoid obstacles. The vehicle can be programmed from a suitcase-size portable control station.

A NEW FIELD RATION called the Long Life Ration Packet II (LLRP) is expected to provide a healthier and tastier diet for soldiers.

Similar to the MRE (meal, ready to eat), the LLRP is an updated version of the LLRP now used by Special Operations forces. Each menu contains 1,570 calories.

The LLRP has an expected shelf life of 10 years at 80 degrees Fahrenheit and is designed for storage in war reserves overseas. It would be issued to the troops who arrived during the early stages of a combat deployment.

This new ration is still in the developmental stages and will undergo extensive testing before it is fielded.

THE U.S. ARMY OFFICER Candidate Alumni Association, Inc., is seeking members. Graduates of any Army Officer Candidate School (OCS) or course are eligible for regular membership. Associate membership is available to non-OCS graduates who served as staff and faculty members at an OCS and other persons who have made and will continue to make significant contributions to the OCS program. Annual dues are \$10.00 for either class of membership.

Anyone who is interested in joining may write to Secretary, The U.S. Army Officer Candidate Alumni Association, Inc., P.O. Box 2192, Fort Benning, GA 31905-2192.



PROFESSIONAL FORUM



Rear Detachment Commander

MAJOR TIMOTHY J. LEYES

When units deploy, as so many did during Operations DESERT SHIELD and DESERT STORM, someone has to stay behind to command the rear detachment. To many officers, this is a novel experience and one that causes many long work hours and some growing pains as they learn their greatly expanded jobs.

Unfortunately, a newly assigned rear detachment commander (RDC) has no single Army field manual, training circular, or regulation to guide him. If he's lucky, he finds that his battalion has a good, current, comprehensive standing operating procedure (SOP) for rear detachment operations to point him in the right direction. Each battalion normally has a system that is to be followed in preparing for an extended absence. But few have a similar plan for preparing the RDC for the problems associated with a battalion's long term and long distance deployment.

For purposes of this article, "a rear detachment" is defined as a group of soldiers left behind by a battalion-size unit to provide command and control, communication, security, and support for the battalion, and assistance to the soldiers and families left behind.

The first question is "How should the rear detachment be organized?" A useful tool in answering this question is to apply a variation on the METT-T (mission, enemy forces, terrain and

weather, troops available, and time available) analysis.

In this variation, the mission analysis can be an examination of all the various "to-do" lists within the command group and the staff sections. This analysis will yield a fairly complete list of projects or actions for the commander to use in deciding how his detachment should be organized. The bulk of these, when assigned priorities, become what is essentially the RDC's mission essential task list (METL).

Instead of enemy forces, friendly points of contact within the various installation agencies can be assessed and telephone numbers obtained.

Terrain and weather can be looked at as determining the required external meetings for battalion personnel during the scheduled deployment dates. These can range from townhall to commissary council meetings and often require some good time management by the RDC and the NCO in charge.

An analysis of troops available definitely has applications here. Commanders want to deploy with as many assigned soldiers as they can. Still, there are almost always some soldiers who are always categorized as "non-deployable," and they make up the major part of the rear detachment. The commander can look at their respective MOSs, grades, and experience levels to determine whether any of the deploy-

able soldiers are needed to perform all of the missions.

The RDC can analyze the scheduled duration of the deployment for a variety of "cues." These cues include looking at personnel actions that will be affected by time (expirations of terms of service, permanent changes of station, retirements, chapters) and how these will affect the manpower needed to accomplish missions or tasks (considering the given resources) and to plan and coordinate all of the support requirements. This is probably the most time-consuming part of the analysis, but it will guide the commander in organizing the rear detachment and assigning duties to key personnel.

Once the rear detachment structure has been approved by the battalion commander, the scope of the RDC's duties and responsibilities must also be discussed with him. The starting point is the RDC's implied mandate of being responsible for everything the rear detachment does or fails to do. But this somewhat simplistic approach does not help the RDC focus his energy on priority tasks or prepare him for the many daily distractions that take on their own priority status and compete for his time.

Examples of these new priorities include answering questions about overnight blotter entries, talking to spouses who must deal with family

choices in the commander's absence.

An excellent method of establishing control as the commander, and of testing the rear detachment chain of command, is to begin operations at least three days before a deployment. With the battalion still around, the RDC can begin implementing his system and adjusting it so the transition will be smooth when the unit departs. Problems that arise during this period can be discussed and resolved with the deploying chains of command. Any attempts to test the resolve of the new chain of command can then be stopped

before they start.

But there are other actions the RDC can take during the execution phase of the deployment to stay ahead of the game. The accompanying checklist, which was developed within a forward-deployed mechanized brigade, has proved useful in organizing a detachment commander's actions during a deployment. The checklist contains some regulatory and local policies, but it offers some helpful hints for making future RDCs' jobs easier. Some of these jobs are done only once, others recur, and additional items may come up that are not listed.

Some officers may think this list overstates the obvious, but it will at least serve as an internal check of commonsense items. Hopefully, a rear detachment commander will take the list and add or delete items as they apply to his specific unit.

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Smoke Integration On the JRTC Battlefield

MAJOR PAUL B. SHORT
CAPTAIN DAVID G. SHOFFNER

As observer-controllers at the Joint Readiness Training Center (JRTC), we have noticed that too few battalions use the advantages smoke can offer. Accordingly, an opposing force (OPFOR) observation team can easily plot and record a unit's defensive preparations from a safe distance. The smoke platoon attached to a brigade task force can help a great deal, and it should be integrated into all unit defensive mission plans.

Generally, the failure to use smoke can be attributed to inexperience with smoke planning and integration. But a battalion commander and his staff can achieve successful smoke integration if they understand the three basic smoke platoon missions—*screening*, *deceiving*, and *obscuring*.

Screening. Screening missions are used to reduce or defeat the enemy's observation and targeting capabilities. For example, a commander can screen

his movement, breaching, or recovery operations by using various concentrations of smoke.

The battalion chemical officer plays an important role in advising the commander on how a screening mission can be accomplished. In addition to an analysis of METT-T (mission, enemy, terrain, troops, and time), his advice should include a consideration of the unit's proficiency in operating under limited visibility conditions. Then, on the basis of this analysis and the commander's intent, the chemical officer should recommend either a smoke *blanket* or a *haze*. A smoke blanket is dense with visibility limited to less than 50 meters, while a haze allows visibility at 50 to 100 meters.

Depending on METT-T and weather conditions, the chemical officer may recommend a smoke curtain rather than a blanket or haze. A *curtain* is a vertical smoke screen that is placed

between the observer and the area observed to reduce observation.

Smoke can be used to screen support operations, lodgements, passage points, breaching, river crossings, and defensive preparations. In all of these examples, the use of a smoke screen increases the survivability of the friendly unit and reduces the enemy's performance. Unfortunately, smoke also attracts attention, and planning must include security and, if possible, deception as well.

Deception. Commanders often overlook smoke as a means of deception. They think that once the generators crank up, the enemy will know something is going on in an area. To mislead the enemy, though, smoke must be created in several different locations, and smoke generators can be supplemented by smoke pots and artillery delivered smoke. The objective is to force the enemy to thin out his

intelligence effort to determine what, if anything, is happening in those various locations.

Once again, the commander's intent and a METT-T analysis are essential to the planning process. Observations at the JRTC support the idea that smoke does indeed draw the attention of the opposing force (OPFOR). The smoke platoon must therefore be prepared to react to OPFOR contact during all missions.

Smoke alone is not enough to deceive the OPFOR. Psychological operations, aviation, artillery, and infantry—all conducted under the limited visibility afforded by a good smoke plan—can help create deception with false insertions, H-hours, and troop movements.

Obscuration. Obscuration may be the most difficult smoke mission and, contrary to popular belief, not all smoke obscures. Obscuring smoke is the smoke employed directly on the enemy. Artillery delivered munitions can provide short periods of coverage for

H-hour missions and smoke grenades can be used for close combat. But extended obscuration of enemy positions requires a great deal of logistical support.

In theory, smoke platoons, given the appropriate terrain and weather, can smoke an objective from the line of departure (LD). But those conditions are rarely reliable, and smoke platoons on or across the LD are usually dead smoke platoons (unless they are mechanized).

If a commander does decide to smoke the objective using generated smoke, a detailed plan must be developed. Unless conditions are perfect, the best results are obtained from using HC (hexachloroethane) and WP (white phosphorus) artillery munitions and smoke grenades on the objective. Commanders can still use smoke generators to screen movement to and across the LD and to deceive the enemy.

On the JRTC battlefield, these three types of smoke missions can be used

effectively, and any mission is improved by the integration of a smoke plan. Brigade and battalion staff chemical personnel can provide their commanders with such a plan, but it is up to the unit commander to request it.

A well-thought-out plan that is integrated into a unit's mission will improve the unit's ability to accomplish its mission. More important, it will improve the unit's training. And any unit that leaves the JRTC with better trained soldiers can say that it has "won" on the JRTC battlefield.

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Equipment Deployment Boxes

CAPTAIN ROBERT E. MILANI

Deploying a company to the field for training exercises or during no-notice readiness alerts can be a stressful task for the chain of command, particularly the company commander. Companies that do not have good deployment practices and SOPs (standing operating procedures) usually run short of time in readying their equipment and personnel.

One way to make the most of the time available, particularly during no-notice readiness alerts, is to prepare equipment deployment boxes ahead of time. Company commanders who use

deployment boxes gain several advantages: The boxes save time in preparing equipment; expedite and improve hand receipting and accountability of equipment; eliminate the worry that the company has forgotten something; and allow the commanders to use only fragmentary orders concerning required equipment during their warning orders or operations orders.

The following are examples of deployment boxes that can be used by companies organized and equipped

under either light, air assault, or heavy tables of organization and equipment (TOEs). (Few light companies have the capacity to transport these boxes as listed. They are normally drawn from the commodity areas and the equipment distributed down to the soldier level in the platoon areas.) One of each type of box is prepared for each rifle and mortar platoon. There should be at least a three-day supply of all expendable items.

Supply Box:

- Chemical lights (one box infrared,

three boxes platoon color).

- Combat acetate (one roll).
- Engineer tape (one roll).
- Sandbags (one bundle).
- Pioneer tools (two shovels and two picks).
- Picket pounder.
- Bean bag lights (four, with color caps, and two batteries per light).
- 100-mile-per-hour tape (five rolls).
- 550 cord (one roll)
- Trash bags (brown, black, or green).
- Toilet paper (three dozen rolls).
- Memorandum pads (ten).
- Ink pens and alcohol pens (one box).
- Sharpened pencils (one box).

The platoon sergeant is responsible for maintaining the supply box, and the supply sergeant for replenishing it after each field exercise or alert.

Platoon Box:

- Bayonets (number authorized per platoon).
- Signal mirrors (five).
- Compasses (12).
- Binoculars (number authorized per platoon).
- Wire cutters (three).
- M60 spare barrel bags and AG equipment (two).
- VS-17 panels (four).

Communications Box:

- AN/PRC-126 radios with accessories (five).

• SINCGARS radios or AN/PRC-77s (number authorized per platoon, with accessories).

- TA-1 telephones (four).
- Field wire (number of rolls as determined by RTO).



- Extra hand microphones.
- Batteries (three dozen for AN/PVS-4, -5, -7, D-cell, AA, AN/PRC-77 and AN/PRC-126).

The platoon sergeant is responsible for maintaining the platoon box, and the platoon radio-telephone operator (RTO) is responsible for maintaining the communications box.

Each of these boxes is maintained under lock and key and stored in the supply room. Each is deployed to the field at the discretion of the platoon leader or company commander. A pre-

printed hand receipt is maintained on the inside top of each box listing all items in it. All of these boxes should be inspected quarterly during command inspections or monthly ten-percent inventories. Two keys should be maintained for each box—one by the responsible individual and the other by the commodity area chief.

The responsible individuals can pre-sign for their boxes to further expedite the hand-receipting process, but all equipment must still be maintained in the appropriate commodity area for physical security reasons. If individuals elect to pre-sign hand receipts, all boxes should be banded, and serial numbered railroad seals placed through the latches.

The primary purpose of using deployment boxes is to expedite the hand-receipting process and allow the company to concentrate on more important matters.

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Hand-to-Hand Combat Training And the Nine Principles of War

STAFF SERGEANT RAYMOND O. LESO

Light infantrymen use nine principles of war as guidelines when attacking (Field Manual 7-71, *The Light Infantry Company*, 1987). These same nine principles can be applied to effective

hand-to-hand combat. Unfortunately, hand-to-hand combat in most infantry companies is given only minimal coverage at best. But the fact that FM 7-71 specifically mentions using bare

hands, garrotes, knives, and bayonets must mean that these skills are intended to be taught and learned.

I propose using the nine principles, in simplified form, as guidelines when

teaching hand-to-hand combat. The techniques selected for this instruction should be direct and easy to learn and the ones that cause the most damage.

The nine principles, as used in teaching hand-to-hand combat, are as follows:

Objective—"Direct every military operation toward a clearly defined, decisive, and attainable objective." In the context of hand-to-hand training, this implies destroying an opponent through unbending intent. To destroy any objective (or opponent), a soldier must attack the vital targets (eyes, throat, groin) and disrupt the opponent's thinking. A soldier can destroy the opponent by a direct assault on his head (headquarters) or groin area. Straight punches, finger jabs, and kicks to the groin will help complete this task.

Offensive—"Seize, retain, and exploit the initiative." Moving forward is essential in hand-to-hand fighting. All the techniques that are learned should be taught in the context of aggressive forward movement. Defensive techniques (blocks) should be used only as a means of moving in and counter-striking. If the concept of moving forward is taught properly, a hand-to-hand fighter will always be focused on the opponent's face, punching, kicking, and gouging. By doing this, he will force his opponent to react rather than act. The idea is for a soldier to impose his will in.

Mass—"Concentrate combat power at the decisive place and time." When fighting hand-to-hand, a soldier should move forward and concentrate his combinations of front kicks (as a set-up) and fists on a certain area. Hand combinations should never be used in less than three-punch bursts. As an example, if the intent is to attack the throat, a good technique is to kick low to the groin. The opponent will then drop his hands, and the soldier can fire three to five punches to his exposed throat and face. An important note in training is to throw punches in bursts of three or more.

Economy of Force—"Allocate minimum essential combat power to secondary efforts." A lot of fancy

footwork may be impractical because of the clothes a soldier is wearing or the terrain he is on. Further, footwork is tiring and only takes away from energy the soldier can use in an attack. When using this principle, a soldier should make his attacks direct and true, with deliberate intent.

Maneuver—"Place the enemy in a position of disadvantage through the flexible application of combat power." Through awareness, a soldier should be trained to use his surroundings to his own advantage. Being able to maneuver others by using



obstacles or terrain is important in hand-to-hand combat. Personal maneuver should be concentrated on the speed of forward attack and, when necessary, on smooth withdrawal.

Unity of Command—"For every objective, ensure unity of effort under one responsive commander." Hand-to-hand techniques, when possible, should fit the individual's physique and temperament. Every fighter should have a simple arsenal of techniques that may work specifically for him. These techniques should be smooth and coordinated. The more coordinated an attack is (through drill), the quicker and more deceptive it will be.

Security—"Never permit the enemy to acquire an unexpected advantage." Being alert and aware of the surroundings should be second nature to all infantrymen. A hand-to-hand fighter should learn (through practice) to anticipate an imminent

attack. The best security, in fact, is to attack first using deadly techniques.

Surprise—"Strike the enemy at a time and place, or in a manner, for which he is unprepared." A good hand-to-hand fighter (especially when using knives or sticks) conceals his assets until the very last moment before striking. And once he initiates an attack, his strikes should be audacious and repeated. The element of surprise is limited only by creativity. Throwing dirt and feigning submission are two simple ways of diverting the opponent's intent long enough to seize the initiative.

Simplicity—"Prepare clear, uncomplicated plans and clear, concise orders to ensure thorough understanding." Simplicity should be applied in teaching as well as in learning. A hand-to-hand combat instructor should present only simple techniques that will work. The teaching should consider the individual student, the clothing or equipment that a soldier wears, and the likely combat terrain. A student combatant should practice the techniques daily in a drill-like sequence until they become second nature. Further, controlled sparring and grappling should be part of every training session.

The importance of hand-to-hand combat training to an individual soldier cannot be emphasized enough. Within a hand-to-hand training regimen, an instructor can build the individual soldier's self-confidence and also teach him the essence of infantry fighting. Hand-to-hand combat is an integral part of the military art. Teaching and learning the concept of moving forward and attacking, as derived from the nine principles of war, can only improve a soldier's ability to fight.

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Mortar Employment

MAJOR CHRISTOPHER A. COLLINS

A mortar platoon leader has to be technically proficient with his mortars, but he also has a critical role as the commander's primary advisor on mortar tactics. If you are a mortar platoon leader, I would like to offer you some lessons—from my experience as an observer-controller at the Joint Readiness Training Center (JRTC)—that you may not have learned in the Infantry Mortar Platoon Course:

Selling the Mortar Platoon

First, since few unit commanders, S-3s, and fire support officers (FSOs) are familiar with the tactical employment of mortars, you have to "sell" your platoon's capabilities. Describe what your mortar fires can do to the enemy and how the commander can capitalize on the effects of those fires to support his scheme of maneuver.

Many commanders seem to believe, for example, that if they assign the mortars a firing position in range of a unit they have coordinated for fire support. But the location of a firing position is almost irrelevant to fire support planning. What counts is the effect a commander wants the mortar fires to achieve.

Unfortunately, though, our current operations order (OPORD) format does not include a paragraph for the commander's intent for fire support. If you don't ask your commander what he wants to happen to the enemy, you will be left to use your own judgment and will frequently be forgotten during the battle.

When you attend the battalion OPORD briefing, don't be satisfied with guidance that addresses only a firing position. Ask the commander to describe how he intends to use the effects of the fires. And take the section sergeant with you to the OPORD briefing so he can plan for the technical aspects of firing the missions.

Do not expect the FSO to provide command guidance for the mortars. All you should expect him to do is plan and coordinate mortar target lists (with overlays), fire missions, and clearance of fires. All other guidance should come from either the commander or the S-3. When it comes to movement and integration into the battalion fight, the mortars should be treated just like an infantry company, and should be addressed in the subunit paragraph of the OPORD and included in the battalion backbriefs.

It is much better to coordinate in person than by radio. If the situation permits, visit the tactical operations center or the tactical command post often to keep abreast of the battle and coordinate the best ways of using mortar fires. Focus on coordinating with the FSE (fire support element) to maintain a current target list. As the battlefield changes, coordinate with the battalion commander and the S-3; they are the ones who integrate the mortars into the battle.

Coordinating for fire support is more than just asking a busy S-3 if there are any changes to the order and then leaving thinking you have a current plan. (Unfortunately, not many commanders and S-3s know the kind of

information mortarmen need to support the battle. And, unlike the artillery, you do not have a staff to do any planning.) Instead, approach the battalion staff with a list of questions and issues, and be prepared to discuss your capabilities and limitations for each specific mission. Again, take the section sergeant with you on these coordination visits.

Don't rely exclusively on the battalion FSO for target lists and fire missions. Go to the companies and talk to the commanders about fire support. Discuss how they can use the effects of your fires to accomplish their missions. Once the companies and platoons make contact with the enemy, you will receive more calls for fire from them than you will receive for planned fires from the battalion FSO.

Besides firing positions, radio frequencies, and target lists, discuss such firing details as the time delay between the initial call for fire and the first round hit (generally longer than five minutes at the JRTC), adjustment procedures, clearance of fire procedures, the commanders' intent for fire for effect, and the assessment of the enemy situation in the commanders' areas of operation. Most important, obtain patrol routes, ambush positions, proposed command post locations, and the anticipated times of movement and occupation. This is one of the few ways to ensure that your mortars will be responsive to the commanders' calls for fire.

Don't forget to coordinate with the units that do not have forward observers (FOs)—scouts, antiarmor platoon,

aviators, engineers, and attached tanks. The only link these units have with the mortars is often the battalion command radio net. If the mortars are to provide support for these units, you need to coordinate with the battalion commander regarding procedures and radio nets.

Using Priority Targets

Priority of fires (POF) does not mean a lot for mortars at the JRTC, because there are not many competing calls for fire. Instead, POF has become an aid in the selection of concealed positions to hide the platoon, because it ensures that the mortars are at least oriented in the direction of the POF unit.

Generally, at the JRTC, a company with an artillery POF will not even call the battalion mortars for fire missions. All three platoons in a company with FA POF call for artillery first. This means that only two of the nine rifle squads in a search and attack operation will get any type of fire support: The first squad in contact will get artillery fire support and the remaining squads will share 60mm mortar fire support. The deletion of battalion mortars from this company's fire support assets is partially due to poor procedures during communication exercises (COMEXs) and partially due to the current procedure of assigning POF to a company instead of to a target description.

POF would be more useful for the mortars if it corresponded to the commander's high payoff targets, such as supply points, enemy mortar sites, command and control sites, or air defense positions) could have artillery POF.

Priority targets are a way of reducing the response time for mortar fire support, since the mortars are already laid on the target. As you coordinate with the company commanders, make sure the priority targets correspond to the scheme of maneuver. Priority targets are not responsive if they are plotted against a terrain feature in center sector and not on enemy targets or



Many routine tasks can be simplified by good written SOPs that every soldier in the platoon understands. And even the best SOPs need to be rehearsed often.

along the route of movement; once units are in the woods, they cannot see the terrain feature to make the needed adjustments.

The priority for a target should have an anticipated start and stop time and a plan for shifting the priority—once the target is no longer relevant—to a new target that supports the maneuver. It is quite common at the JRTC to see mortars still laid on a priority target 24 to 48 hours after a company has passed through the area of operations (AO).

A technique that works is to have the priority target 500 to 1,000 meters

forward of a company's lead element and then to keep adjusting the target to correspond to the movement along a specified direction of attack.

Be careful of matrices. A fire support matrix is useful only as a tool for controlling fires; it is not intended as a final product for fire support planning.

A fire support matrix generally indicates how mortar fires will be integrated or synchronized with maneuver. (Sometimes, commanders and S-3s accept matrices and target lists as final products because the mortar men have not asked for the commander's

intent for fire support.) Most matrices that indicate POF by phase or phase lines do not list a time when the POF will change or who will notify the mortars when it does. Also, POF for the mortars does little more than help obtain a direction of fire and resolve the conflict when there are competing calls for fire.

During the search and attack phase, fires must be integrated and synchronized. In this two-part mission, squads and platoons generally conduct the search, and they are the ones who can normally control fires best during chance contacts. They need almost instant fire support that they can easily adjust to fix the enemy. The company mortars are the most responsive, but single 81mm mortars or mortar sections in support of designated squads can be just as responsive.

Once the enemy has been found, and the company or battalion is preparing to attack, coordinated fires from the battalion mortars and the artillery can be most effective. But designating the battalion mortar platoon to provide POF to a specified company during the search phase has been a poor technique for integrating fires with maneuver. The company FSOs normally do not coordinate fires with the squad and platoon patrols, and the mortars remain laid on a terrain feature in the center of the company AO. Also, if a unit without mortar or artillery POF makes contact with a high-payoff target, battalion FSOs frequently forget to adjust the mortar fires to support the company's attack.

One of the better uses of mortar fires during the search phase is to suppress the enemy and fix him when the patrols make initial contact. A squad size patrol that makes contact with a small enemy element will have to adjust an excessive number of mortar rounds on the enemy force to destroy it, but the soldiers in the patrol can synchronize the mortar fires to fix the enemy while they maneuver to destroy or capture his force.

To synchronize mortar fires with their maneuver, the squads need responsive communications with the

mortars. A successful technique during the search phase is to have the company with priority of mortar fire transfer that priority to designated squads or patrols. Squads in an ambush posture can also synchronize mortar fires so they will seal off kill zones or illuminate an area.

Once the enemy has been found and the unit is preparing to attack him, POF can be reassigned so that all fires are massed on the target area. POF during a search and attack should not just be split equitably among the companies. Instead, the mortar platoon POF (perhaps even section POF) should be assigned to the squads that are designated to make contact during their patrols. Then, once the enemy has been found, the POF can be shifted to support the attack.

Mortar illumination and white phosphorous rounds can play an important role as well. Although night vision goggles are excellent, units that illuminate the battlefield at night during contacts shoot better, more often, and cause more damage to the enemy. And if there is a good chance of causing civilian casualties, you may want to use illumination for positive target identification.

Although WP rounds are excellent for marking locations for close air support (CAS) and attack helicopters, they are seldom used this way. One consideration for WP rounds is that they are more lethal than high-explosive (HE) rounds. They can establish an initial smoke screen but are best used if the WP is fired on an enemy position—not to cover a friendly unit's movement.

Communicating

Good communications also require planning and coordination. Although the mortars are usually described as the commander's most responsive fire support asset, surprisingly few FOs or FSOs monitor the mortar platoon frequency. The battalion mortars compete with the artillery nets and the 60mm mortar frequencies on the few FO and FSO radios. Normally, at the JRTC, only the battalion FSO and the

company with 81mm mortar POF monitor the mortar platoon frequency. Even the FOs monitor the artillery frequency instead of their own 60mm mortar net. As a result, the mortars are inaccessible to the companies and platoons.

As part of the planning and coordination process, you need to coordinate with the FSO, the S-3, and the signal officer and prepare a communication scheme that supports the mission. All units must be able to call for mortar fires and must know the procedures (frequencies, clearances, retransmission nets, and the like). This is important because few FSOs or FOs monitor the mortar platoon's frequency. The fire support communication diagram should be included in Paragraph 5 of the battalion OPORD.

To make the fire support communication net work, you need to conduct a communication exercise (COMEX) as a three-phase rehearsal.

During Phase I, everyone conducts a serviceability check on the same frequency to ensure that all radios and Vinson devices are serviceable and on the correct Vinson variable.

During Phase II, the units put their assigned frequencies on their radios and practice such skills as remote rekeying of the Vinson devices, retransmission procedures, frequency presets on the radios, and voice versus digital fire missions.

Finally, during Phase III, all units on the fire support nets rehearse their calls for fire for both planned targets and targets of opportunity, emphasizing clearance of fires and switching radio nets to contact 60mm mortars, battalion mortars, artillery, close air support, and attack helicopters. Make sure the units with no FOs participate as well. (Unfortunately, few units at the JRTC have rehearsed anything beyond Phase I, and poor communication consistently delays fire support.)

Plan to monitor the battalion command net. Doctrinally, the mortars monitor both their platoon net and the battalion command net. In practice, the fire direction center (FDC) is very responsive on the platoon net—anyone

who is on the net is generally calling the mortars—but the platoon is not as responsive to the battalion command net. A radio telephone operator is assigned to respond on the battalion command net in case the platoon is called.

The only way for mortarmen to stay abreast of the current battle situation and the status of the maneuver units is to monitor and record all the messages on the battalion command net. Then, you will be able to ensure that your mortars can range the units and are in a position to provide synchronized fires.

Effective Mortar Planning

Prepare an effective mortar plan. Too many mortar OPORDs address only a firing position, a time of occupation, a POF, a DOF, and some coordinating instructions. But these orders have no direct bearing on fighting an enemy. An effective mortar OPORD must be based on an analysis of METT-T (mission, enemy, terrain, troops, and time) with the most important issue being the effects on the enemy.

To be effective, plans must also address the way the mortar platoon will protect itself from enemy attacks and the way the mortar fires will be synchronized with maneuver. A mortar platoon should be able to fight off enemy probes and squads. If the enemy has only a few mortars operating independently and is expected to be in elements of squad size or smaller (as in the JRTC's low intensity conflict scenario), it does not make sense for a mortar platoon to operate as split sections to survive enemy indirect fires. Split sections may protect the platoon from enemy artillery barrages (you don't expect barrages from single mortars), but the sections are more likely to be destroyed piecemeal by small enemy teams. If the enemy has no close air support or artillery, preparing a hardened position similar to a small firebase may protect the force from enemy probes. But if the enemy does have CAS, setting up in an open

field could be disastrous for the platoon. In short, you have to deduce the enemy's capabilities and plan to protect the force from them.

Remember that not all fires are effective. You must determine how the effects of your fires can cause the most damage to the enemy and then make sure your fire plans support the scheme of maneuver. It is meaningless to say, "Fire a mortar preparation on an enemy bunker system to damage the enemy." Mortar fires on a dug-in position will have little effect, compared to the number of rounds that will be expended.

The term "prep fires" does little to help mortarmen synchronize their fires with the ground attack. Similarly, guidance for "prep fires" does little more than direct the mortarmen to fire onto a grid coordinate. It does not address whether the rounds are expected to suppress, neutralize, or destroy the enemy. Placing preparation fires onto a bunker system is not likely to do more than force the enemy to keep his head down. In any case, preparation fire is not effective unless the infantry uses it to maneuver onto the objective.

"Attrition" is also a meaningless term for the mortars. It can mean causing one enemy casualty or 20, but with a significant difference in the ammunition expended. To plan for effective fire support, you have to get clearer guidance from the commander, such as the nature of the target and the desired effect.

The planning process must also include load plans for your vehicles. A platoon with seven HMMWVs (high mobility multipurpose wheeled vehicles) and two trailers can haul almost 500 boxed rounds of 81mm ammunition or 900 canister rounds. The only way to manage such quantities of ammunition—along with the mortar, personal equipment, and the assigned soldiers—is to prepare vehicle load plans.

Squad vehicles need to be self sustaining. Too often, when key vehicles are destroyed the platoon loses all its communication wire, all of the FDC equipment, or all of one category of ammunition because the load plans

did not include cross-loading.

Prepare the FDC to monitor the battle. It should include map boards that have the current battalion graphics indicating unit locations and planned targets. Planned targets should also be entered in the mortar ballistic computer (MBC), and the FDC should have a journal in which to record all radio transmissions.

The FDC staff members should be proficient at tracking the battle. They should show initiative and ask the companies for status reports instead of relying on the units to call them. Many units at the JRTC have failed to prepare any map boards for fear of an operations security compromise if the FDC vehicle is captured. A good FDC crew is cross-trained so that there will be no shortcomings in case of casualties or when one shift is sleeping. The entire mortar platoon should be proficient at FDC duties.

Plan to care for your casualties. Designate casualty collection points inside the platoon perimeter. Task several combat lifesaver qualified soldiers to care for the wounded.

Prepare for continuous security that corresponds to the enemy threat. At the same time, prepare a sleep plan while maintaining a mortar firing capability; don't keep everyone up all day and then expect them to be able to stay up all night as well, especially in the FDC. If the platoon has only four soldiers who are trained on the MBC, for example, the platoon will have difficulty sustaining split section operations while maintaining computer checks. If a squad needs two soldiers standing by for its fire missions, it needs a third (preferably the squad leader) to check the data.

Many routine tasks can be simplified by good written SOPs that every soldier in the platoon understands. SOPs should state priorities of work, procedures for the advance party, occupation drills, stand-to procedures, sleep plans, and the like. Even the best SOPs need to be rehearsed often.

Rehearsals can help identify and correct many planning shortcomings. Just as the most important rehearsals in

a rifle platoon are actions on the objective, the most important mortar rehearsals are the planned fire missions. Ideally, these rehearsals are part of the COMEX, and they include everyone involved in the fire missions. But some have observed at the JRTC that most mortarmen do not know what to rehearse or how to rehearse. Too often, rehearsals consist of nothing more than mortar crew drills that have no relationship to tasks, conditions, or standards.

Not surprisingly, most of the contingencies a platoon is likely to face on the battlefield are included in the infantry mission training plans, along with the tasks, conditions, and standards. To conduct effective rehearsals, you need to use your imagination and vary the conditions to correspond to both the enemy threat and the available men and equipment, conduct the rehearsal on terrain similar to that in the area of operations, and perform it to standard. If time permits, rehearse the contingencies in which the enemy is likely to cause the platoon the most damage—such as convoy ambushes, contacts during leaders' reconnaissances, and attacks on the mortar position.

Once you have established the standards, don't let them slide. If you coordinate with the company that has your POF and agree that your first adjustment round will hit in less than two minutes, you may have to conduct daily rehearsals to make sure you can maintain that standard. Some standards are easy to maintain if the entire mortar squad is standing around the mortar, but these same standards may not be met if some of the soldiers have been sent out on security and others are sleeping.

Prepare and rehearse contingency plans for protecting the platoon's vehicles during movement. Mortar vehicles are among the easiest to ambush because of their lack of security and the bad habit of leaving the canopies over the beds of the HMMWVs. Mortars are not equipped with machineguns to protect themselves during convoy movements. Three enemy soldiers can easily destroy the

entire mortar platoon in an ambush.

Success for mortars can be measured by the percentage of effective fire missions and by the ability to protect the platoon. Plans that are tactically and technically correct and that have been rehearsed help to ensure success. Obviously, a platoon that has an excellent plan but can't adjust its fires onto the enemy contributes little to a battalion fight. Similarly, a platoon that has adjusted fires onto the enemy but is caught sleeping and is destroyed by an enemy squad makes no contribution to the battalion.

Do not select sites on a "drive by" basis. Site selection is more than just finding an open field with some trees in which to hide the HMMWVs. First, if you can't verify the location of the tentative position within 100 meters, you may need to find a new site. Frequently at the JRTC, mortar platoons are tasked to airland at night and set up the mortars on the edge of a dirt airstrip. Many of them end up wandering the landing zone all night looking for something to use as a reference point. Conducting daylight reconnaissance to select and verify the location of a firing position will improve the platoon's ability to deliver accurate fires.

Next, a firing position should meet the following eight criteria—range, supports the commander's intent, supports communications, has mask and overhead clearance, can be defended by the mortar platoon, provides cover and concealment, is supported by routes, and has soil firm enough to support the vehicles and the base plate. Sometimes a platoon can compensate for these deficiencies—by emplacing mines, for example, to make a position defensible or by digging Stage III positions for cover. But if a deficiency can't be corrected, find a new position.

As much as possible, have the POF unit register your mortars after you occupy a new position, and re-register as often as necessary. This increases your accuracy and establishes the FO and mortar relationship. When mortars register for the live fire exercise at the JRTC, their initial rounds are often more than 500 meters off. When you

consider firing danger-close to a platoon in contact, being 500 meters off could be disastrous.

Walk the mortar line frequently and check the status of your mortars. Few platoon leaders do this at the JRTC, and they are frequently unaware that their mortar sights are inoperable for various reasons—condensation, incorrect data, aiming posts knocked over, or sight blocks.

To reduce the number of mortar squad errors, walk the mortar line during fire missions. Have the section sergeant walk the line frequently to check mask, overhead clearance, and firing data. Check the DOF with a compass to confirm that the aiming circle is laid properly.

The fastest way to prepare a mortar firing pit is to have an engineer small emplacement excavator (SEE) prepare holes for a Stage III position. A SEE can also dig a ramp to protect the HMMWVs, using its rear scoop and dumping the residue dirt as berms around the ramps. Stage III mortar pits should require no more than 15 minutes of SEE blade time, and HMMWV ramps should require about 20 minutes each.

Don't forget to harden the FDC vehicle, and always have the squad leader present when the SEE is excavating his position. Each squad vehicle should carry enough Class IV material to construct its positions. Ten engineer pickets, three sheets of 1/4-inch plywood, and 800 sandbags per position is a good starting point for a Class IV SOP.

Being a good mortarman is challenging. There is much more to providing fire support than sitting in an open field waiting for someone to call for fire. A good mortarman "sells" his platoon's capabilities and then trains and rehearses his unit to make sure he can meet his commitments.

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AN EXERCISE IN LEADERSHIP

LIEUTENANT COLONEL THOMAS R. ROZMAN
LIEUTENANT COLONEL WILLIAM A. SAUNDERS, JR.

The Army, as it reshapes and builds down in this post-Cold War period, will continue to demand top-quality leaders. At the same time, though, it will face increasing challenges in its efforts to attract, develop, and train those leaders, one of which will be a shortage of resources.

For officers, the precommissioning experience provides them their first impressions of what leadership is all about. In the Army, precommissioning training comes from several different sources, one of which is the Reserve Officer Training Corps (ROTC).

The following case study examines one way first-rate leaders can be attracted, trained, and developed, in spite of meager resources. The insight and lessons provided by the experiences of the ROTC instructor group portrayed in the study can be applied to any organization or unit that is faced

with the challenge of meeting training requirements with severely constrained resources.

This particular corps of cadets at a large state university had undergone the same decline in popularity—and in enrollment and facilities—as had many ROTC groups at other colleges and universities. By the late 1970s, its apparent decline had seemed complete. The program had barely commissioned the 12 second lieutenants required for it to be considered effective, and few of these were combat arms or career oriented. In fact, its collective cadet performance at ROTC advanced camp barely measured on the performance scale of school rankings.

Then something positive began to happen, and by the summer of 1979, this corps sent 30 cadets to advanced camp and ranked 24th out of 96 schools in the ROTC region. By

the summer of 1982, the corps had more than 40 cadets at the camp and ranked 12th among 106 schools. During that period, it consistently ranked as a top school in its ROTC region, ranking first in 1981.

What had caused this improvement? Changes had begun occurring in the overall university environment, but most telling, the cadre had acquired a new philosophy of leadership. Its guiding premise was that any experience the cadets would get from the program about being officers would be directly proportional to the efforts of the cadre. Next, if the cadets were to compete successfully for assignment to active duty, and achieve professional success once they were members of the officer corps, their experiences on campus would have to give them a proper foundation and an initial advantage.

How did the cadre members—many of them new to the program—apply their new leadership philosophy? They began with an assessment of the cadet's poor camp performance and precipitous drop in the enrollment figures. From this assessment, they considered several possible causes:

- The program had been generally "demilitarized" in response to the anti-military pressures of the late 1960s and the 1970s, apparently in the belief that it would be more palatable if it made fewer demands on the students. The weekly laboratories had been discontinued, for example, and the cadets were no longer required to wear their uniforms to class.

- Also as a result of the demilitarization policy, most of the tactical equipment, particularly operational weapons, had been removed from the campus. Only a bare residue of field equipment and a few AN/PRC-77 radios remained.

- The cadets' involvement in the leadership and planning experience had atrophied in terms of quality, standards, and opportunities.

- The cadets' exposure to formal military training had been progressively and significantly reduced. The only exposure they had to the cadre in any constructive professional sense were a few formal contacts in the classroom. The only interactive, "lead by example" mentoring was done by two of the ten military cadre members responsible for preparing those cadets who were scheduled to attend advanced camp and the officer and noncommissioned officer working with the cadet Ranger unit.

- The preparation of annual training calendars and training guidance needed to be revitalized.

- The cadets had little opportunity to employ such typical Army communication systems and methods as instruction, administration, training, tactics, and the like.

- The cadets received no academic credit for the time and effort they invested in structured leader planning or detailed training activities, even though these were equal to or better than other academic endeavors on campus.

In brief, the overall programs and operations of the cadre and the cadet corps were not functioning as an integrated system, the object of which was the commissioning of

competent, competitive lieutenants.

From these findings, it became apparent that even if more students could be enticed into the program, whatever interest they might have in the Army as a profession was not likely to be sustained. Statistics on cadet retention bore this out. Less than 25 percent of the basic course (freshman and sophomore) cadets moved on to the advanced course (junior and senior). Instead, those students who wanted more of a challenge from their military experience either pursued service academy appointments or took part in Marine Corps and Navy off-campus programs during the summer.

The cadre determined that if this situation was to be turned around, the on-campus program would have to be made more dynamic and challenging, and there would have to be more interaction between cadre and the cadet corps. Although the tougher program might also make it more difficult for the program to meet its enrollment goals, it would also build esprit, generate higher identification with the corps of cadets and, most important, greatly improve the professional competence of the cadets.

In response to these findings, the cadre developed a flexible plan that was based on total cadre involvement. It consisted of several elements, which were then continually refined.

First, the cadre organized as a maneuver battalion staff in terms of structure, though retaining their appropriate TDA titles as necessary. Each cadre member, in addition to his operational mission functions, assumed several other roles—instructor and advisor to a cadet class or tactical advisor to a cadet organization, such as the cadet Ranger company. In addition, each member, in his operational role, had a cadet staff counterpart; for example, the cadre S-1 served as advisor and counselor to the cadet battalion S-1 (see Table 1). These organizational assignments shifted as cadre members departed and others arrived, depending upon the skills and branch experiences of the incoming personnel. The cadre noncommissioned officers were assigned to these functions in their NCO capacity. Generally, the S-4 and S-4 sergeant, for instance, were teamed across all functions, which expanded and greatly improved the cadets' exposure to and interaction with the cadre members. As a result, the cadets had more access to all of the officers and NCOs and their professional military experience.

The cadet battalion was reorganized initially into a traditional line battalion staff structure with two cadet companies (one for cadets at the university's main campus and one for those from the six campuses supported by an instructor group extension center at a smaller college 30 miles away). This organization was later refined into a headquarters detachment and four line companies, each with a functional training mission (Table 2).

This organization supported expanded cadet involvement, leadership, and planning opportunities. It also provided the organizational framework for a mission oriented training program that focused on what is now termed a mission essential task list (METL). It was a functional organization that operated on the principle that the cadets ran the corps of

cadets, while the cadre served as advisors (albeit heavily involved advisors).

The operational mission approach of both the cadre and the cadet corps became more focused, dynamic, and interactive. Advanced camp and commissioning were the orientation, and all on-campus activities were restructured to support the goal of producing the best prepared individuals for each camp event.

Along these lines, all classes (within the guidelines of the Department of the Army and Training and Doctrine Command) were revised to meet both the university's standards of academic excellence and the instructor group's mission objectives. The mandatory MS III (junior) courses in the second semester, for example, consisted of an instructional methods course (three credit hours) and a physical training course (one credit hour).

The instructional methods course used a comprehensive "train the trainer" model, which rapidly placed cadets in the trainer role with multiple assignments (rehearsing, preparing lesson plans, and coordinating for equipment). Hands-on training was used, and the skills trained were those that would be required at camp.

The second course, a Physical Education department course taught by the Military Science department, focused on physical conditioning, with an objective of preparing cadets to take and pass the Army Physical Fitness Test (APFT). It also instructed the cadets in command voice, drill and ceremonies, and leading physical training.

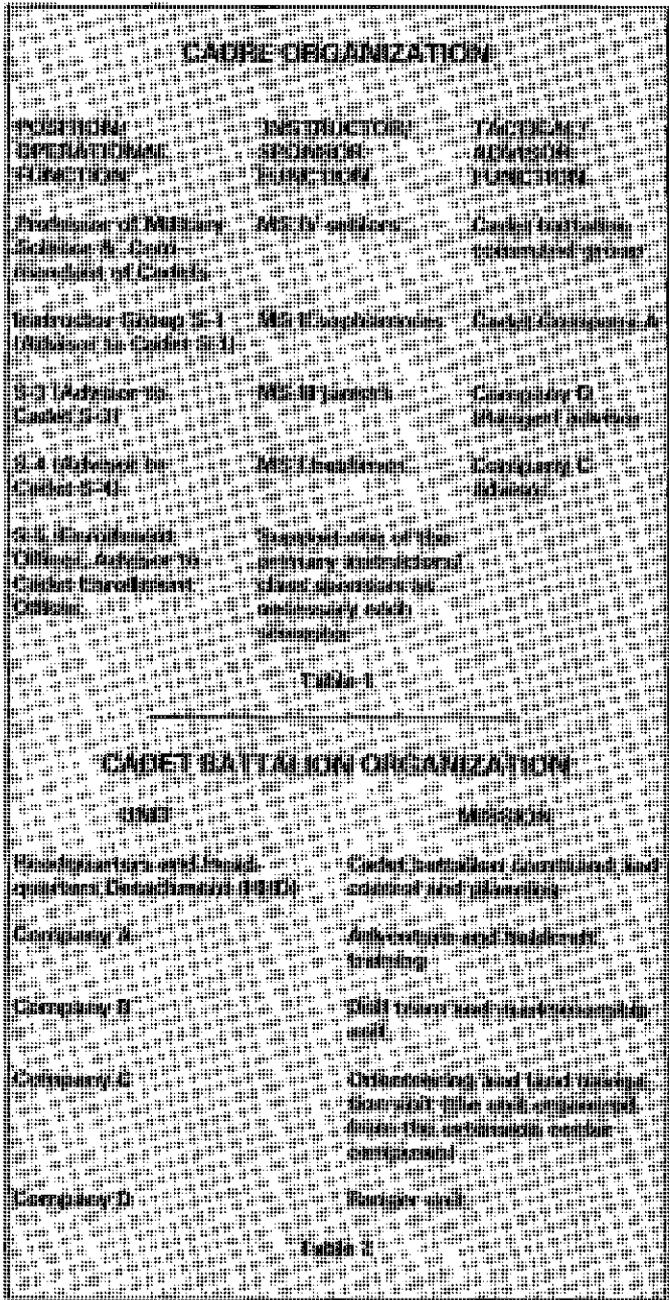
The cadet organization augmented the formal instruction. The battalion and company programs were designed to offer challenge and adventure to a young person but were still professionally oriented and focused on military development.

The corps planned and executed two battalion operations a year (one each semester). These "field training exercises" (FTXs) and military skills and marksmanship exercises consisted of a deployment to a nearby Army post, where military skills could be tested, and tactical training and range firing could be conducted. The full exercise was focused on preparing the MS III cadets for the military and tactical skills they would need at advanced camp.

Bi-weekly leadership laboratories were reinstated on campus, and the cadet battalion was assigned the mission of providing the military skills instruction during these laboratories. The laboratories were oriented on drill and ceremonies, customs of the service, and better exposure of all cadets to the Army's organization.

The cadets on the main campus were given unit assignments upon their enrollment and at the beginning of a semester on the basis of their stated preferences. During a semester, although the cadets were expected to support their own company's program, they were welcome to participate with another company's exercises. For the most part, these exercises were voluntary but encouraged. The exception was a requirement that all MS III cadets (juniors) participate in one of the three Company D exercises each semester as a laboratory for their MS III level courses.

Each company was given a mission program to plan and



execute, as illustrated in Table 3. Usually each program had a capstone activity or exercise.

All of the company training programs required preliminary or refresher training before an FTX. For example, Company D usually conducted two or three two-hour blocks of training once a week before an FTX.

To support the principle of having the cadets run the corps, the battalion organization was expanded to allow as many leadership opportunities as possible. Real missions were assigned that contributed to the overall training mission. Although the cadre served as a resource for information, guidance, and critique, the cadets were responsible for planning and executing the training.

To further support this principle and improve cadet opportunities (and to avoid burn-out among over-eager

helicopters for air assault insertion and extraction.

Additionally, through agreements with local government and private interests, a 15-by-20-mile training area of wood lot and watershed was created. Other smaller maneuver areas were also available as part of a local training area system, including an Air Force base, which housed reserve units from all three services.

The cadre also determined that there might be some value in reviving an awareness of the cadet corps' history and significance. Various methods of pursuing this awareness were used; for example, obtaining new cadet battalion colors and company guidons. The cadre also obtained cadet corps photographs that recounted events that emphasized the distinct heritage of the university's corps of cadets.

In addition, a selective system of individual cadet awards was used. An awards ceremony was conducted annually in battalion formation; it focused on awards based on sustained merit and academic or military achievement. Curious to note, the cadets seldom displayed more than two or three ribbons on their uniform blouses. Service veterans were encouraged to wear the federal decorations they had earned on active duty to heighten an attitude of military professionalism in the corps of cadets.

To expose the cadets to the Army's social institutions and protocol, the cadre retained and emphasized the traditional military ball, and in an alternate semester, introduced a dining-in.

The cadre also sought opportunities to expand its staff by incorporating reserve officers in the area. Two such officers participated. One was an Army Reserve officer employed by the university who served as an adjunct instructor for the MS I course, the other a Coast Guard Reserve (ex-Armor) officer who taught the Uniform Code of Military Justice portion of the MS IV course.

This plan, its execution, and its refinement produced the results outlined earlier. But the most spectacular result was the response of the cadets. In large part, the success achieved was a product of the cadets and their involvement.

The more apparent and involved leadership of the cadre also played a role, of course, but if the cadets had not embraced the tough demands of a rigorous program, little could have been achieved. Significantly, the entire operation was managed on a tight budget.

The principle that a good, well executed plan with dedicated leadership and thoroughgoing professionalism will produce outstanding results once again proved valid. But it illustrated more than that. Any body of soldiers (cadets, draftees, veterans) that is led with dedication and enthusiasm (which we often think possible only in our elite battalions) will produce outstanding results.

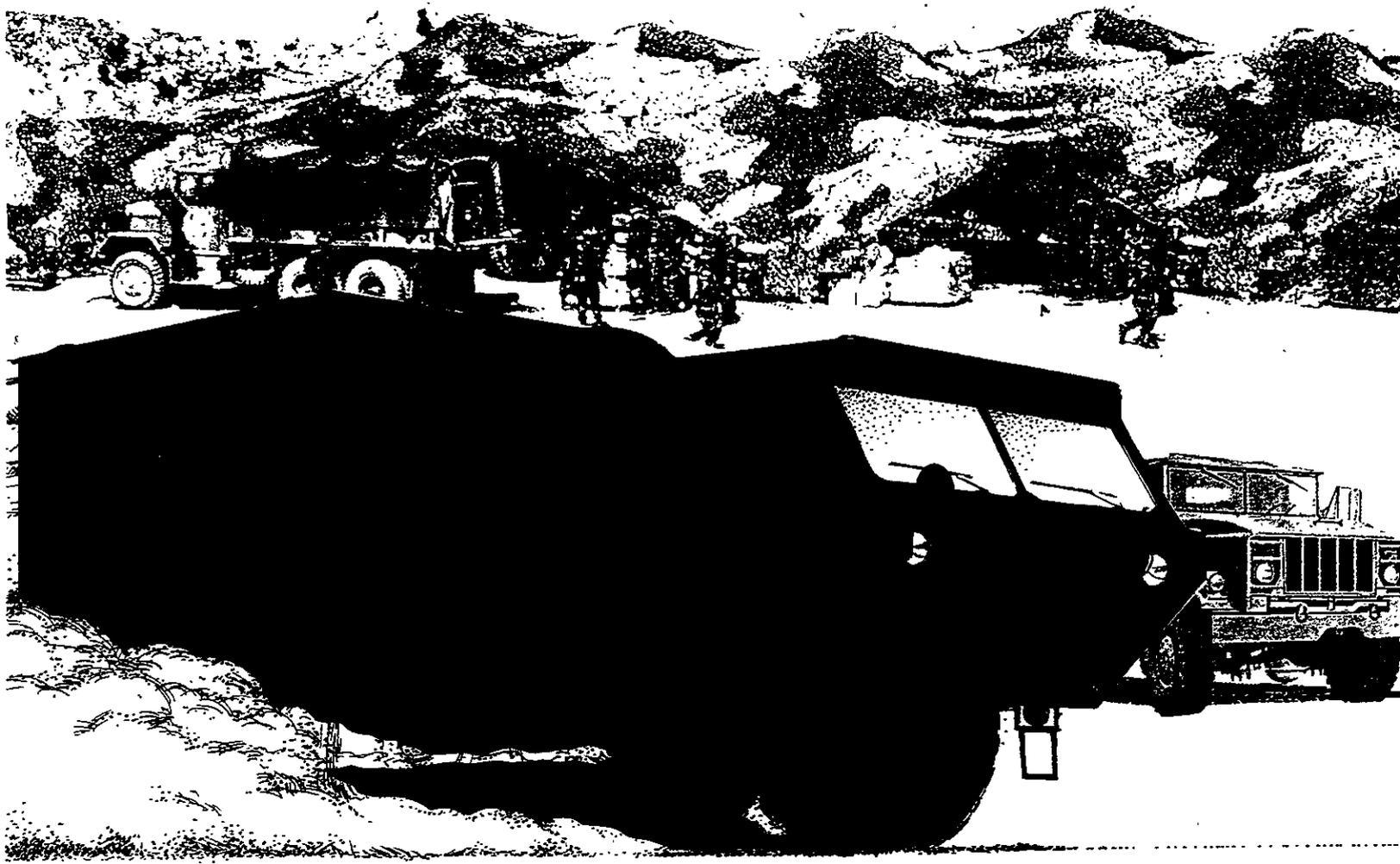
In this case, once the cadets began to understand the mission objectives and the way the unit contributed to achieving these objectives to standard, there was no stopping their competitiveness. And it was they who defined the standard—camp performance. It became a goal of each class to beat the previous year's results—and for five successive years, they did.

The positive collective leadership response of the cadre and the cadets that produced this tremendous success story once again illustrates what can be done when things seem all but hopeless. The 300 percent increase in commissions and the equally spectacular jump in MS III performance at advanced camp attest to what dedicated, professional leadership by example can do.

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Lieutenant Colonel William A. Saunders, Jr., was also an instructor at the same university. He has served in staff assignments in the 101st Airborne Division and the U.S. Special Operations Command. More recently, he commanded the 4th Battalion, 13th Infantry, at Fort Jackson and is now attending the Army War College. He is also a 1970 graduate of the United States Military Academy.





Command and Control of LOGPAC Resupply

CAPTAIN PAUL J. CANCELLIERE
MASTER SERGEANT EDWIN B. HINZMANN

Keeping a unit going in combat requires an enormous amount of supplies. During Operation DESERT STORM, for example, the total fuel consumption for the 100-hour war amounted to eight million gallons. In the ground offensive, by one report, 291 trucks were required to keep the 24th Infantry Division alone supplied with fuel, water, food, ammunition, and medical supplies.

At the end of such a supply line is a battalion task force consuming and expending supplies. A logistic package (LOGPAC) must be pushed forward daily to meet the needs of the individual soldiers so they can fight and win, and proper command and control is critical.

Command and control of LOGPAC operations must consider the task force's mission, upload needs, attachments, movement, actions at the logistics release point, actions at the company team locations, and the timely return of the assets to the field trains.

Tactical planning for controlling LOGPAC operations must begin with a complete mission analysis. First, is the operation an attack or a defend mission?

In the attack, the logistics plan must take into account increased fuel consumption, longer evacuation routes for casualties and equipment, and a large demand for equipment recovery. The commander can expect the main supply route

(MSR) to be long and to get longer as the task force achieves success. The need to rearm and refuel on or near the objective becomes vital to continued operations, and the soldiers' land navigation skills are tested as they move over unfamiliar terrain. Controlling the trucks for resupply depends upon a sound plan, which is developed by the battalion S-4 and implemented by the support platoon leader. Since radio communication may not always be available, the plan must be clearly understood by those who will execute it.

The mission will specify the type of attack (movement to contact, hasty attack, deliberate attack, exploitation, or pursuit). Each of these types of attack requires a well-planned effort to resupply the task force.

In a movement to contact, for example, the S-4 plans to move the support platoon with the main body. This keeps forward the assets needed to sustain the force for a continued attack or to provide the material for the defense.

A deliberate attack allows an opportunity to pre-position supplies along a specific axis of advance. In planning the pre-positioning, the S-4 considers time and distance factors for the combat vehicles. Is a refuel operation on the move (ROM) appropriate? Can fuel and ammunition be pre-positioned? What is the plan for supporting the task force scouts, the mortars, and any attachments? Who is responsible for area coverage, and is the company team first sergeant aware of the task for area support?

The fundamentals of defensive operations call for preparation, disruption, concentration, and flexibility. In this case, LOGPAC operations prepare the battlefield for the fight. The S-4 plans for extensive supplies of Class IV (engineer material) and Class V (ammunition). Mines and barrier materials are needed to reinforce the obstacle plan. These plans, to be successful, must be carefully coordinated among the task force engineer, the brigade S-4, support operations at the forward support battalion, and the battalion task force S-4. The S-4 establishes transportation priorities and coordinates the movement of barrier materials to prepare the battlefield for the defense.

Detailed reporting of logistics requirements helps the S-4 and the support platoon leader calculate the task force's transportation needs. The wise management of HEMTTs (heavy extended mobility tactical trucks) complements the engineer effort to haul Class IV supplies and mines forward.

In the defense, the battlefield usually becomes restrictive; truck drivers are expected to know the locations of obstacles

and their relationship to the task force mobility and countermobility plans. The S-4 places the MSR where it will best support the scheme of maneuver.

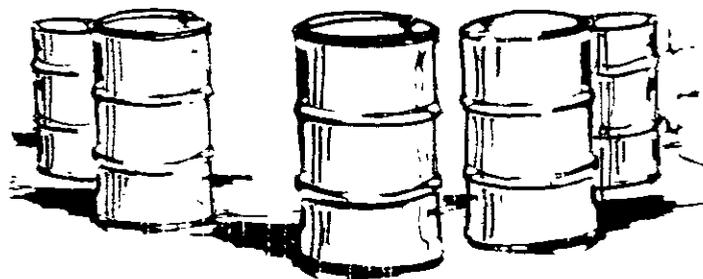
The plan must be disseminated early. The combat trains command post (CP) informs the field trains CP, keeping the support platoon informed. Conducting rehearsals before LOGPAC departure time is an extra step that can further reduce the unnecessary loss of supplies.

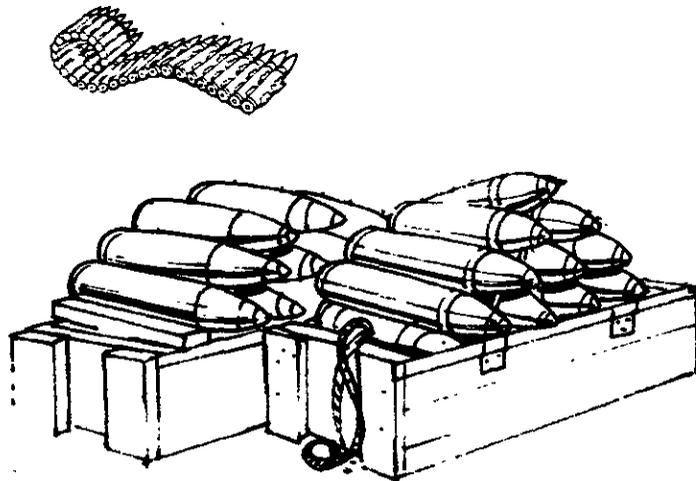
A plan to pre-stock ammunition helps increase survivability. The S-4 and S-3 plan for Class V pre-stock locations that support the tactical plan. Quantities of ammunition are available based on the controlled supply rate (CSR). Platoon packages of ammunition planned by the S-3 and passed to the combat trains for implementation link the pre-stock plan to the tactical plan.

Troop leading procedures help in planning sustainment operations. The timely and accurate dissemination of information to the field trains prevents unnecessary loading and unloading of supplies. The following are some tips for improving the timely dissemination of information to the support platoon:

- Get the warning order to the tactical operations center (TOC), the combat trains CP, and the field trains CP as early as possible
- Completely integrate the combat service support (CSS) staff, analyzing mission support requirements before the LOGPAC leaves the field trains.
- Pass the graphics and an operations order to the field trains.
- Focus on combat power and break it down by company team.
- Conduct rehearsals for LOGPAC personnel, reviewing actions at halts, actions at the logistic release point (LRP), and contingencies for breakdown.
- Conduct LRP briefbacks with all first sergeants, the command sergeant major, the specialty platoon sergeants, the attachment NCOs in charge, and an S-4 representative.

The successful execution of the LOGPAC operation calls for pro-active efforts on the part of key personnel, and their responsibilities should be outlined in the task force tactical SOPs. These key personnel include platoon sergeants, attachments, company team first sergeants, headquarters company (HHC) first sergeant, supply sergeants, battalion motor officer, battalion motor sergeant, company team maintenance team chiefs, ammunition NCO, support platoon





leader and sergeant, S-4, S-4 NCOIC, S-1, S-1 NCOIC, HHC executive officer, and HHC commander.

The following are some examples of these LOGPAC responsibilities:

S-4s:

- Plan and coordinate logistics needs in support of the operation. Coordinate with the TF S-3 to determine the needs of the TF.
- Develop and disseminate the MSR and the LRP locations.
- Identify station time for LOGPAC to arrive at LRP.
- Establish a time to complete resupply.
- Disseminate the controlled supply rate for ammunition.
- Know the TF's combat power by company team, attachments, and specialty platoons.
- Keep emergency resupplies of Class III and Class V on hand in the combat trains.
- Analyze the logistics reports, forecast needs, and pass these requirements to the HHC commander.
- Calculate the needs for food, fuel, ammunition, and water to sustain the TF and pass the information to the HHC commander.

TF S-1 and personnel and administration center (PAC):

- Plan the transportation needed to move replacements forward.
- Monitor the distribution of administrative actions sent on LOGPAC—awards, letters, promotions, processing DA Forms 1156 and 1155.
- Monitor the distribution of mail to the TF and the attachments.
- Focus on the TF's personnel strength, which keys the Class I operation to identify head count.

HHC commanders:

- Coordinate upload time windows in the BSA with the FSB.
- Assist the S-4 in calculating logistics needs for the TF.
- Issue operations orders, keeping LOGPAC personnel informed of the tactical situation.
- Conduct rehearsals before LOGPAC departs.
- Track TF combat power.

- Manage transportation.

HHC first sergeants:

- Actively track status of attachments and specialty platoons.
- Identify the ammunition needs of attachments and specialty platoons; notify the support platoon and the HHC commander.
- Track the personnel strength of attachments and specialty platoons.
- Move with the LOGPAC from field trains to LRP.
- Keep supply sergeants informed of the tactical situation.
- Actively pursue area coverage of the specialty platoons and attachments.
- Resupply the TOC and the combat trains.

Company team first sergeant:

- Accurately report personnel and equipment status to the combat trains CP.
- Execute area coverage when tasked.
- Supervise resupply operations at the company team.
- Inform supply sergeant of all logistical needs, including personnel strength reporting (head count); status of replacements; casualties (DA Forms 1156 and 1155); maintenance (DA Forms 2404 and 2406); water status; Class III bulk and package needs; and Class V needs, including attachments.
- Provide a tactical update that includes combat power.

Company team supply sergeants:

- Collect status figures from company team, including attachments.
- Personnel strength—DA Forms 1156 and 1155 to determine head count.
- Process personnel actions.
- Calculate ammunition needs.
- Collect maintenance status using DA Forms 2404 and 2406.
- Distribute Class IX to the company maintenance team chief.
- Resupply water.
- Assist with personnel replacements.

LOGPAC upload operations begin with the support platoon leader using the backward planning process. The

task organization determines the composition of the ammunition package for each truck. The FSB provides time windows for picking up supplies. Knowing these factors is the key to prompt arrival at the LRP.

Platoon breakdowns provide the flexibility needed to react to a change in task organization. The support platoon leader, by identifying a standard ammunition mix for each platoon, can develop push packages tailored for mechanized or tank heavy teams. (A cargo HEMTT carries eight pallets of ammunition, and a pallet will hold 30 120mm rounds, 44 107mm rounds, 1,500 25mm rounds, 9 TOW rounds, or 12 Dragon rounds.)

Keeping emergency resupply in the combat trains improves the sustainment process. The recommended mix of ammunition calls for three trucks—one with a mechanized heavy mix and Stinger, the second with an armor mix and Stinger, the third to support the mortars, scouts, air defense artillery, and engineers. This technique gives first sergeants a quick method of resupplying a platoon in need of ammunition. The S-4 can publish the amounts of emergency resupply in the operations order. The support platoon leader is responsible for resupplying these packages daily during LOGPAC operations.

There are two methods of moving LOGPACs from the field trains to the LRP—serial and convoy. The specific situation determines which will be used.

Serial movement requires each company team supply sergeant to take his LOGPAC forward to the LRP. (The HHC commander decides whether to move his company in a serial or a convoy.) The supply sergeant must be skilled in land navigation. He will need maps and graphics that show the MSR and LRPs and also planned rally points in case the LRP changes.

The support platoon leader leaves with the first serial, and the HHC first sergeant leaves with the last. The placement of their vehicles is critical to maintaining control, because they are the only vehicles authorized radios for command and control.

The advantage of serial movement is that it provides the best dispersion along the MSR. At the LRP, the number of vehicles is reduced, which facilitates security. Command and control is decreased when the distance between units is increased. The risk of losing part of the LOGPAC becomes

greater as the supply sergeants approach certain critical points along the route of march.

Moving in a convoy improves command and control. The support platoon leader leads the convoy while the HHC first sergeant is in the rear. A distinct advantage to convoy movement is that the support platoon leader can react to a changing LRP without losing control of the trucks. The disadvantage is that a convoy makes a large target on the MSR and at the LRP.

An SOP that establishes the order of march helps control LOGPAC operations. The order of march seldom changes, and if it does the information can be passed on the radio to the first sergeants waiting at the LRP.

Colored flags or paper in the passenger side of a supply sergeant's vehicle can be used for marking the company team's LOGPAC assets. At night and during limited visibility, the same color scheme can be used with lights, but the lights should be used only for link-up at the LRP. The company team first sergeant should have the same color light at the LRP link-up point. Rolling through the LRP with minimal delay is an indication of good resupply operations, because of less time on station.

Before the LOGPAC arrives, a coordination meeting should be held. At this meeting, the CSM has an opportunity to meet with all the company first sergeants and the platoon sergeants from the specialty platoons and attachments. A representative from the S-4 shop is also present to compare information.

The company team first sergeant can take this opportunity to pass hard copy reports to the S-4 and the S-1. Any problems can be resolved at this session. At the least, personnel reports, Class III bulk and package products, Class V status on hand, and a maintenance deadline report should be exchanged.

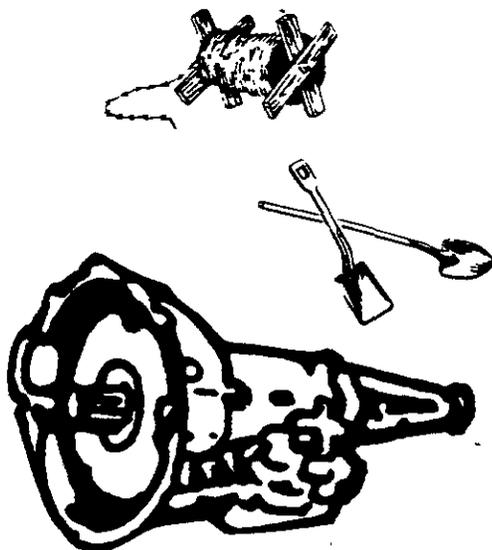
The combat trains representative can disseminate any changes to the CSS plan and provide a tactical update. He identifies responsibilities for area coverage, coordinating specific times and locations for support, then conducts a briefback to ensure that all the company team first sergeants understand the plan.

The first sergeants then review the logistics plan and make any necessary changes to support their units. This process keeps the administration/logistics net clear. The combat trains representative compares the amounts shown on the logistics reports with the Class III and Class V coming forward on the LOGPAC. A unit should be informed if it is receiving replacements, because this affects its combat power for the next mission.

When this exchange of information has been completed, the combat trains representative reminds the first sergeants of the order of march and prepares to receive the LOGPAC. The first sergeants pick up their supplies, and the supply sergeants roll through with their trucks. The support platoon leader begins preparing the next LOGPAC by reviewing the logistic reports with the combat trains representative.

At the company team location, the first sergeant establishes a system for resupply. Site selection for this is





vital, as is a chain of command that is tasked to execute the resupply. The terrain selected should offer as much protection as possible for the logistics assets. Reverse slope terrain and overhead cover should be used whenever possible, and out of the enemy's line of sight. An alternate site should be selected as a contingency for attack or to support company team movement.

The maintenance team chief and medical personnel are responsible for setting up the service station resupply operation. Company headquarters personnel are tasked to position HEMTT fuel trucks and ammunition trucks. Guides for the platoons can help ensure the dispersion of vehicles, and a soldier should be appointed to notify the platoons and subordinate units to move to the company team LRP for resupply. (Resupply operations should not detract from the priorities of work established by the company team commander.)

The platoon sergeants arrive with accurate information on the status of their platoons. They exchange reports among themselves and with the maintenance team chief, the medical section sergeant, the supply sergeant, and the first sergeant.

The supply sergeant counts, by bumper number, all of the vehicles that pass through the refuel point and ammunition points. The maintenance team chief and the mechanics verify all of the faults on the vehicles and note requests for parts, using stock numbers. Class I supply and mail are the final station.

There are times when the tailgate resupply method is preferred, but it takes much longer and is normally used only in assembly areas. Individual vehicles, such as the

commander's CP, for example, may require tailgate resupply.

To improve sustainment operations, each supply sergeant should make a final check before leaving the company team for the LRP and then the field trains. He must make sure he has the following items:

- Logistics reports that reveal on-hand quantities.
- Maintenance DA Forms 2404, complete with part numbers.
- DA Forms 1156 and 1155 filled out completely.
- The soldiers' outgoing mail.
- Enemy prisoner of war information.
- Signed awards, letters, and completed administrative actions.
- Personnel strengths by MOS, including those of the attachments.

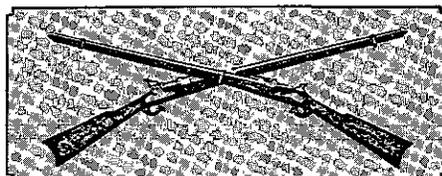
By keeping a notebook, the supply sergeant can record company team needs that were not covered in the current LOGPAC. Recording these needs helps to improve future LOGPAC operations.

The assets should be returned quickly to the LRP so the next logistic package can be prepared. Each supply sergeant should know the status of his company team. This means knowing how much ammunition is issued, how much fuel is pumped, and the status of replacements and casualties. The support platoon leader must track the status of all the units in the task force. A unit that has to take supplies back to the field trains demonstrates poor reporting and wasted effort. Quantities of supplies carried back to the LRP must be reported to the support platoon leader. The fuel can be transferred at the combat trains to keep the emergency resupply full. Ammunition can be cross-loaded in the combat trains, pre-stocked, or delivered to another unit that is short.

The control of the LOGPAC operation rests on accurate reporting and forecasting. Each company team and everyone in it must participate in the daily LOGPAC operation. If they do not, they may be forced to react to their logistics needs, and lose some of their combat power in the process.

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TRAINING NOTES



The JRTC Platoon and Squad Lessons Learned

LIEUTENANT ROBERT F. TOOLE, JR.
LIEUTENANT STANLEY G. GENEGA, JR.

Our unit participated in a rotation at the Joint Readiness Training Center (JRTC) in early 1991. From that experience, we learned many useful lessons, primarily during our search and attack operations. We would like to share some of those lessons that apply at squad and platoon level.

First, we need to describe the basic characteristics of the opposing force (OPFOR) at JRTC. Its members work in small sections of six to nine men operating from cache sites and patrol bases in assigned sectors. These sections can operate with stealth and cover ground quickly, and the men are extremely proficient in using MILES (multiple integrated laser engagement system) equipment. They also excel at small unit tactics, including harassment and sniper techniques. (One big advantage they have over the "visitors" is that they do not have to evacuate their casualties. As we found out, casualty evacuation is an important factor in determining the success or failure of any unit going through JRTC.)

During our training, the following scenario was not uncommon for a task force's rifle platoons:

A platoon moves into sector to begin

search and attack operations at first light. The platoon enters its objective rally point (ORP) and begins to conduct its reconnaissance. It deploys into squads to conduct a systematic search of the sector. One squad hits a booby trap and loses a key leader while another squad makes contact. The platoon leader attempts to maneuver his reserve squad, while the squad in contact suffers two more casualties. As the OPFOR withdraws, the platoon sergeant consolidates the wounded, while the platoon leader reorganizes the force. As the platoon prepares to evacuate its personnel, sniper fire accounts for three more casualties, all dead. During the course of this action, a platoon of 33 men has lost its combat effectiveness. More important, it has inflicted no significant losses on the OPFOR.

The lessons we learned from experiencing such a scenario dealt with the following areas:

Assessment of the Situation. The first thing any leader must do upon enemy contact is to assess the situation. In our training, we often made chance contact with one of the OPFOR sections. When this happened, our

platoons and companies tended to piecemeal their forces, which resulted in team-on-team and squad-on-squad engagements. The leaders did not make accurate assessments, nor did they make decisive moves until it was too late. In their development of the situation, they also failed to take into account the fire support they had available.

Fighting the OPFOR close-in with units of equal size proved unsuccessful on almost all occasions. And when a platoon did commit a force to the fight, its battle drills were seldom executed properly. A squad or team sometimes tried to flank the OPFOR, but not as boldly as it should have.

During the after action reviews, OPFOR members remarked that they would see our units initiate their drills. The OPFOR then acted on those drills and took advantage of weak flanking movements. Squad and platoon leaders need to practice making bold flanking movements on concealed routes.

Actions on Contact. In the early stages of the search and attack phase, before the OPFOR infiltrated enough combat power, it tended to break contact. In our units, it was usually the commander's intent to maintain contact



with the enemy, and our units often interpreted this intent as a call for a relentless pursuit of the OPFOR at squad level. In many cases, our squads sustained needless casualties because of overzealous team leaders and soldiers.

A good reaction when the OPFOR breaks contact is not only to maintain momentum but also to maintain security so as not to be baited into an ambush.

Use of Indirect Fire. Some of the keys to success in using indirect fire assets were the dissemination of the fire support plan, proficiency in land navigation, prompt clearance of fires, and the junior leaders' use of fire support.

Platoon leaders and their forward observers (FOs) need to make sure the fire support plan is known down to the lowest level. This is especially important, given the decentralized nature of search and attack operations and the possibility that key leaders will become casualties.

The platoon FO needs to be expert at land navigation so the unit can react quickly to fire missions. Precise navigation is also a critical skill for the company mortars. Friendly casualties from indirect fire often resulted when small units or 60mm mortar crews were not sure of their exact locations.

During our rotation, the reaction time of fire missions was slow because of the

delay in clearing fires in the sector. By the time the fires had been cleared, the main action was usually over and the OPFOR had broken contact.

A platoon or squad leader's assessment of the situation is extremely important in the use of indirect fire assets. Our platoons and squads too often found themselves in a close-in fight when they could have pulled back and called in indirect fire.

Another problem we encountered was with our small unit leaders—they had the skill to call for fire but were reluctant to do so when put in command. One solution is to train junior leaders to adjust live rounds at their home station so they can become familiar with this process.

Marksmanship. As our units learned, marksmanship plus fire control are the keys to defeating the OPFOR at team and squad level. Our squads were able to fire and maneuver correctly, but the team leaders did not employ fire control measures or designate targets as well as they should have (understanding, of course, that only blank fire is used and that tracers cannot be used).

Rifle marksmanship, in the form of well aimed shots, was also a problem. Leaders were more concerned with the volume of fire than with its accurate placement. Because MILES marksmanship is so important to success at

the JRTC, units need to take every possible opportunity to zero their MILES devices.

Weapons in general are keys to success, and units need to conduct more field fire training, despite ammunition constraints. Most units stress marksmanship only during their semiannual qualification periods; then this emphasis fades when they concentrate on maneuver live fires between qualification periods.

Casualty Evacuation. The most significant lessons we learned at platoon and squad level were probably in the area of casualty evacuation. Units at the JRTC are forced to evacuate their wounded just as they would in wartime and are tied to a piece of ground until the evacuation has been completed. Since units rarely practice caring for wounded soldiers in the middle of a firefight, casualty evacuation becomes a stumbling block at platoon level.

Leaders fail to realize that when a unit sustains casualties and consolidates them at a casualty collection point (CCP) it must also provide the personnel to carry the wounded and their equipment and to provide security. It takes at least six men to evacuate one casualty—four for the casualty and his equipment and two for security. At this rate, two casualties render a squad ineffective, and six make a platoon ineffective.

In our units at the JRTC, leaving only two men to secure a platoon's casualties proved ineffective, because the OPFOR usually detected the casualty collection point (CCP) and harassed it. Units that do not secure their CCPs often sustain even more casualties before the actual evacuation takes place. We found that it took at least three men to secure a squad CCP and at least a squad to secure a platoon CCP.

Our units found poleless litters effective for transporting casualties to

the CCP, both in ease of movement and in the survivability of wounded soldiers. We recommend that each platoon have at least three of these poleless litters.

Units such as ours learn many lessons at the JRTC as their standing operating procedures and systems are tested. We have discussed and amplified our own mistakes to highlight some of the more important subjects that are keys to success at the platoon and squad levels.

If you are a platoon or squad leader, you may want to consider these subjects

in all of your training. Your unit's performance at the JRTC, or in any realistic training environment, will reflect your personal efforts in these areas.

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Zone Reconnaissance

CAPTAIN KEVIN J. DOUGHERTY

One of the biggest problems with scout platoon operations at the Joint Readiness Training Center (JRTC) is the failure to use the zone reconnaissance techniques found in ARTEP 7-92-MTP and elsewhere—the *fan*, *converging routes*, and *successive sector techniques*. Instead, the platoons usually disperse immediately into squad size elements that operate almost independently.

The usual scenario begins with a scout platoon being airlanded by C-130 aircraft, along with the task force quartering party, into an assault landing zone. The platoon has a little over 24 hours to gather its initial information about the zone before the battalion's main body arrives. The platoon's scheme of maneuver in most cases is to send the three squads in three different directions to observe named areas of interest (NAIs) previously identified by the S-2 while the platoon headquarters moves to some central location to set up a command post (CP). Its primary duty is usually to provide a radio link between the squads and the battalion.

The squads move to their NAIs using the modified wedge formation. Unless they have been given specific guidance to the contrary, their actions at the NAI are usually just to look left and right as they continue moving through it. Their reconnaissance, therefore, will be limited to the width of the formation (about two meters) and the distance the soldiers can see to their flanks (about five to 30 meters). This simply is not a zone reconnaissance.

DISPERSED

From the platoon perspective, the end result is that three squads are now in three widely dispersed areas. If one of these areas proves to contain enemy activity that warrants further investigation, the platoon leader cannot reposition his forces to influence the situation. The distance is too great to move a squad quickly enough from one zone to another.

This plan is like putting all your eggs in one basket, which is risky business at

this early stage of the intelligence preparation of the battlefield (IPB). If the S-2's initial IPB is correct, the scouts have a chance of finding something. If it is not correct, the scouts have no realistic ability to regroup and focus their efforts in another direction. And the platoon leader has no command and control over the platoon as a whole, because his squads cannot be responsive to his orders as a unit.

This type of scheme of maneuver also fails to provide for future resupply operations, link-ups, and communication contingencies. Since the squads, for all practical purposes, are operating independently, they must be treated accordingly. Instead of delivering a resupply to one location, from which it can then be distributed, the S-4 must now execute three separate resupplies (four, counting the headquarters element). Resupplying the scouts, who are usually beyond the reach of main supply routes, is difficult enough without compounding the requirements.

If the platoon leader wants to

The Four Methods

Combining Reconnaissance and Communication

When faced with a mission to conduct a zone reconnaissance or to recover secret plaintexts, leaders often struggle with developing a scheme of movement that can be supported by a workable resupply plan. In fact, in many cases the resupply actually occurs. The resupply plan determines the tactical plan.

Operations at the AFE indicate that the very first withdrawal secret signals can determine up to half of the resupply of water they receive in the process of moving to the resupply point and back to their communication point. That is, for every 1000 lbs. of water from the CP to a resupply point for each sq. there's a quarter of water that they have to take CP may check up to two quarters of water during the transit. In addition to planning a great search for the resupply system, there's also extracts from the support's mission of conducting reconnaissance and observation.

One solution to this problem is to use the intelligence of the team conducting the zone reconnaissance. In AMEP (AMEP) the platoon receives an update on the support's mission to the zone and maintainers are CP. The CP moves on a resupply point, a CP for the headquarters, and a patrol base for some of the support. The CP is not the center used directly by the main in the platoon case. From the CP, two squads move forward to the CP's or other place, while one other squad and the headquarters support to the CP. Each squad leaves the CP with 24 hours worth of supplies. This amount, of course, can be increased or decreased as warranted.

The platoon then begins a reconnaissance of the zone and

seeks always from CPs directly for and 2d Squad in the diagram and the headquarters in always in the CP.

First Event—The platoon moves to the CP. The headquarters and 2d Squad occupy it.

Second Event—1st and 2d Squad move to their respective CP's with supplies for 24 hours.

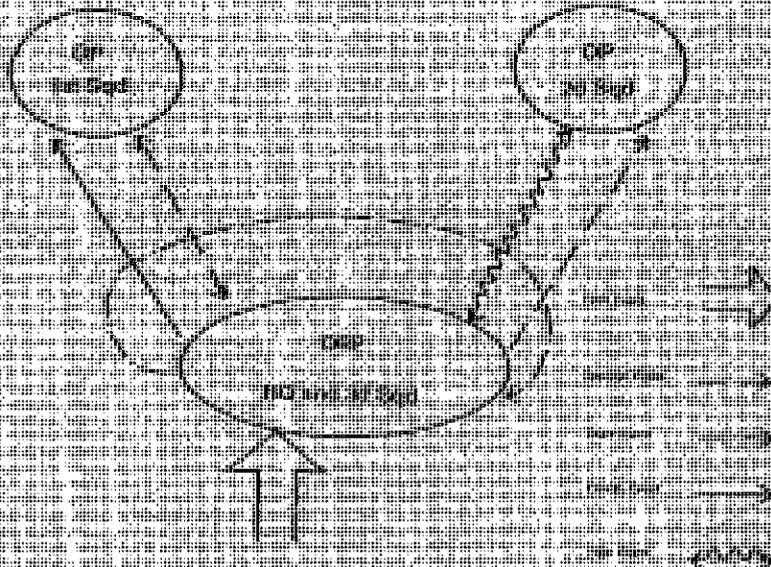
Third Event—2d Squad operates base station, maintaining supply base, and conducting protection of work and six hours of supply. (Class can vary depending on the AFE.)

Fourth Event—After 12 hours, 2d Squad and 1st Squad switch places. 2d Squad runs the CP for the next 12 hours, and 1st Squad conducts the activities 2d Squad conducted for the first event.

Fifth Event—After 12 hours, 1st and 2d Squad switch places. 1st Squad runs the CP for the next 12 hours and 2d Squad conducts

the activities indicated in the third event.

The squads receive their resupply in the CP and conduct the other activities indicated. The squad given without a resupply for more than 24 hours. The platoon movement can easily accommodate for logistical packages and the longer of the time period, used supplies can be directly removed and distributed from the CP or nearby. More important, no time or energy is wasted in getting resupplying activities. The squads rotate back to the CP as part of the physical nature of maintenance, and getting their resupply is just a fringe benefit of the physical activities. Additionally, no supplies are produced forward from the support position to the CP. The secret plaintexts and support the standard management, supply, and conditions on the section that are brought back to the team.



concentrate his reconnaissance effort on an updated IPB, he must first get his dispersed elements together and issue the necessary fragmentary order. That process requires an extraordinary amount of effort and the loss of as much as a day of execution time. By then, the original need for reconnoitering the area may have passed. The platoon may also

want to link up for many other reasons—such as mutual security, planning, debriefing, and resupply.

In addition, the concept of individual squad reconnaissance operations also does not facilitate contingency planning. Since there is no planned link-up, there is no physical contact. The only link is by radio, and radio

communication is subject to both equipment and operator malfunctions. If the headquarters loses communication with a squad, the platoon leader has no way of knowing whether the squad has been destroyed.

Using a standard technique for zone reconnaissance helps alleviate all of these problems. For example, using the

TRAINING NOTES

converging routes technique in a JRTC scenario, the scouts are inserted at Cole LZ (Figure 1), and this serves as the initial objective rally point (ORP). From this ORP, the squads move on their assigned routes to a reference point (RP) that becomes a second ORP once it has been occupied. The platoon leader moves with one of the squads or separately, depending on where he thinks he can best control the platoon. In addition to specifying the reference point, the platoon leader also specifies an exact date and time for link-up. Thus, if he loses communication with a squad, and that squad also fails to appear for the link-up, he can safely assume something has gone wrong. And he knows that squad's route and can go look for it.

The squad routes are assigned on the basis of the IPB. They lead the squads through areas the S-2 has identified as having intelligence potential. For example, one squad route may focus on the Vache Grasse Creek; the second may work the key terrain and trails around Carnis Village; and the third may concentrate on Little White Oak Ridge.

Along these general routes, the S-2 has also identified specific NAIs and other areas that require detailed area reconnaissance or observation. The S-2 must give specific guidance. If he wants an NAI observed for a certain time period, he must specify that period. For example, if he thinks the enemy is moving only at night, he may want the NAI along the suspected infiltration lane observed from sunset to sunrise. Knowing this, the scouts can do other things the rest of the time. If the S-2 does not specify that NAIs are to be observed for a specific period, an area reconnaissance of the same area will provide only a snapshot view of a given instant in time. An NAI where nothing is happening at 1200 may be a whirlwind of activity an hour later. The S-2 must specify what he wants in his reconnaissance and security matrix. On the basis of this guidance, the scouts will pause several times along their route to reconnoiter or observe locations in the zone.

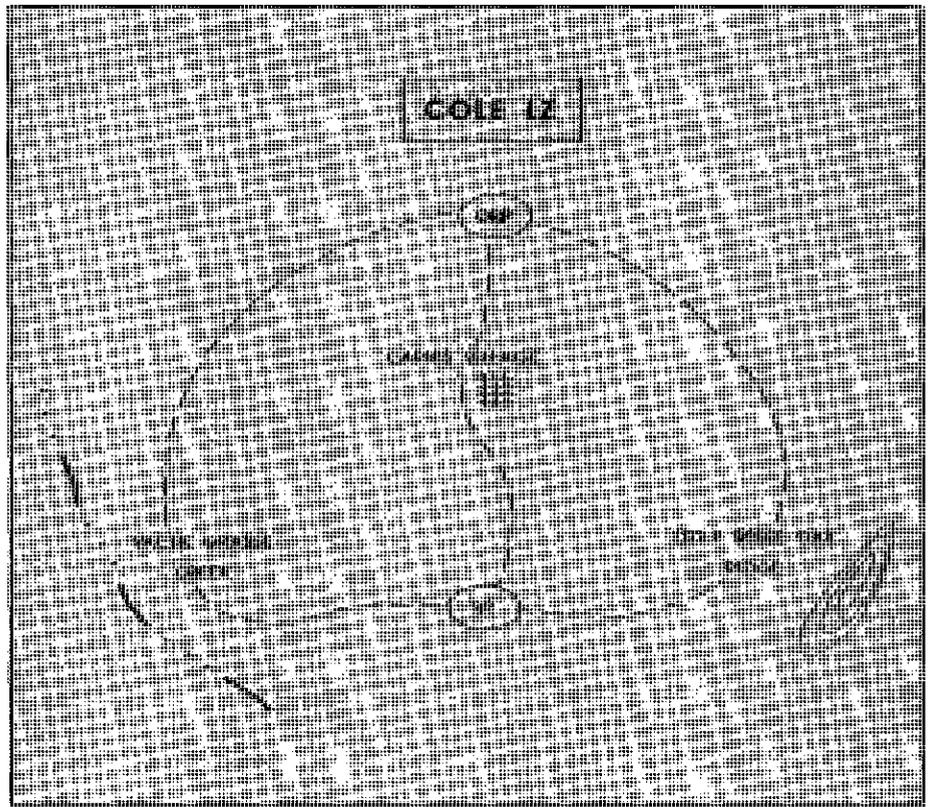


Figure 1

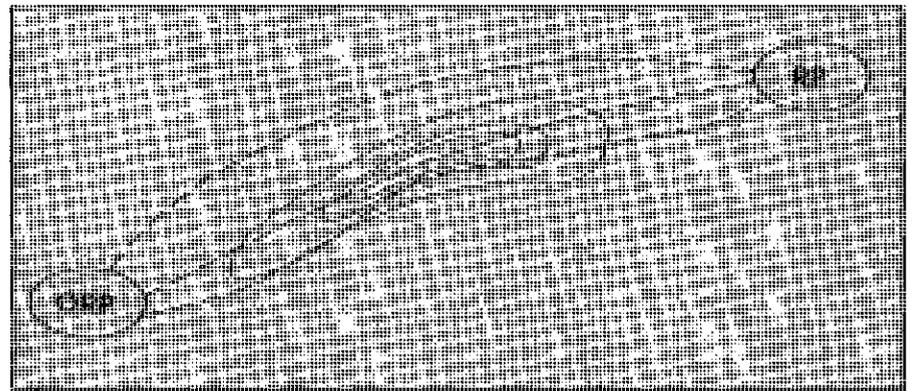


Figure 2

The platoon leader decides how long the squads need to perform their reconnaissance tasks along their designated routes. At the appointed time, all the elements will link up at the RP. Then, the RP becomes an ORP. In the ORP, the platoon leader can plan future operations. For example, the squad operating around Little White Oak Ridge has observed enemy activity such as SA-14 positions, troop movements, and caches. The other squads have found nothing. The

platoon leader may decide to conduct another zone reconnaissance that focuses all his efforts around the ridge (Figure 2). One squad route may go along the topographical crest, one on the reverse slope, and one in the valley forward of the ridge. The RP may be at the northeast end of the ridge.

In issuing this fragmentary order, the platoon leader has advanced to the successive sector technique, which is merely two or more iterations of the converging routes technique. Because

the platoon leader designates a time and place for the platoon to link up, he can coordinate with the S-4 for a pre-planned aerial resupply near the ORP. The squads can pick up their share of the resupply before leaving the ORP.

Using this technique, the scout platoon can honestly report that it has reconnoitered its zone, not that it has looked at a few specific NAIs in passing. If a zone reconnaissance turns

up enemy activity in one area, the platoon leader can increase his coverage there by introducing more troops to that area and by fine-tuning his operation to include area reconnaissance and observation points.

The scenario and the terrain described here are not the "approved solution" for scout platoon operations or IPBs at the JRTC. But using the proper techniques for zone reconnaissance as cited in

ARTEP 7-92-MTP will greatly improve the performance of scout platoons at the JRTC and elsewhere.

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Long Range Planning A Different Perspective

CAPTAIN PAUL C. ZIMMERMAN

One of the most difficult tasks leaders at company and battalion level must perform is developing coherent long range plans. I would like to offer a somewhat different view of this planning process.

My suggestions are focused on the company level for two reasons—this is the lowest level at which anyone really worries (or ought to worry) about long range planning, and it is also the first level at which a leader has command responsibility. But these ideas could easily be adapted to units at higher levels.

First, intuition tells us that to be successful we must establish priorities, but this is easier said than done. Our priorities come from many different sources, and we have to make a logical effort to sort them out and apply them to specific units and circumstances. The cumulative priorities approach will not work—a company commander cannot simply add his own priorities to those established by all the commanders above him.

Several years ago, for example, while working in a battalion operations shop,

we attempted to map out all the requirements imposed upon us by headquarters at brigade level and higher. We found that in a year's time, we were required to accomplish tasks totaling 53.5 weeks worth of work. This did not include anything that the commanders or staffs at battalion or company level wanted to do.

Plain and simple, there are some tasks that we cannot and should not do. The question then becomes, "How does a company commander determine his priorities?"

PRIORITIES

First, I recommend that commanders at all levels adopt a set of universal priorities that transcend all others. I call them the "Big Three"—readiness, training, and taking care of soldiers. Taking care of soldiers is something we do all the time. Readiness and training are closely interrelated yet distinct portions of the Army's mission. Readiness relates to the ability to deploy a combat effective force rapidly;

training relates to the ability to win the fight once we get there.

Admittedly, these are broad categories that encompass numerous tasks, but they do provide a suitable framework upon which a commander can base his own long range planning process. Units can refine the Big Three to fit their particular situations, but the key is universality.

Using this simple model, a commander can think of many tasks that fall within the Big Three, and these should be unit priorities. He can also think of many tasks that fall outside the bounds of the Big Three, and these are the "nice-to-haves," which should be done only after the Big Three tasks and should in no way detract from the true priorities.

The first step in achieving a consensus on priorities is to establish communications between the various levels of the chain of command. Some units do this better than others. Often there is good communication one level up (from company commander to battalion commander), but there are often insurmountable barriers to

communication two levels up. If the process is to be productive, these barriers must come down. There are many ways to do this—training briefs, counseling, office calls, desk-side briefings. The point is that all levels must communicate. In short, there must be interaction among the brigade, battalion, and company commanders.

If his unit is to be proficient at the Big Three, a company commander must be able to say "No" to certain nonessential tasks. He should be able to look his brigade commander in the eye and tell him what he can and cannot do. At some point, the two should be able to reach an agreement. The company commander can then execute his plan while his battalion and brigade commanders understand the company's limitations.

Before a company commander can successfully defend his priorities, though, he must know his unit's capabilities. For example, an infantry rifle company, in theory, has the ability to accomplish a set number of tasks in a given period of time—a year, for example—and all of the rifle companies in a brigade or division should be capable of doing the same amount of work.

We know, however, that this equality does not exist in reality. The reason it does not is our own inefficiency. No

company can be 100 percent efficient for an entire year. Therefore, it will never achieve an amount of work equal to its potential. A unit that is operating at 50 percent efficiency, for example, can accomplish only half of the tasks it is potentially capable of accomplishing. The higher its efficiency level, the more tasks it can do.

A commander can get a relative appreciation of his unit's standing by looking at a few indicators. He can look at how well his company performs in certain activities, and compare that with the performance of other companies in the battalion or brigade. If he is always swamped and finds that the other companies are in the same boat, all of them may have a problem with unit priorities. But if he finds his company is in a quagmire and sinking fast while the others are not, he may have an efficiency problem.

The answers to some specific questions will provide certain indicators: What is the unit's status on missed or late suspenses? What is the status of its training schedules? Do the soldiers know what is going on? Does everyone in the unit understand multi-echelon training? Are unit tasks executed concurrently or sequentially?

A unit's potential capacity is a difficult idea to nail down, but if the concept is translated into work, it is

much simpler. When we think about work, we think about man-hours. This highlights the two most important resources a unit has with which to accomplish any task—time and troops. The engineers, for example, do a great job of planning their work. Before they install an obstacle plan in a defense, they compute the available blade hours and squad or platoon hours. Then, based on the commander's priorities, they begin to work on the individual obstacles. The infantry company commander should use the same thought process in developing his long range plans.

Since time and troops are the most important resources, they are also the biggest factors in inefficiency. A major cause of inefficiency is personnel turnover, especially at the officer level. It seems that as soon as a platoon leader learns his job, he is moved and the platoon starts over. Outwardly, it appears that we can never build an adequate base of institutional knowledge, but this is not true. Otto von Bismarck once said, "Only fools learn by experience; wise men learn by the experience of others." Our penchant for constantly reinventing the wheel more often than not lumps us with the fools. Because we fail to do our homework, we are condemned to inefficiency and its inevitable bedfellow, mediocrity.

It is most unlikely that anyone at battalion level or below is really breaking new ground. If a leader believes he has a genuinely new idea, he has probably not looked around at what others are doing.

If a commander in a light unit wants to know about infiltration tactics, for example, he should examine the German offensive in 1918. (Even our high-speed vocabulary is old. Sir B.H. Liddell Hart coined the term "expanding torrent" in the years between the two world wars.) To hit closer to home, in a brigade—with more than nine rifle companies, each with the same mission essential task list (METL)—there is little chance that only one leader is working on a particular problem. Someone else



either has done it, is doing it, or is thinking about doing it. Looking around for good ideas and using them will save a commander valuable time in the long run and allow him to devote more effort to the Big Three.

A second cause of inefficiency is "time wasters." Meetings in general are time wasters, and two aspects of meetings multiply their negative effect.

The first of these is "waiting for the word," which is so prevalent in many units. One example is holding soldiers until the evening hours so they can be given all the information that has been distilled during the many meetings throughout the day. Invariably, these soldiers waste many hours only to be told they should report for PT at the usual time the next day.

The second aspect deals with the content of the meetings. Only a tiny percentage of the information given out in any meeting deals concretely with any topic that is part of the Big Three. This results in what I call "the tyranny of minutia." In this case, commanders are so overwhelmed by the sheer number of relatively unimportant requirements that they totally lose sight of their priorities. Every once in a while, a commander should stop a meeting and ask, "How will this information save lives in combat?" The silence would be obvious.

Another major time waster is doing tasks sequentially instead of concurrently. In the field, if a unit does not conduct concurrent planning at all levels, it will invariably cross the line of departure before all of its soldiers know the mission. Too, a multi-echelon approach results in simultaneous training at all levels. Anything else is less efficient.

Finally, delegating and working in a decentralized manner greatly improves a unit's ability to conduct concurrent tasks. A unit's efficiency is directly related to its ability to do multiple tasks at various levels all at the same time.

A commander's goal, therefore, should be to reach an efficiency level equal to or above that of his peers. The more efficient he is, the more work he can do with a given set of resources and

the more tasks his unit can accomplish. If his efficiency diminishes, however, he will find himself making sacrifices—either eliminating tasks or performing the same tasks at lower standards.

In trying to link unit priorities to unit potential and efficiency, a commander can use the budget process as an ideal model for long range planning. A budget normally covers an entire fiscal year, the same as a company's long range calendar. The need for long range planning is more obvious with a unit's budget, because it deals with dollars—a limited asset that is easy to quantify. To make the money last an entire year, a leader must plan the whole year in detail.

An infantry company's potential is just as limited as the money in a budget. The only difference is that potential is more difficult to measure. When developing a budget, as with a training plan, a commander must determine which of the many tasks he can do and which he cannot. When developing training, he "funds" a training event by committing his resources to it. He devotes a portion of his unit's total potential—troops, time, and other resources—to a task.

Another tool of the budget process—the decrement list—can also be applied to the development of a long range training plan. This is a comprehensive list of all projects that must be funded for a given fiscal year. Everything is listed, regardless of how much money is available. The items on the list are arranged in priority order from highest to lowest. In a column alongside the tasks, the cumulative cost of all is recorded. Once the decrement list is complete, the total funding is applied to it, and a cut line is added. Items that lie above the line are funded. Those that fall below are not.

If a company commander wants to construct an effective, coherent long range plan, he must also make a decrement list of his unit training requirements. The first step is to identify all the tasks the unit should accomplish and list them in priority order. Tasks that relate to the Big Three are near the top; those that don't

are at the bottom. Then he examines the cost of each task. This cost, or the work or energy required, can be expressed in terms of the two most precious resources—troops and time. The commander keeps a cumulative total as he works down the list of tasks and finally, he draws his cut line. The tasks above the line (the essentials) go on the long range training calendar; those below (the "luxuries") are done only if the resources become available.

A key point to remember is that the commander should be able to defend this list and his cut line to his battalion and brigade commanders. As a commander, he is paid to make important judgment calls, and the positioning of the cut line is one of these decisions. His unit's efficiency directly affects the cut line. The more efficient it is, the lower the cut line can be. Conversely, if the unit is inefficient, he must either move the cut line up and reduce the total number of tasks to be done, or he must take resources away from his Big Three tasks to fund the tasks lower down on the list.

A training calendar, like a budget, must be flexible. In a budget, some funds are usually set aside for unprogrammed requirements—essential items that are sure to crop up later in the year.

A commander can handle unexpected tasks in a training calendar in a similar manner. This system is also flexible because the commander can move the cut line. If extra money becomes available, he can drop the line and fund more projects. If extra time shows up on a training schedule, he can reach below the cut line and perform tasks that were previously unscheduled. He can think of the items below the cut line as a list arranged in order of importance for hip-pocket training.

There is a system now in place throughout the Army that, properly used, will greatly reinforce this concept and the underlying principle that a unit cannot do everything. This is the command inspection program.

In previous years, we had the dreaded Annual General Inspection. This was usually a bunch of highly proficient

inspectors who checked to see if a unit had done things according to every obscure regulation they could find. This type of inspection clearly caused us to divert many precious resources away from the Big Three tasks and to focus our attention on more mundane things.

With the new command inspection program, the commander who approves the company's priorities and its training plan is also responsible for the inspection. If a company commander

and that inspector jointly decide that certain items are not important and they would rather concentrate on others, then the inspection focuses on those other items. Such an integrated program greatly bolsters unit priorities, and it will undoubtedly have a positive effect on combat readiness.

I have not introduced any new ideas here. I have merely linked some old ones in somewhat different ways. If a commander realizes that universal priorities are critical, and that at some

point he must just say "No," then I have achieved my goal. I hope that by thinking of long range planning as a kind of budget process, he may gain new insight into long range planning.

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Platoon Fire Control

CAPTAIN MICHAEL H. SHIELDS
CAPTAIN GERALD P. KULP

During gunnery training at the Combat Maneuver Training Center (CMTC) in Germany, it was discovered that there was a general lack of understanding of platoon fire planning and control. Too many of the platoons succeeded because of outstanding individual gunnery performances, not because they had well-rehearsed and well-executed fire plans for all of their weapon systems.

A platoon on the combined arms battlefield must have detailed fire planning and control if it is to achieve the results that are expected. The major problem is the lack of definitive guidance in our "how to" manuals and an incomplete training and evaluation outline (T&EO) in ARTEP 7-8 MTP. (Fire planning should be made a critical task in the outline and the destruction of the enemy in accordance with the fire plan should be a critical task.)

In the absence of definitive guidance from these sources, members of our brigade developed a fire control memorandum of instruction for its mechanized infantry platoon leaders and their squad and section leaders. We

would like to share some of the ideas in that document on how the principles of fire control and distribution can be applied in practical terms in mechanized infantry units. We will outline common terms, offer some illustrations of fire patterns and techniques, and show how an effective fire plan and execution matrix are developed.

We used the following common terms and techniques in planning and executing a fire plan:

Target reference point (TRP). A specific point on the ground that is used to control direct and indirect fires.

Trigger line (TL). An imaginary line drawn across the battlefield that is used to initiate direct and indirect fires.

Engagement criteria. Conditions that must be met before a unit can initiate fires on the enemy (for example, three BTRs crossing TL A).

Disengagement criteria. Conditions that must be met before a unit can disengage.

Fire pattern. The manner in which direct fire systems engage a target area. There are three fire patterns:

- **Frontal**—the standard fire pattern assumed unless otherwise directed. This pattern is used when targets are dispersed laterally to the unit and all friendly elements can engage the targets.

- **Depth**—employed when targets are exposed in depth in a column formation moving directly toward or away from the unit.

- **Cross**—employed when targets are exposed laterally and when obstructions prevent all weapon systems within the unit from firing to the front.

Firing technique. The manner in which all weapon systems are fired. There are three firing techniques:

- **Simultaneous**—used when moving or unprotected, with all weapon systems firing at the same time in the target area.

- **Alternating**—used when one weapon of a section is firing at a target area and as its firing is being completed, the other weapon in the same section begins firing into the target area.

- **Observed**—used for both indirect and direct fires. This technique is used

for long range targets, and adjustments are made after the initial burst.

Fire Command. A format for directing gunners to engage specific targets. The most formal fire command consists of six elements: *alert, weapon or ammunition, description, location, control, and execution.* When chance contact is made with the enemy, an abbreviated format consisting of four elements—*alert, description, location, and execution*—should be used.

Maximum Engagement Line. An imaginary line drawn across the battlefield that represents the farthest point at which a weapon system can effectively engage a target. Terrain, visibility, gunner ability, and weapon capability are all factors.

Engagement Area (EA). A specific area in which the leader has decided he wants to destroy the enemy.

Final Protective Fire (FPF) Line. An imaginary line drawn across the battlefield at which all direct and indirect fire assets are to fire at their maximum rate when approached by the enemy. Final protective fire continues until a cease fire command is issued.

Fire patterns are selected on the basis of the way the leader anticipates destroying the enemy, compared to the manner in which the enemy is exposed to the friendly positions. Standing operating procedures (SOPs) for various firing patterns must be developed and completely understood by all members of a platoon.

The frontal fire pattern (Figure 1) should be established as the standard for friendly units to use unless unit leaders specifically direct them to do otherwise. When frontal fire patterns are used, friendly elements should engage the enemy to their front. The friendly element at far left engages the enemy element on the far left, and the one at far right engages the enemy element on the far right. The two friendly elements in the middle engage the enemy elements from the center to the flank. All friendly elements engage their targets from near to far, the most dangerous to the least dangerous.

When using a depth pattern (Figure 2), the right section engages enemy

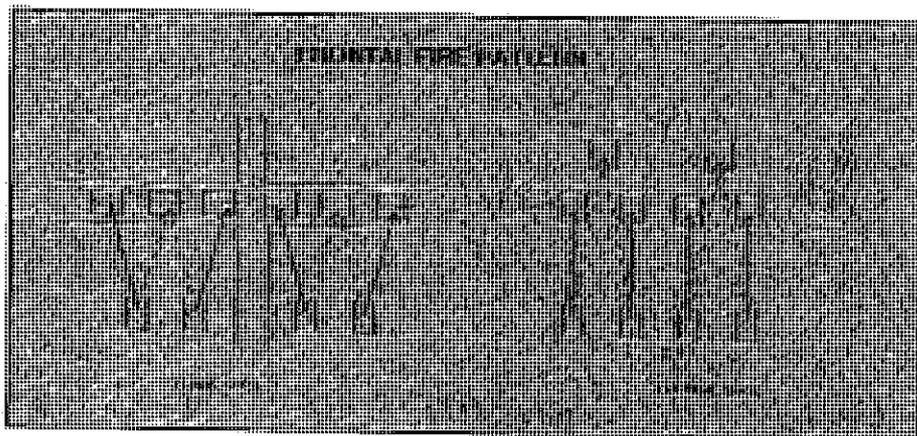


Figure 1

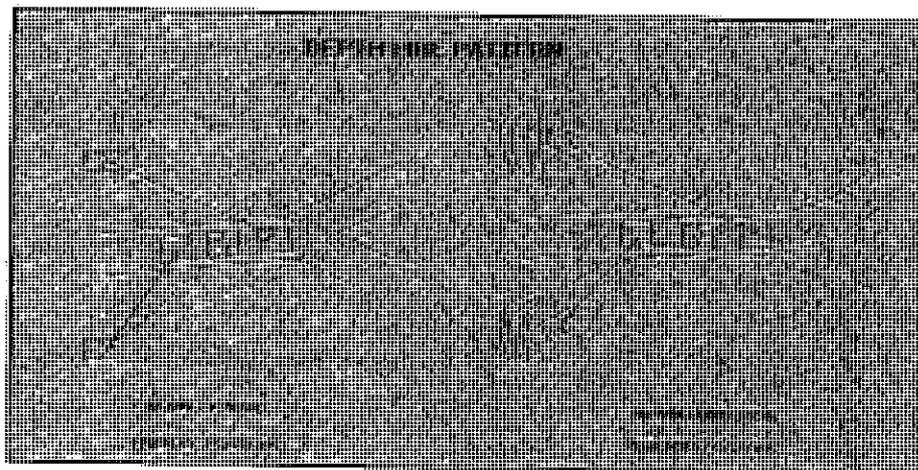


Figure 2

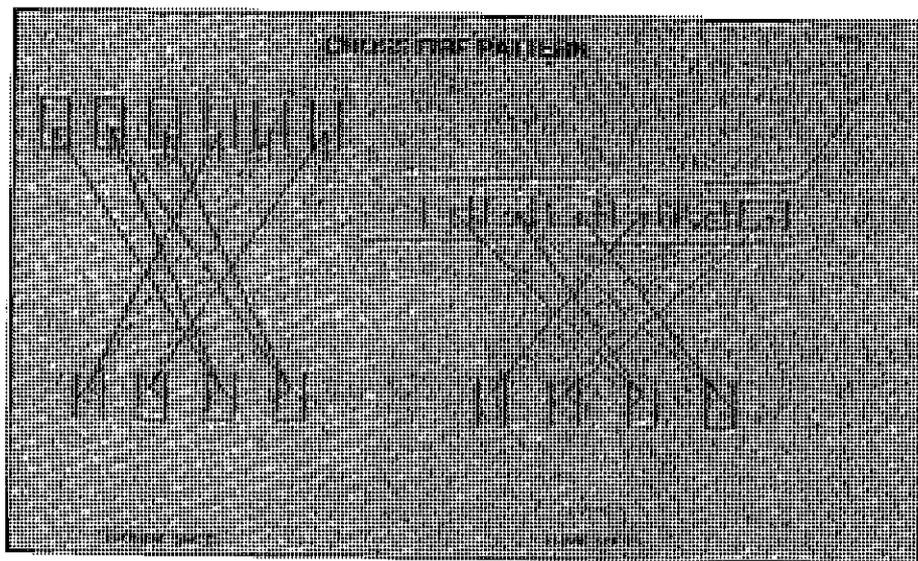


Figure 3

targets from front to center and the left section engages from rear to center.

Cross patterns (Figure 3) are effective because they offer friendly gunners flank or oblique shots. Cross patterns also help friendly elements by creating

a "wall of steel" to the direct front of the friendly positions. Engagements in the cross firing pattern are from flank to center—left side elements engage from right to center, and right side elements engage from left to center. All elements

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engage enemy targets from the most dangerous to the least dangerous.

The importance of making sure all soldiers understand these three basic fire patterns cannot be overemphasized. Gunners must know their assigned targets so that the enemy can be destroyed rapidly. Once they understand the basics, they can expand their collective killing capability—the sections can fire a pattern different from the platoon pattern (for example, the platoon may be firing frontal patterns while each section internally fires cross patterns).

The firing techniques are essential to controlling the rate and distribution of fire in an engagement area. These techniques insure that a unit places enough fire on its target without recklessly expending ammunition.

In an offensive movement, leaders may need to be reminded that fire superiority must be established immediately. Once contact is made with the enemy, simultaneous fire from all weapon systems should be employed. As the enemy is being suppressed, the leader must decide at what point he must order the transition to alternating fire. This is a critical decision because if fire superiority has not been achieved, changing from simultaneous to alternating fire may result in the loss of friendly soldiers and equipment. If the unit cannot gain fire superiority, the gunners must continue to suppress the enemy while moving to covered and concealed positions.

One technique for controlling the distribution of fire while moving is terrain indexing. In most mechanized infantry platoons, the soldiers, when mounted, understand sectors of fire that resemble those in Figure 4. The leader must terrain index to identify sectors while moving, and he does this by using the natural and man-made terrain features.

The leader indexes the terrain by using TRPs, which can be houses, tree lines, terrain features, or anything else that can be identified easily. In the example shown in Figure 5, the leader might say, "All stations, this is Blue 1, TRP 1 is the red church by the road

exiting the town from the south. TRP 2 is the water tower 800 meters northwest of TRP 1. TRP 3 is the woodline 700 meters northeast of TRP 1. Alpha section, your sector is from TRP 2 to TRP 1. Bravo section, your sector is from TRP 1 to TRP 3."

By identifying these TRPs, the platoon leader accomplishes two things: He identifies points on the ground from which he can adjust fires onto the enemy, and he clarifies and defines specific sectors for his weapon systems.

For example, if the platoon's soldiers hear the fire command "contact, 2 BTRs, 50m right of TRP 1, fire" (Figure 6) they immediately assume the frontal fire pattern, and those in Bravo section simultaneously engage the enemy. If

additional fires are needed, the leader can issue another fire command for Alpha section to fire into its secondary sector (TRP 1 to TRP 3).

Terrain indexing can also be used in the movement to contact and during the dismounted assault from the assault position. The principle is the same: The leader identifies TRPs to control the fires of his element and to control the maneuver of the unit so that it does not mask those fires. A terrain index should be updated continually to avoid confusion if contact should be made with an enemy force.

In a defensive engagement, the platoon must decimate the attacking enemy force as quickly as it can, suggesting again the use of simul-

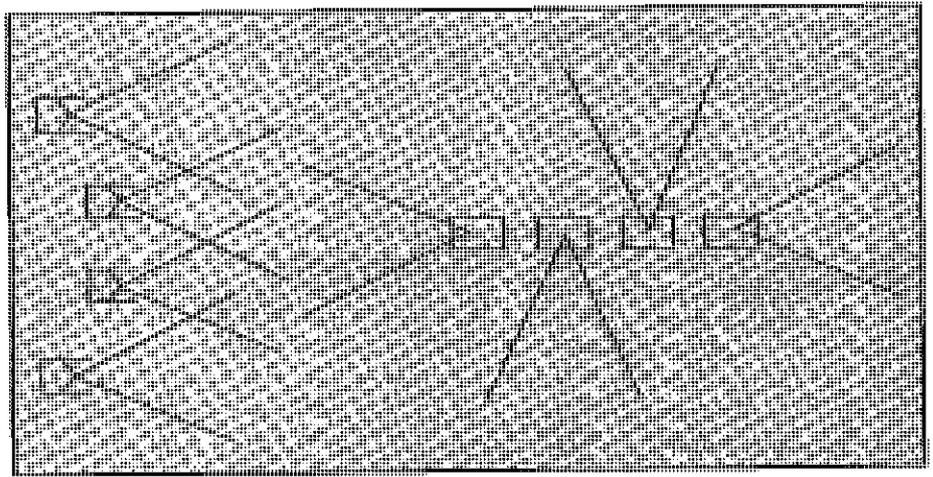


Figure 4

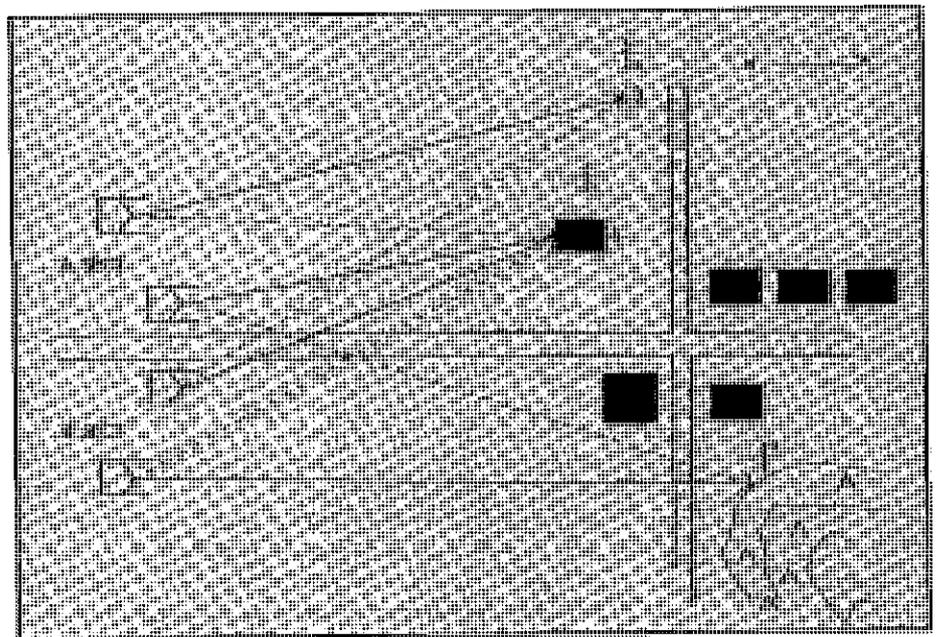


Figure 5

taneous fire. Once the enemy force has been halted and the platoon has gained fire superiority, the leader may call for alternating fires in a specific sector.

A detailed fire plan is essential to the execution of a defense. A platoon and its sections must be able to analyze the terrain rapidly, issue a detailed order, and synchronize direct and indirect fires. The fire plan depicts the way the leader envisions the decimation of an enemy force in a specific engagement area.

The elements of a fire plan vary with the amount of time the leader has to prepare (considering factors of METT-T—mission, enemy, terrain, troops, and time). As a minimum requirement, a fire plan should include engagement area, TRPs, sectors, trigger lines, dead space, and FPF. A more detailed fire plan will include the maximum

effective engagement line; observation posts (OPs); obstacles; fire support plan; vehicle positions; primary, alternate and supplementary positions; primary and secondary sectors of fire; all weapon symbols; principal direction of fire (PDF); final protective lines; terrain features; and adjacent units.

The fire plan should also include the engagement criteria, total number of systems available, and priorities of engagement. The personnel and systems should be arrayed on the battlefield so as to mass fires, not systems. Whenever possible, the fire plan should depict mutually supporting fires and the massing of direct and indirect fire in the engagement area.

Although there is no schoolbook solution to developing a fire plan, the following examples illustrate the thought processes a leader must go

through to write a detailed, comprehensive fire plan.

- Draw a terrain sketch, including any dead space.

- Analyze OCOKA (observation and fields of fire, cover and concealment, obstacles and movement, key terrain, and avenues of approach) and the engagement area.

- Emplace weapon systems, depicting weapon symbols, vehicle positions, and primary, alternate, and supplemental positions.

- Identify TRPs, primary and secondary sectors of fire, and trigger lines. (Multiple trigger lines may be used for different weapon systems.) Identify maximum engagement lines.

- Identify FPF, and depict the location of OPs and obstacles.

- Identify engagement criteria, priority of engagement, and number of weapon systems.

The execution matrix is another excellent tool to use in developing the operations order and for rehearsing the defensive plan, because it gives specific guidance to all weapon systems on the basis of several possible enemy courses of action. For example, the matrix might show Sections A and B and the forward observer in boxes down the left side, and trigger lines A, B, C, and D across the top. The specific actions for the sections at each trigger line would then be entered in the appropriate boxes.

During limited visibility operations, a leader uses these same fire planning techniques, but controlling fires becomes more difficult. For this reason, a leader should always prepare to operate on a non-illuminated battlefield. Being prepared means maintaining the night observation devices (NODs) and training the soldiers so they will be confident in using the equipment and in their own ability to acquire and destroy targets.

All of a platoon's organic weapon systems have night observation devices associated with them. The way the leaders elect to use these devices is a matter of technique and experience.

A leader's decision to remove the NOD from a weapon system, for

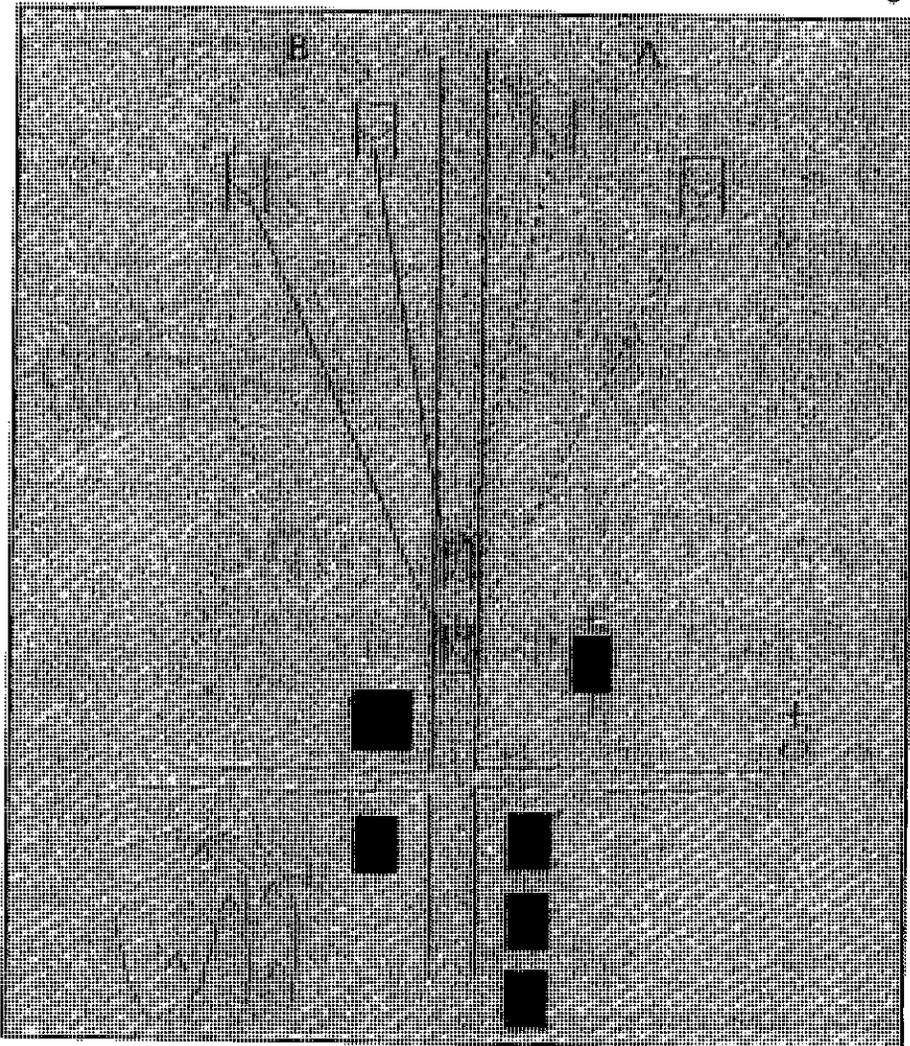


Figure 6

example, should be based on a tactical advantage to be gained by doing so, not on a problem such as an inability to boresight and zero with it. Too, the issues associated with the "whiting out" of these devices are real and must be dealt with. A crew that elects to remove the NOD from their weapon should always have a well rehearsed range card and a means of target acquisition and fire adjustment.

On the other hand, a decision to fire with NODs presents a fire control challenge. Such fire control measures as trigger lines, TRPs, FPLs, PDFs, and FPFs *must* be marked so that they can be identified.

TRPs should be both thermal and visual so that all systems can use them. Trigger lines should be marked according to a color scheme for different distances and different systems. Final protective lines can be marked with chemical lights to the front of the position, or with some chemical liquid from a light on the horizontal and vertical bars of the weapons' traversing and elevating mechanisms. PDFs and the trigger line for the FPF can also be marked using chemical lights.

There are many other techniques for fire control during limited visibility operations, but a leader must always use discretion in placing these lights. His plan must be simple and usable, and

whenever possible, he should get a look at the engagement area from the enemy's vantage point. Rehearsal is the key to understanding the limited visibility fire plan, including shifting fires between marked TRPs and repositioning forces as necessary.

In fact, rehearsals are absolutely necessary to the successful execution of any fire plan, but time is often the adversary. When possible, rehearsals should be conducted with all personnel involved. Various levels of rehearsal can be conducted, depending upon the factors of METT-T.

- A full rehearsal is conducted with all soldiers in a secure area going over specific tasks. Actions on the objective should be rehearsed first (based on reconnaissance) then specific company, team, and platoon drills.

- A key leader rehearsal is a walk-through version of full rehearsal by key leaders.

- A terrain model rehearsal reconstructs key events on a terrain model.

- A fire plan rehearsal uses a fire plan board and terrain model on which key leaders rehearse actions to be taken as *the enemy crosses specific trigger lines.*

- A range card rehearsal is one in which the squad leaders go over the range card with their gunners and assistant gunners (a transition exercise, for example).

- A backbrief is used by leaders to explain their actions using maps or fire plan boards to the soldiers.

To summarize, leaders must be able to analyze OCOKA in relation to METT-T and design a fire plan that considers the weapon systems available and the enemy's order of battle. Gunners must understand how to control the rate and distribution of fires (fire patterns and firing techniques). Since everyone must understand the fire commands, they must be brief and simple. And, if leaders and gunners are to initiate direct fires according to the proper trigger line, they absolutely must rehearse the fire plan.

But units will continue to have problems defining the "how to" until ARTEP 7-8 MTP includes a check list that leaders can use to guide them through the process.

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Offensive TOW Training

An Innovative Approach

CAPTAIN R.W. CHATHAM, JR.

The Echo Company in a mechanized infantry battalion is the support arm of a battalion task force. It enables the maneuver infantry battalion commander to make the most of his combat power. By fixing enemy forces at long ranges,

the Echo Company increases the concentration of assault forces directed at an enemy's center of gravity. Why, then, do after action reviews (AARs) at the combat training centers so often mention that, "the TOWs never

influenced the battle"?

It is easy to visualize the TOW in the defense, but what can an Echo Company really do as part of an attacking force? Offensively, the company *fixes* or *suppresses* an enemy

force by attacking it by fire or from support-by-fire positions. Because of the TOW's slow rate of fire, a company commander must mass his fires to have any effect on the enemy. In fact Field Manual 7-91 (Employment of Antiarmor Platoons, Companies, and Battalions) specifies that mass is "the key to employment of a unit's antiarmor assets." But the only way a company commander can mass his fires is by concentrating his platoon fires from different locations. Although this sounds fundamental, most units in the field task TOW companies either to support by fire or to overwatch from a single position. This dysfunction results from the lack of guidance from training manuals and a general misunderstanding of Echo Company's capabilities.

To compound this misunderstanding, a recent study released by a research institution indicated a number of concerns with TOW employment. When the study focused on the offensive tasks given to TOW companies, the following statistics resulted: *In 44 battles reviewed at the National Training Center (NTC), 32% of the TF orders specified an OVERWATCH mission for the TOW company. SUPPORT-BY-FIRE was assigned 50% of the time and a screen was specified 7% of the time. The remaining 11% specified no mission for the TOW company.*

On the surface, it might seem that a company would have no difficulty with those missions. The problem is that there is no U.S. Army standard for training a *company* in them. ARTEP 7-91-MTP (mission training plan) lists 24 collective tasks that are suited for company execution but only one of the training and evaluation outlines (TEOs) contains a training objective that specifies engaging enemy forces.

Since the MTP and the FM clearly do not offer the company commander any specific help in fighting a company, he must turn to innovations and the available assets in planning his training. Despite the problems with the MTP and the FM, they do provide excellent guidance for training TOW platoons.

And if the platoons are trained to a high standard, fighting the company is as simple as employing the platoons in depth and controlling their fires.

During Operation DESERT SHIELD, the MTP and the accompanying drill manual served as the base in establishing the master training plan used to train TOW platoons at the NTC. The training techniques outlined here are not suggested as the only way, just as one way that works.

Individual Skills. Skill Level 1 tasks, both TOW-specific and common soldier skills, continue to serve as the foundation for all collective training at the NTC. A gunner skill test (GST) is a great technique for training the perishable skills of the antiarmor infantryman. A GST is a series of TOW-specific skills that are common to all crew and collective tasks.

Conducting an effective GST requires numerous resources and company-level support. The tasks to be trained must be selected on the basis of the first-line supervisor's assessment of his soldiers' level of proficiency. The selection may follow a "round-robin" series of stations, in which crewmen walk through classes and ultimately acquire hands-on experience in performing all tasks. The GST culminates in a test along the lines of the Expert Infantryman's Badge (EIB). The leaders must ensure that standards remain high so that individual skills do not hinder further training.

Gunnery. TOW gunnery training places an unusual burden on an Echo Company commander. Despite its limitations, the M70 tracking board (currently the U.S. Army standard) still provides feedback to gunners and squad leaders. But the lack of an integrated/thermal sight unit forces an antiarmor infantryman to devise some ingenious training techniques.

One of these involves affixing a video camera to the top of the gunner's sight (day or night), which allows a "coach" (usually the squad leader) to view the same sight picture as the gunner. To ensure that the gunner and the coach have the same point of aim, the coach simply has the gunner sight in

on any target. The coach takes a grease pencil and draws a set of crosshairs on the accompanying video monitor, ensuring that his crosshairs match the gunner's. The coach then provides feedback to the gunner as targets are tracked. This video equipment, available through training support channels, provides a different level of feedback and improves reticle aim training.

The Bradley Unit Conduct of Fire Trainer (U-COFT) offers an innovative approach to training TOW gunners. The major difference between the Bradley and the M901 hand stations is the reversal of the "slew" and "trigger" switches. With the TOW gunner sitting in the gunner's seat of the U-COFT, TOW platoon leaders supervise the exercise from the Bradley commander's station. (This assumes that all TOW platoon leaders are Bradley qualified.) The gunners fire the first hours of the U-COFT matrix (TOW engagements) while the platoon leaders explain the simulator.

Simple tracking with MILES equipment is a proven technique and is highly encouraged for units participating in combat training center rotations. This tracking not only increases the soldiers' knowledge of MILES (both weapon and vehicle) but also reinforces good engagement skills.

Battle Drills. Battle drills introduce soldiers to teamwork, and ARTEP 7-91-Drill provides all the training objectives needed to establish a training plan. The important thing with drill training is survival, and the crew's survivability is increased when crewmen are cross-trained in their duties. Until the crews master the drills, units will not be able to progress in training.

Platoon Situational Training Exercises (STXs). STXs were used to train combat forces in preparation for Operation DESERT SHIELD. Tank, Bradley, and TOW platoons all used STXs in platoon training.

Lanes were developed using a systems approach to training (analysis, design, development, implementation, and evaluation). The first step in developing the training plan (analysis)

was to select the tasks for training. Based on the combined experience of a six-man observer-controller team, three missions were selected as the most common for TOW platoons: attack-by-fire, screen, and support-by-fire. ARTEP 7-91-MTP served as the base document for the selection of appropriate crew tasks and individual tasks. These came straight out of the collective-to-crew and individual task matrices in the MTP.

Writing the training objectives for each lane was the next phase of the STXs (design). Each lane incorporated a standard sequence using one of the three missions—*overwatch*, *support by fire*, or *screen*.

An AAR began as soon as each lane was completed. The emphasis was on teaching and coaching the fundamentals of pre-combat inspection (PCI), moving, maintaining formations, and acquiring targets. Having an aggressive opposing force (OPFOR) that could “kill” as well as “be killed” was the key in maintaining healthy levels of stress. A reconnaissance of the training site ensured that the maneuver room was adequate. All support requirements became evident during this phase, both for the OPFOR and for the training unit.

At the next stage (development), a review of all existing materials produced the lane concept. The concept behind the STX used a simple *crawl*, *walk*, *run* approach. Each lane introduced a platoon leader to a tactical situation through an operations order and a terrain model. The platoon leaders conducted troop leading procedures and gave their orders using a sand table. A backbrief immediately followed in which squad leaders literally crawled on the sand table with “toy” models. The leaders’ discussion focused on movement formations and techniques as well as on an understanding of the platoon leader’s concept.

Once the soldiers felt comfortable with the mission, the entire platoon rehearsed the operation without their vehicles. This *walk* phase gave drivers, loaders, and gunners an appreciation for their upcoming mission. The platoon

leader, satisfied with their performance here, informed his observer controller that he wanted to *run* the lane. Platoons that immediately showed major problems had to get off the lane, but those that had only minor problems were allowed to continue.

Validation, which became the litmus test for the proposed program, required an antitank platoon to go through all sequences of the lane. For validation, the lane must have enough maneuver space, fields of fire, and realism.

In the actual training (implementation), units executed the lane concept within a scenario that specified one of the three missions—attack-by-fire, screen, support-by-fire. Multiple repetitions of each lane ensured a high level of proficiency in all performance measures and brought out any individual or crew weaknesses.

The observer-controllers focused most of their coaching on PCI, movement, and target acquisition. Leader training ensured that all of the lessons learned were disseminated. The intent of this training was to give the leaders a block of instruction on a lane they would train on the next day. Leader training began the night before and allowed leaders a chance to practice the *crawl* portion of the lane. This reinforced their troop leading skills and allowed the leaders to appear “squared away” in front of their subordinates the next day.

Company Field Training Exercise (FTX). If the company in training is proficient in the individual skills, the execution of these events takes seven days (one for the GST, two for crew-drill competition, three for STXs, and one for retesting). Individual skills should be strongly emphasized.

The company commander, having completed the fundamentals, must now seek help and support in continuing his training progression. This assistance and support must come from his battalion or sister units. Again, the systems approach to planning works best, and an opposing force composed of tanks and infantry fighting vehicles is essential. The scenarios used should replicate task force offensive operations

that require Echo Company to conduct one of the same three missions—attack-by-fire, screen, and support-by-fire.

To conduct an accurate estimate of the situation, the company commander must have an operations order with overlay, an indirect fire plan, and an enemy situational template. The task force staff and commander receive training on Echo Company’s capabilities while they are involved in supporting the company’s training.

To attain mass, the battalion orders need to stress the following portions of the battlefield operating systems:

- Intelligence—location, type, composition, and estimated strength of the “targeted” enemy, and the ranges of all enemy weapon systems.

- Maneuver—scheme to attain firing positions.

- Fire Support—fires dedicated to Echo Company in attaining firing positions. (If we think a position is a good place to support from, the enemy probably has the same idea. An artillery preparation should be fired on all positions before they are occupied. The intent of fires is to destroy enemy vehicles and dismounted soldiers.)

- Air Defense—a man-portable air defense system (MANPADS) should be dedicated to support the force.

- Maneuver, Countermaneuver, and Survivability—the extent of survivability the existing terrain affords; the chances of encountering chemical agents.

- Combat Service Support—ammunition resupply and casualty evacuation considerations.

- Command and Control—graphic control measures that facilitate a 360-degree orientation during movement and engagement of the enemy.

The fundamentals of antiarmor employment (as stated in FM 7-91, Chapter 2) give a commander a blueprint for using his platoons. Covered and concealed positions increase the survivability of the platoons. During map and actual reconnaissances, commanders identify these places. Graphic control measures provide the commander with the tools to designate such positions as they

become apparent during movement. Commanders gain depth through initial positioning, movement techniques (traveling, traveling overwatch, bounding overwatch), and disengagement criteria.

The maneuvering platoons also gain enough depth to engage an enemy force from several directions. Templating the enemy's direct and indirect fire ranges gives the commander a gauge he can use to assess the risk in maintaining his depth. Flank shots result from fixing the enemy from one direction in an effort to turn his flank to the main effort. Mutual support exists within the company by platoons as well as within the zone of action with other companies. Cross-talk on the battalion command net eases this process.

Standoff provides more survivability, but if a unit templates its enemy and understands the range and the effect of his weapons, it can make the most of standoff by fighting outside the enemy's direct-fire envelope. All-around security is paramount to the supporting force. If a unit must fix an enemy force while its assault forces close on the enemy, it must also take the appropriate means of providing continuous fires.

The U.S. Army needs a dedicated support system to fight offensively, and the Echo Company can fill that role. It has the means by which to gain an initial advantage over the enemy (maneuver). Its long-range accurate fires, when focused on the enemy, are capable of inflicting substantial

destruction (firepower). A task force commander, by dedicating the combat multipliers to the TOW company, ensures that his support force is a credible one (protection). Bringing it all together is the responsibility of the Echo Company commander (leadership).

Innovation, and the use of all available assets, will help increase the effectiveness of our antiarmor companies.

Captain R.W. Chatham, Jr., served as an antiarmor platoon leader and an Echo Company executive officer in the 82d Airborne Division, commanded an Echo Company in Europe, and served as an antitank company observer-controller at the National Training Center. He is now a small group instructor at the Infantry School.

SWAP SHOP



Infrared LED Light

As light infantrymen, we conduct most of our operations at night and often use chemical lights as control measures. Although these lights work well, they have some disadvantages: They are expensive (about \$3.00 each); they don't last long (about three hours for an infrared light); and sometimes they don't work at all.

I wanted to find something I could use as an alternative, but I also wanted it to last longer and be reusable. After a little trial and error, I found that a small infrared light emitting diode (LED) did the job quite well. It was also inexpensive and practically indestructible. (The diodes come in several different colors in addition to the infrared.)

Because I wanted the light to work with a regular nine-volt battery (BA-3290), I had to add a 470-ohm, $\frac{1}{2}$ -watt resistor. The light, the resistor, and a nine-volt battery connector can be purchased at any electronics store for

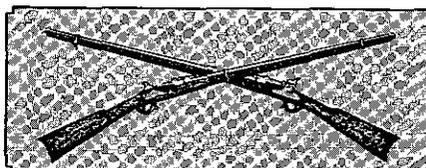
about \$2.50.

To make this light, first strip the insulation from the leads on the battery connector. Then wrap one of the leads around one end of the resistor. Connect the other lead to one of the diode's tails and complete the circuit by connecting the other tail to the other end of the resistor. Soldering the connections is not necessary; the glue from a hot glue gun will hold everything in place and waterproof the light as well.

I have tested the lights for more than 48 hours of continuous burning before the battery finally gave out. The lights themselves will last almost forever without burning out. The diode is as bright as a chemical light but smaller, which decreases the chances of enemy detection.

My platoon found these lights very useful during a recent ARTEP.

(Submitted by Lieutenant Kent A. Palmer, 3d Battalion, 17th Infantry, Fort Ord, California.)



ENLISTED CAREER NOTES



OFFICER CANDIDATE SCHOOL

The Branch Immaterial Officer Candidate School (OCS)—conducted at Fort Benning, Georgia, by the 3d Battalion (OCS), 11th Infantry—is the Active Army's only OCS. It commissions about 450 officers annually into 16 different branches.

This intense 14-week program offers selected soldiers and warrant officers an excellent opportunity to secure commissions. Throughout the program, officer candidates undergo rigorous physical training and extensive leadership and ethical development. Candidates are challenged and evaluated in numerous leadership positions, both in garrison and in infantry-focused tactical training situations.

The selection of soldiers to attend OCS is highly competitive, and applicants' packets must be complete and up to date if the soldiers are to receive consideration. Commanders at all appropriate levels are encouraged to identify interested and qualified soldiers, help them prepare the necessary documents, and provide strong endorsements supporting their application packets.

Army Regulation 351-5, U.S. Army Officer Candidate School, contains information on the program and instructions for applying.

CERTAIN LINGUISTS MAY RECLASSIFY

The end of the Cold War in Europe has brought about changes in Military Intelligence personnel requirements. Specifically, there are fewer authorizations for German, Polish, and Czech linguists. As a result, soldiers in career management fields (CMFs) 98G

GM, 98G PL, and 98G CX may now volunteer for reclassification into either MOS 97B or MOS 95D.

The following restrictions apply:

- MOS 97B, Counterintelligence Agent, is open only to soldiers in the ranks of specialist, sergeant, or staff sergeant.

- MOS 95D, Criminal Investigation Division Special Agent, is open only to soldiers in the ranks of specialist, sergeant, or sergeant promotable.

Soldiers must apply for reclassification through their chain of command to Commander, PERSCOM, ATTN: TAPC-EPL-M, 2461 Eisenhower Avenue, Alexandria, VA 22331-0453.

“RELEASE” AND “DISCHARGE” NOT THE SAME

Soldiers leaving active duty need to know that “release from active duty” and “discharge from the Army” are two separate things.

By law, all soldiers have an eight-year military service obligation. Those who have served less than eight years on active duty have a continuing military obligation.

One way of meeting this obligation is to join an Army Reserve or National Guard unit. Soldiers who do not join a unit are assigned to the Individual Ready Reserve (IRR) for the rest of their service time.

More than 20,000 IRR soldiers were recalled to active duty to serve during Operations DESERT SHIELD and DESERT STORM. Some of these soldiers had believed that because they were off active duty, they were out of the Army, and were surprised to learn they were not.

Soldiers who are separating from active duty need to talk with their post

Total Army Career Counselors during the transition process to learn the details of their military service obligations and the opportunities available in the U.S. Army Reserve.

NCOES COURSES MANDATORY FOR USAR PROMOTIONS

Soldiers in the U.S. Army Reserve must now complete certain Non-commissioned Officer Education System (NCOES) courses before competing for promotion to the next higher rank. This affects promotions to the ranks of staff sergeant through sergeant major.

Under the new policy, which became effective 1 October 1991, a soldier must complete Phase II of the Basic NCO Course (BNCOC) or Advanced NCO Course (ANCOC), MOS specific, before he can be considered for promotion. In addition, he must complete Phase II within two years of completing Phase I.

The Primary Leadership Development Course (PLDC) is now required for promotion to sergeant. Effective 1 October 1993, BNCOC will be required for promotion to staff sergeant; ANCOC will be required for promotion to sergeant first class; and the U.S. Army Sergeants Major Academy will be required for promotion to sergeant major.



OFFICERS CAREER NOTES



YEAR GROUP 1987 FA DESIGNATION

The functional area (FA) designation process for officers in Year Group (YG) 1987 is tentatively scheduled to begin in June 1992. The Functional Area Management Division will begin sending out preference forms at that time, and officers will be required to return the forms not later than September 1992.

The preference forms will be sent to the officers' home addresses as recorded on their officer record briefs (ORBs). Officers should make sure those addresses are correct, and those who have not received preference statements by August should contact Infantry Branch.

Infantry Branch strongly encourages YG 1987 officers to read DA Pamphlet 600-3 and seek the advice of their mentors and chains of command before making their selections. An officer's FA designation will be based upon his preference, manner of military performance, college grade point average, and military schooling, and, of course, the Army's requirements.

OER REPORTING TIPS FOR SENIOR RATERS

The role of a senior rater is to provide the capstone evaluation for an officer, with the primary focus on an officer's *potential*. If a senior rater simply repeats what the rater has said, he may do the rated officer a disservice.

The senior rater's narrative should highlight the rated officers' potential for the next three to five years. This evaluation should also include overall recommendations for the officer's promotion, schooling, assignment, or command, as appropriate. Even though

this may seem like a laundry list, a senior rater's failure to address these areas could send a negative signal to members of a promotion or selection board.

Members of DA selection boards have consistently said that departing senior raters should prepare option reports on commanders or key staff officers, no matter what the level, if there is the remotest possibility that reports on these officers will be required before the new senior rater is qualified to evaluate them (normally 60 days).

Center of mass officers fared well.

The overall selection rate for officers having all center of mass OERs in their files, and whose records appeared before the 1991 lieutenants retention board was 78 percent. Those who were not selected often had "off-perfect" rater block checks, problems with the Army Physical Fitness Test, weight control, or bad photographs.

A senior rater evaluation with a box check and profile relationship with a clear, single-box center of mass was the easiest to interpret. The second box center of mass (where the 2-box is the most frequently used) was the most commonly used senior rater profile

INFANTRY BRANCH POINTS OF CONTACT

ASSIGNMENT AREA	NAME	PHONE	221-XXXX
		Commercial Area	Off-Office
Branch Chief	LTC John Kowalski	221-4444	
Branch Staff	LTC Frank Robinson	353-2538	
Equipment Control	MAJ Bruce McCortney	221-4238	
	MAJ Don Coffey		
	Mrs. Deborah McCortney		
Messrs	MAJ John Mangano	221-4231	
	MAJ Ernest Probst		
	Mrs. Evelyn Blawie		
Captains	LTC Frank Amstrong	221-4229	
	LTC Rick Smith		
	Mr. Kenney Emerson		
NAC/Executives	LTC Jack Parnell	221-4236	
	LTC Chuck Taylor	221-4237	
	Mrs. Gloria Hughes		
	Mr. James Cunningham		
Future Reference	MAJ Don Padden	221-4237	
	Mr. Evelyn Robinson		
Colonels Available	LTC Lynn Harney	221-4238	
Branch Address	Commander, PERS/ORA ATTN: PERS/ORA 3000 Military Street Arlington, VA 22204-4000		

OFFICERS CAREER NOTES

philosophy. This appears to be the philosophy that presents the least risk of misinterpretation.

UPDATING FILES

Because of the "downsizing" of the Army, more and more centralized DA boards will be held, and schedules will be difficult to predict. In addition to the routine competitive selection boards, reduction in force, selective early retirement, and lieutenant retention boards will meet.

As a result, Infantry Branch is strongly recommending that every infantryman keep his records in the best possible condition. This means his ORBs, photos, physicals, microfiche records, and related documents must be up to date all the time, not just when a board has been scheduled.

PREFERENCE STATEMENTS

To meet the demands of today's combined arms battlefield, infantrymen will need the experience of serving in different types of infantry units (mechanized, light, airborne, air assault, or Ranger) before they are promoted to major. Infantrymen should keep this requirement in mind when they complete their preference statements.

Since Infantry Branch usually succeeds in assigning Infantry Officer Advanced Course (IOAC) graduates to one of their top three choices, it is important that they submit their preference statements. Officers who do not express their preferences, or who make unrealistic choices that violate the heavy-light requirement, must depend upon their assignment officers for their career development.

Infantry Branch is also sending increasing numbers of qualified infantrymen to the Armor Officer Advanced Course (AOAC). Generally, these are officers who have experience in light infantry and who volunteer to attend AOAC enroute to assignments in "heavy" units. Infantrymen who are

interested should contact their assignment officers not later than seven months before they are due for new assignments.

OFFICER ADVANCED COURSE (OAC) NOTES

The following are the typical assignment milestones for an Officer Advanced Course (OAC) class:

- Six months before the start date, officers are slated to attend, and Military Personnel Offices are notified by electronic mail. Welcome packets and requests for orders are mailed to the slated officers.

- Three months before the start date, preference statements as to follow-on assignments are due at Infantry Branch.

- Two months before the start date, a tentative slate of follow-on assignments is completed.

- Two weeks after the class starts, Infantry Branch assignment officers conduct face-to-face interviews with the students to confirm their follow-on assignments and schedule any schools they need to attend.

- Three months after the class starts, requests for orders are released for the students' follow-on assignments and schools.

SYSTEMS AUTOMATION FUNCTIONAL AREA

The Computer Science School at the U.S. Army Signal Center, Fort Gordon, Georgia, is developing a new course to support officers in Functional Area (FA) 53, Systems Automation.

The course, Systems Automation Course (SAC) II, is being developed to prepare FA 53 officers who are serving in branch-related assignments for upcoming FA 53 assignments. This course will quickly bring an officer up to date on current automation technology and on Army automation issues in general. It will also give him the critical skills he will need in his next assignment.

SAC II is four weeks, four days long, and an officer should be scheduled to attend enroute to his next FA 53 assignment. The first class is scheduled for January 1993, with quarterly classes thereafter.

To attend the course, an officer must be on orders to an FA 53 assignment; must be in the rank of major, lieutenant colonel, or colonel; and must have served outside FA 53 for at least the previous three years.

For further information on this course, call CPT Prantl at DSN 780-3236. To request seats in the course, or other FA 53 assignment information, call MAJ Welch at DSN 221-2759.

SENIOR OFFICER LOGISTICS MANAGEMENT COURSE

The Senior Officer Logistics Management Course (SOLMC) is specifically designed to update commanders and their primary staff members at battalion and brigade level on logistics. The course encompasses maintenance, supply, and transportation procedures; hands-on experience with vehicles, weapons, and ammunition; and medical, communication, NBC, and quartermaster equipment.

The course is open to officers in the ranks of major and above in the Active Army, Army Reserve, Army National Guard, U.S. Marine Corps, armies of other nations, and Department of Defense civilians in the grades of GS-11 or above.

The one-week course is conducted ten times each fiscal year at Fort Knox, Kentucky. Class quotas can be obtained through normal U.S. Army Training and Doctrine Command channels.

For more information, contact the SOLMC staff at DSN 464-7133/3411 or commercial (502) 624-7133/3411. The principal point of contact for administrative information and enrollment procedures is the Maintenance Department Support Section, DSN 464-1755 or commercial (502) 624-1755.

BOOK REVIEWS



In this, our second issue of 1992, we would like to call your attention to a number of publications that you will find both informative and useful:

• **THE MILITARY BALANCE, 1991-1992.** By the Director and Staff of the International Institute for Strategic Studies (Brassey's, 1991. 250 Pages. \$52.50, Softbound). This authoritative and world-renowned annual publication provides a comprehensive overview and assessment of the military forces and defense expenditures of more than 140 countries; its data is current as of 1 June 1991, and it reflects the reduced strength of the Iraqi armed forces. Of particular interest to U.S. researchers and general readers is an annex that lists the order of battle of the coalition forces during Operations DESERT SHIELD/DESERT STORM, differentiating between those that were deployed purely for the defensive phase and those that took part in the offensive operations.

A map of the Middle East showing the deployment of key air and land equipment in the region as of 1 June 1991 is provided as a loose insert. Of interest, too, is the Director's statement that this is "the first edition not to include a separate section detailing the armed forces of the Non-Soviet Warsaw Pact countries" and that "it may well be the last to include a section entitled the Soviet Union."

• **UNITED STATES ARMY WEAPON SYSTEMS, 1991.** Published under the auspices of the Assistant Secretary of the Army for Research, Development and Acquisition (USGPO S/N 008-020-01239-8. 1991. 187 Pages. \$12.00, Softbound). This is another annual publication, but its mission is different from that of the one mentioned above. It is designed to acquaint a reader with many of the Army's weapon systems and other support equipment. Following a brief description of the technology based portion of the Army's research and development program, the various items are placed in categories according to their specific missions—close combat; air defense; fire support; combat support; combat service support; command, control, and communications; soldier support; and

strategic conflict. Many of the entries describe a Soviet counterpart, which adds a nice touch to the publication's overall tone.

• **ART FROM THE TRENCHES: AMERICA'S UNIFORMED ARTISTS IN WORLD WAR I.** By Alfred Emile Cornebise (Texas A&M University Press, 1991. Volume 20 in the Military History Series. 157 Pages. \$50.00). When the United States entered World War I in April 1917, eight U.S. artists and illustrators were commissioned as captains in the Corps of Engineers and designated official artists of the American Expeditionary Forces in Europe. From early 1918 until several months after the armistice of 11 November 1918 had been signed, they were in France and later in Germany performing their artistic duties.

Although their work for the Army has been largely forgotten, the author of this book gives us a proper selection (66 pieces all told) to demonstrate their wide range of subjects and treatments of wartime themes. He follows up with a brief description of each of the artists' postwar careers. (Two of the artists, George Harding and Harvey Dunn, used their talents for the armed forces again during World War II. Dunn joined the USO and traveled widely to military hospitals and training camps. Harding, at the age of 60, accepted a captain's commission in the U.S. Marine Corps and covered the war in the Pacific for 20 months, producing more than 600 pictures.) Much of their World War I work has been held by the Smithsonian Institution since 1919.

• **A CONCISE DICTIONARY OF MILITARY BIOGRAPHY.** By Martin Windrow and Francis K. Mason (Wiley, 1991. 337 Pages. \$24.95). Two well-known British writers on military subjects joined pens and talents to produce this very fine reference work. In it they offer a reader a look at 200 important military figures in history, some for their battlefield exploits, others for their theoretical compositions, others because they were great men of other cultures. (One woman is included—Jeanne d'Arc.) Each entry gives a brief personal biography, describes battles, tactics, and

maneuvers, and provides an analysis of the individual in the field and in history. The authors do not expect everyone to agree with all of their selections, but they do believe that "many of the names included in this book are beyond all challenge."

• **SOLDIERS: A PORTRAIT OF THE UNITED STATES ARMY.** Text by Shelby L. Stanton (Howell Press, Inc., 700 Harris Street, Suite B, Charlottesville, VA 22901. 1990. 208 pages). This is an absolutely gorgeous book. Hundreds of photographs (most in full color, others full or double page size) complement just enough text to make it a magnificent tribute to today's soldiers, the "vanguards of democracy."

History is not forgotten, for the early narrative and group of photographs show the Army's evolution from the trenches of Civil War battlefields to the jungles of Vietnam. There is one minor comment: New infantry soldiers have been trained under the OSUT (one station unit training) system for a number of years.

• **PEARL HARBOR, 1941: A BIBLIOGRAPHY.** By Myron J. Smith, Jr. (Greenwood Press, 1991. Bibliographies of Battles and Leaders Number 4. 224 Pages. \$55.00). The author provides more than 1,500 citations from 11 languages. This is an annotated bibliography in that the author not only examines the published literature but also cites the main repositories in the United States and abroad that hold the data any researcher or student of the events surrounding that day in December 1941 would find most helpful.

• **AN UNKNOWN FUTURE AND A DOUBTFUL PRESENT: WRITING THE VICTORY PLAN OF 1941.** By Charles E. Kirkpatrick (U.S. Army Center of Military History, 1990. CMH Pub 93-10. USGPO S/N 008-029-00208-6. 158 Pages. \$4.75, Softbound). The author details how the War Department's Victory Plan of 1941 came to be written, and its importance as the blueprint for the general mobilization of the Army for World War II and also for the operational concept by which the U.S. would fight the war. He also tells of the important role played by then-Major Albert C. Wedemeyer in the plan's preparation.

BOOK REVIEWS

Now here are a number of our longer reviews:

THE NORTON BOOK OF MODERN WAR. Edited by Paul Fussell (W.W. Norton, 1990. 720 Pages. \$24.95). Reviewed by Chris Timmers, Charlotte, North Carolina.

Why would a publisher commission an English professor at the University of Pennsylvania to collect a compendium of short stories, news dispatches, poems, and personal remembrances on the brutalities of war in the 20th century? Well, if that professor were himself a former infantry platoon leader and combat veteran who had been wounded in Italy during World War II, his qualifications would be obvious.

Paul Fussell has brought together both poetry and prose by men and women who lived and fought in this century's bloodiest conflicts from World War I to the Spanish Civil War to World War II, Korea, and Vietnam. Their stories are based on direct personal experience (such as Daniel Sweeney's in the battle of the Somme), poetry (especially that of Siegfried Sassoon and Wilfred Owen), and even fiction (a passage from Ernest Hemingway's *For Whom the Bell Tolls* that is often excerpted in anthologies as "Sordo's Last Stand").

Despite the horrific content of many of the pieces, Fussell has included as one of his last entries a portion of General Douglas MacArthur's address to the Corps of Cadets at West Point in 1962—"Duty, Honor, Country"—a speech that focused on the dignity as well as the necessity of the profession of arms. On the basis of his selections, no one can accuse Fussell of being either too pacifist or too warlike.

One has to wonder, however, why he included the remembrances of Linda J. McClenahan, a WAC who worked in communications in Vietnam, or of Bobbie Joe Pettit, who "entertained troops in Vietnam as a member of 'The Pretty Kittens,' an all-girl band," or those of a flight attendant for a civilian airline flying into Vietnam. Perhaps, when compiling selections from our country's failed Indo-China war, he felt compelled, out of some sort of sense of balance, to include certain personal histories from women. But these seem somehow inappropriate when placed against those of the infantrymen and Marines who fought in the rice paddies, forests, and mountains. In fact, they seem to trivialize the sacrifices of the men who were sent to kill or be killed and who bore the overwhelming punishment of loss of life or limb.

Nonetheless, Fussell's anthology deserves to be read. He does not let us forget that the goals of nations or empires require human sacrifice, that war is terrible, and that human life is irreplaceable.

FROM SUMAR TO ROME: THE MILITARY CAPABILITIES OF ANCIENT ARMIES. By Richard A. Gabriel and Karen S. Metz (Greenwood Press, 1991. 182 Pages. \$45.00). Reviewed by Leroy Thompson, Manchester, Missouri.

A key element in any appreciation of this book stems from the fact that Richard Gabriel, in addition to being a scholar, is also a former U.S. Army intelligence officer. He therefore brings a military analytical approach to his scholarship. In addition, the authors often took to the field to test such concepts as the difficulty of scoring hits with a composite bow while riding in a chariot. As a result, this is one of the most interesting works of ancient military history to appear in many years.

Similarly, Karen Metz is able to put her specialized knowledge gained as a medical librarian to good use; the authors give particularly thorough coverage to the effectiveness of ancient medical services. Among other interesting conclusions, they point out that the Egyptian use of honey on wounds was more effective than modern antibiotics in certain cases, and that the Roman military medical system was more effective than any subsequent system until at least late in World War I.

My own favorite chapter is the one titled "Weapons and Lethality," because it applies many of the same techniques of evaluation that modern armies use in rating weapon systems. This chapter, together with the one titled "Death, Wounds, and Injury," also offers a comprehensive and systematic coverage of the ancient art of mayhem from the point of view of the common soldier.

I recommend this book most highly, particularly to those readers who are not normally interested in ancient warfare. I also recommend it to those who are interested in the development of weapons or of military medicine. It is both informative and entertaining, and that is a hard combination to beat.

THE CERTAIN TRUMPET: MAXWELL TAYLOR AND THE AMERICAN EXPERIENCE IN VIETNAM. By Douglas Kinnard

(Brassey's (US), 1991. 252 Pages. \$22.95). Reviewed by Doctor Joe P. Dunn, Converse College.

No high level player served longer or in more diverse capacities during the Vietnam War than did Maxwell Taylor, a transitional figure between the World War II heroic generals to the managerial leaders of the 1960s. Douglas Kinnard, himself a retired general and first-rate scholar, focuses on this key figure's public career to tell the story of policymaking in Vietnam during the Eisenhower and Johnson years.

After a brief overview of Taylor's military career through the mid-1950s, Kinnard traces Taylor's role and influence as Army Chief of Staff (1955-1959), President Kennedy's military advisor (1961-1962), chairman of the Joint Chiefs of Staff (1962-1964), ambassador to Vietnam (1964-1965), and special White House consultant on Vietnam (1965-1968). A brief chapter summarizes his writings and other public activities for two more decades until his death in 1987.

Kinnard's treatment is balanced and insightful. He depicts Taylor's influence on the war as central but not decisive. Taylor's proposals often were rejected, but Kinnard asserts that the General's views were usually better than those that prevailed. His judgment is that Taylor's failure as a policymaker was "not in what he did, but what he failed to do."

This interesting, well-written volume is a most useful addition to a growing literature on those individuals who were our policymakers and decisionmakers during the Vietnam War era.

TWO GREAT REBEL ARMIES. By Richard M. McMurry (University of North Carolina Press, 1989. 204 Pages. \$19.95). Reviewed by Major Don Rightmyer, United States Air Force.

This is certainly one of the most worthwhile Civil War history books to be published in recent years. It is an exceptionally well-written discussion of the Confederacy's two main armies that were fielded during the war. (The Southern government fielded some two dozen armies all told.)

The author takes an in-depth look at the Army of Northern Virginia and the Army of Tennessee. The former army's battlefield record showed almost entirely victories until mid-1863 followed by nothing but hard-fought campaigns and defeats until its final surrender in 1865. On the other hand, the

Army of Tennessee—except for the battle of Chickamauga in late 1863—could claim virtually no successes from early 1861 to its surrender in North Carolina in 1865.

The author, who is a distinguished Civil War historian, spends the entire book in looking at the numerous factors that might explain the two armies' wartime performance. His scrutiny considers a wide variety of factors, including the leadership and composition of the opposing Union armies.

He believes the Army of Northern Virginia's performance cannot be attributed solely to its commander, Robert E. Lee. He does feel, however, that a leader's influence on his men, such as that Lee exercised, is vital to the total performance of an Army. His book is well worth reading and highly recommended.

WORLD WAR II IN THE MEDITERRANEAN, 1942-1945. By Carlo D'Este (Algonquin Books of Chapel Hill, 1990. 218 Pages. \$22.95). Reviewed by Lieutenant Colonel Donald C. Snedeker, United States Army.

In his introduction to this book, John S.D. Eisenhower, editor of this series of World War II histories and a military historian in his own right, says Carlo D'Este has written a "reevaluation of the Allied campaigns in the Mediterranean. . . free of the supposed truths on which we were raised."

But D'Este does not appear to have written a revisionist history just to be different. He has indeed reevaluated the campaigns (most of them, at least) and the roles the major participants played. And particularly for Generals Alexander and Montgomery, he has arrived at a conclusion of leadership effectiveness "free of the supposed truths on which we were raised."

At the same time, D'Este has tried to put a reader in the infantryman's boots as he slogged his way through the heat of Tunisia, the mountains of Sicily, and the mud of Italy. In other words, he describes the policies, strategy, operations, tactics, personalities, equipment, and battles of three long and hard years of fighting against a tenacious foe—all in 200 pages.

Unfortunately, the author's conclusions are not reinforced with facts. There are no footnotes, and the bibliography is presented more as a palette of what's available than as references for the text.

In the final analysis, the book exposes the campaign in the Mediterranean as being a disjointed one, without strategic guidance or

objective and almost constantly on the verge of disaster. Nevertheless, it was the crucible in which the major Allied commanders—Eisenhower, Montgomery, Bradley, Patton, Tedder, and others—learned the lessons on how to do and not to do things for the crucial cross-channel invasion in 1944.

If this book were a ball game, you could say, "You win some, you lose some, and for some you don't even get tickets." The project is just too ambitious for what the publishers deem an appropriate length for today's reading market. More important, however, the book fails to live up to a standard to be accepted as serious military history.

INSIDE SPETSNAZ: SOVIET SPECIAL OPERATIONS, A CRITICAL ANALYSIS. Edited by William H. Burgess III (Presidio, 1990. 308 Pages. \$24.95). Reviewed by Leroy Thompson, Manchester, Missouri.

This is the fourth work to appear during the past few years on the Soviet Special Forces and by far the best. Assembled in symposium form to draw on the knowledge and experience of nine authors, the book does an excellent job of looking at what really is known about Spetsnaz without the bias or mythology sometimes employed by authors writing about this particular Soviet organization.

One of the most useful aspects of this book is that it puts Spetsnaz into its historical perspective by devoting almost half of its pages to Soviet special operations during the Russian revolution, the Spanish civil war, and World War II. Not only do these sections lay the foundations for the development of Soviet special operations theory, they also make interesting and informative historical reading.

Later chapters deal with more contemporary topics, including Spetsnaz deployment in Afghanistan, deep operations in wartime, and training. The chapter on training is especially enlightening since it gives insight into the mindset and physical characteristics considered desirable for Spetsnaz members.

The final chapter consists of 15 conclusions about Spetsnaz that can be drawn from the information presented in the other chapters. I would recommend that even readers who feel they do not have time to read the entire book take ten minutes to read this chapter.

The book concludes with an appendix that lists important personnel with capsule

biographies, and an extensive bibliography of what are basically open sources for further reading. I strongly recommend this book to both the general reader and the military professional.

WHERE EAGLES LAND. By Jerold E. Brown (Greenwood Press, 1990. Contributions in Military Studies Number 94. 232 Pages. \$29.95). Reviewed by Lieutenant Colonel Jack Mudie, United States Air Force Retired.

This study of the planning and development of U.S. Army airfields from 1910-1941 is an effort to fill what the author perceived as a void in the historical record. Specifically, he wanted to tell why our air bases are located where they are.

Jerold Brown, an associate professor of military history at the Army's Command and General Staff College when he wrote this book, undoubtedly had to sift through a lot of boring reference material to complete his work. But the book would have been more interesting if he had included more anecdotes of well-known figures, such as Fiorello LaGuardia and his failed effort to establish an Army Air Corps field on Governor's Island.

He does include a number of excellent chronological maps and tables that show the growth and distribution of the airfields. But there are numerous misspellings and words run together in the text itself. More than a third of the book consists of notes and selected bibliography, so it is best used as a reference for any individual who may want further information on the subject.

At \$39.95 per copy, that individual would be wiser to look for the book in a library instead of buying it.

WAR, PEACE, AND VICTORY: STRATEGY AND STATECRAFT FOR THE NEXT CENTURY. By Colin S. Gray (Simon and Schuster, 1990. 442 Pages. \$24.95). Reviewed by Stephen A. Johnson, Columbus, Georgia.

The author is chairman of the National Institute for Public Policy and the author of many works on such subjects as arms control, nuclear strategy, and geopolitics. In this book, he attempts to provide the military services and the civilian politicians with a framework for strategic thinking, a subject much on the minds of many of our country's leaders today.

Gray notes that winning is the goal and that the United States must learn to adjust its

policy, strategy, and means to fit changing political realities. He believes that strategy and the five themes he develops in the book (the unity of strategic phenomena; the influence of geography; the value of historical experience; the power of national culture to help shape expectations, beliefs, and behavior; and the consequences of technological change for statecraft and strategy) are essential for the proper identification and implementation of the "means-end nexus." He argues strongly that strategy applies equally to peace as to war and that winning in peace may well preclude the need for war.

This effort is far superior to the author's earlier attempts to show the importance of thinking strategically. I strongly recommend it to students of the subject and to military leaders who are involved with national strategy and security policies.

GEORGE C. MARSHALL: STATESMAN, 1945-1959. By Forrest C. Pogue (Viking, 1987. 603 Pages. \$29.95). Reviewed by Doctor Charles E. White, 21st TAACOM Command Historian.

George Marshall (1880-1959) was a totally incorruptible leader with a deep intellect, a crisp capacity for making decisions, and a selfless devotion to duty. Like Marshall himself, this book is great biography. It is the fourth and final volume of Forrest Pogue's masterful study of Marshall, and he presents a detailed picture of the brilliantly effective soldier turned master statesman.

The book is aptly sub-titled. Pogue takes the wartime Army chief of staff through his postwar career as special envoy to China, Secretary of State, and finally Secretary of Defense. These were the years that witnessed the reconstruction of Europe, the triumph of communism in China, the beginning of the cold war, the birth of NATO, the creation of Israel, and the Korean War. Marshall was a central figure in all of these events, and it is Pogue's belief that Marshall's qualities of leadership and integrity are today in short supply.

Marshall soon discovered that winning the peace was much more complex than conducting the war. The Chinese communists called him Chiang Kai-shek's stooge as he sincerely tried to mediate an end to the Chinese civil war. Later, Senator Joseph McCarthy called him Mao Tse-tung's stooge. Congress demanded that he get tough with the Russians, but appropriated funds for barely two divisions.

Even Eisenhower deserted his mentor when it appeared that supporting Marshall would impair his own relationship with McCarthy. Perhaps the greatest irony of Marshall's postwar service came when he was called forward to receive the Nobel Peace Prize and several demonstrators shouted, "Murderer! Murderer!"

Through it all, Marshall never gave up his hopes and dreams for a peaceful, better world. Although he was not perfect, George C. Marshall remained imperturbable to the end.

LIGHT FORCES AND THE FUTURE OF U.S. MILITARY STRATEGY. By Michael J. Mazarr (Brassey's (US), 1990. An AUSA Institute of Land Warfare Book. 180 Pages. \$32.00). Reviewed by Colonel James B. Motley, United States Army Retired.

This is an informative and well-researched book. It will certainly draw mixed reviews. The author, who is with the Center for Strategic and International Studies in Washington, examines the U.S. Army's future "through the prism of the most important issue it faces: the balance of light, heavy and middleweight units in its force structure." He contends that a middleweight force of light mechanized and light armored units would be easier to deploy than today's heavy forces and would have more firepower and mobility than today's light infantry units.

He believes that "neither a counter-insurgency (CI) war nor a European conflict is likely" and that "certain forms of conflict between CI and major war . . . will pose the key challenges to U.S. interests, and hence U.S. Army planning into the twenty-first century."

Operations DESERT SHIELD/STORM were a mixed blessing for this book, which appeared before either got under way. He did not think it likely that the U.S. would be committed to the Gulf "or other mid-intensity conflicts." (In all fairness to him, his conclusion was based on a Soviet incursion into the Gulf region, not the irrational act of Saddam Hussein.)

On the other hand, he is correct to state that "the lack of a significant U.S. strategic lift capability remains a primary barrier to any U.S. rapid deployments," and that our present light units, such as the 82d Airborne Division, are too light to stand alone against any significant opposing heavy units.

Assuming the existing trends remain valid, the author is also correct in

recognizing two key points: One, the future combat environment the Army will confront will be one much more suited to light rather than heavy forces; and, two, continued emphasis on heavy units will consign the Army to "virtual irrelevance" during the 1990s and beyond.

I strongly recommend this book to the career military man and to the serious student of U.S. national security policies. It gives insights into the direction the Army must move if it is to retain its role as the primary landpower arm of our nations' armed forces.

RECENT AND RECOMMENDED UNITED STATES MARINE CORPS RIFLE AND PISTOL MARKSMANSHIP, 1935. Originally published by the United States Marine Corps, 1936. Lancer Militaria. 104 Pages. \$11.95, Softbound.

IN THE CAMERA'S EYE: NEWS COVERAGE OF TERRORIST EVENTS. By Yonah Alexander and Robert G. Picard. Brassey's (U.S.), 1991. 156 Pages. \$19.95.

MUD SOLDIERS: LIFE INSIDE THE NEW AMERICAN ARMY. By George C. Wilson. First published in hard cover in 1989. Collier Books. Macmillan, 1991. 276 Pages. \$9.95, Softbound.

BUSINESS PARTNERS: THE BEST PISTOL/AMMUNITION COMBINATIONS FOR PERSONAL DEFENSE. By Peter Alan Kasler. Paladin Press, 1991. 187 Pages. \$22.95.

RADIO EQUIPMENT OF THE THIRD REICH, 1933-1945. By Charles J. Barger. Paladin Press, 1991. 106 Pages. \$25.00, Softbound.

FIRST TO FIGHT: AN INSIDE VIEW OF THE U.S. MARINE CORPS. By Victor H. Krulak. First published in hard cover in 1984. Pocket Books, 1991. 292 Pages. \$4.95.

UNIFORMS OF THE AMERICAN REVOLUTION. By John Mollo. Originally published in hard cover in 1975. Sterling, 1991. 232 Pages. \$9.95, Softbound.

THE WOMEN'S ARMY CORPS, 1945-1978. By Bettie J. Morden. Army Historical Series. Center of Military History, U.S. Army, 1990. CMH Pub 30-14. USGPO S/N 008-029-00201-9. 543 Pages. \$30.00.

THE DICTIONARY OF MODERN WAR: A GUIDE TO THE IDEAS, INSTITUTIONS AND WEAPONS OF MODERN MILITARY POWER. By Edward Luttwak and Stuart L. Koehl. HarperCollins, 1991. 680 Pages. \$45.00.

RECURRING LOGISTICAL PROBLEMS AS I HAVE OBSERVED THEM. By Carter B. Magruder. Center of Military History, U.S. Army, 1991 CMH Pub 70-39. USGPO S/N 008-029-00209-4. 134 Pages. \$7.00, Softbound.

CASE STUDIES IN THE DEVELOPMENT OF CLOSE AIR SUPPORT. Edited by Benjamin Franklin Cooling. Special Studies. Office of Air Force History, USGPO S/N 008-070-00635-9. 606 Pages. \$30.00.

THE COLD WAR: FIFTY YEARS OF CONFLICT. By William G. Hyland. Originally published in 1990 as *The Cold War Is Over*. Times Books. Random House, 1991. 222 Pages. \$12.00, Softbound.

From the Editor

As I assume my duties as editor of INFANTRY, I am impressed by both the quality of the magazine and the participation of our readers in the combined arms community and throughout the Army. INFANTRY has truly become what General Donn Starry envisioned as a "medium for professional commentary, debate, and communication about the tactics, techniques, and operational art of our profession." It will continue to serve this purpose and will also provide the book reviews, letters, branch career notes, and infantry news items we have come to expect. Lieutenant Colonel (Retired) Al Garland has left a robust, relevant branch journal, and there is no immediate need for a change of direction.

A professional in any field advances through the study of his vocation; this includes not only reading professional literature but also actively participating by writing, challenging, and suggesting better ways to do the job. I encourage you to continue subscribing, to tell others about INFANTRY, and—most important—to share your experience and skills by submitting articles to be considered for publication.

I look forward to a challenging and professionally rewarding association with infantrymen around the world.

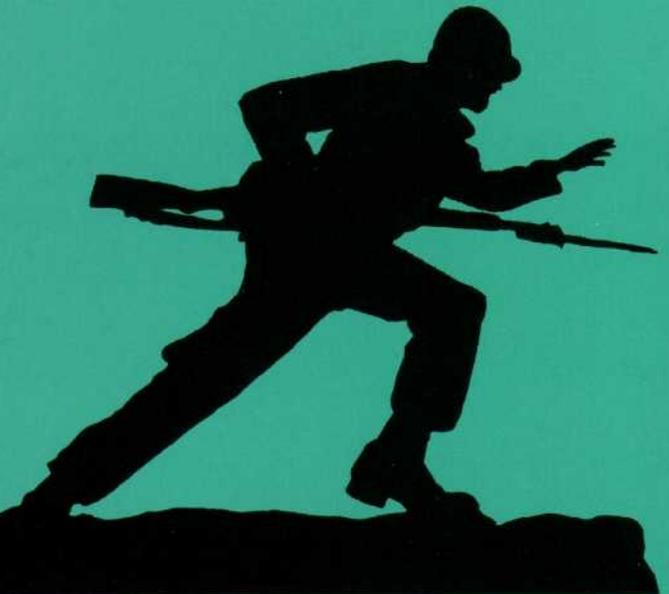
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