

Infantry

September-October 1996



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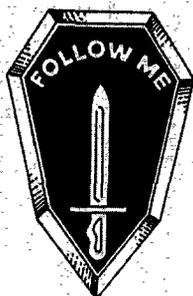
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COVER: During a 1969 combat operation in the Mekong Delta south of Dong Tam, Republic of Vietnam, soldiers of the 9th Infantry Division's 2d Battalion, 39th Infantry, carry a wounded buddy to a pickup zone for helicopter evacuation. This issue's cover is adapted from a photograph taken by SP5 Paul Halverson.

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Commandant's NOTE

MAJOR GENERAL CARL F. ERNST Chief of Infantry

JAVELIN—THE KNOCKOUT PUNCH

In my last Commandant's Note, I focused on the close Infantry fight, and the importance of developing the training, tactical, and materiel systems to ensure an early, decisive victory over an adversary. In this issue's Note, I want to discuss one of those systems—the Javelin antitank missile—and the advantages it offers the U.S. Infantryman.

Javelin is the world's first fire-and-forget antitank missile. It is man-portable, it can kill a target at two thousand meters plus—twice the range of the Dragon missile—and its fire-and-forget capability permits the gunner to seek cover or change his position as soon as he has fired at his target. This not only gives him far greater survivability than with conventional wire-guided missiles, but also broadens his tactical flexibility. The low-smoke launch motor of the Javelin further reduces the firing signature and track of the missile. This makes it difficult for an enemy to identify either the firer's location or the track of an incoming Javelin.

Through its ability to destroy armor and other hard targets at long range, Javelin will also support the close fight by enabling Infantrymen to engage and destroy enemy vehicles before they can effectively bring their main guns and automatic cannon to bear on our troops. This stand-off advantage will apply to the urban battle as well, since the soft-launch design of Javelin allows it to be fired from within buildings. Javelins thus emplaced along the periphery of a built-up area can isolate the city by effectively engaging approaching tanks and armored personnel carriers at long range, before they can support or reinforce other enemy in the city.

The Javelin gunner can select two attack modes, each of which has its own characteristic flight path or "profile" for engaging the target. In the top-attack mode, the missile plunges down from above to impact on the top of

its target. Since armored vehicles have less protective armor on top, this mode greatly increases the kill probability and is the primary attack mode. In the alternate—direct-attack—mode, a missile impacts and detonates while traveling generally horizontally, against the side of the target. This mode allows the gunner to engage targets under overhead cover or under forest canopy.

Whichever mode the gunner selects, the tandem five-inch warhead can defeat explosive reactive armor and other types of enhanced armor protection, and for this reason Javelin is considered a one-shot, one-kill weapon. To ensure the lethality of the system, target acquisition is accomplished with the Javelin's command launch unit (CLU), with its superior day/night second-generation forward looking infrared (FLIR) surveillance and detection capability, and by the imaging infrared seeker in the warhead.

Javelin is clearly the best man-portable tank killer we have fielded; it can acquire and engage targets day or night with its integral sight, while the Dragon gunner must remove the day sight and replace it with the night sight for night engagements. Throughout its development cycle, Javelin has undergone extensive technical and operational testing to ensure that the Army is fielding the most effective, reliable antitank weapon system money can buy. Javelin has already been fielded to the 75th Ranger Regiment, and fielding to the 82d Airborne Division will begin in April 1997.

The Soldier's load is a factor in the development of any weapon, and Javelin is no exception. At 49.5 pounds with all of its accessories, Javelin is heavier than initially envisioned, but when you consider that the Dragon with its day and night sights weighs over 73 pounds, that Javelin is a fire-and-forget weapon with over twice the range, and the size of Javelin's tandem warhead, Javelin is well

worth the weight. During operational testing, each Soldier and Marine was asked to carry a complete Javelin in addition to his basic Soldier load and complete a ten-kilometer road march. The results showed no significant differences between the movement rates of Soldiers carrying Javelins and those with Dragons. When the Soldiers and Marines were asked which weapon they would prefer, their choice was almost unanimously Javelin. This is not surprising, considering the higher kill probability of Javelin.

It is not enough, however, to have the best antitank system on the battlefield; we must train leaders and Soldiers to fully exploit its capabilities. For example, Javelin's increased range will allow for greater dispersion, laterally and in depth, while placing effective fires into the same engagement area. This means that Javelins placed 500 to 1,000 meters behind other Javelin teams can still bring the enemy under effective fire, leaving the forward teams free to displace. The Infantry School's Combined Arms and Tactics Directorate is working on a White Paper that will examine tactical employment implications of the Javelin.

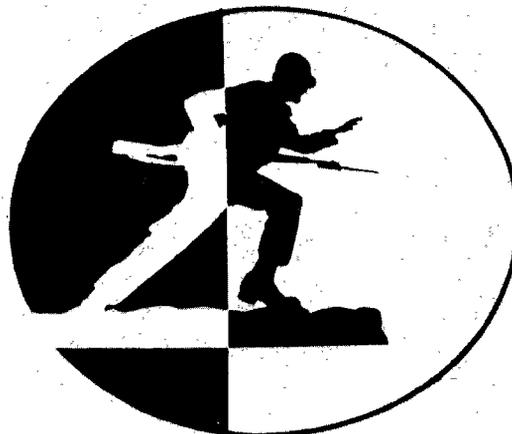
The fact that Javelin has fire-and-forget technology means that all of the gunner skills and tasks are accomplished prior to the launch of the missile. The gunner no longer has to acquire and retain the high maintenance training tasks of tracking a target until a fired missile impacts on target. Javelin training devices have been developed concurrently with the weapon system to ensure that the gunner can practice every skill necessary to launch a missile, with a high probability of destroying his target, as many times as the training schedule permits.

The soft launch of Javelin seems to have been the biggest eye-opener for gunners firing it: Those who have previously fired Dragons are surprised at the lesser launch effect of Javelin. Additionally, the tremendous lethality

of the Javelin missile ensures one-shot kills, something that is less likely with the smaller, shorter range Dragon. And don't forget that a Dragon gunner engaging at maximum range may have to sit in his firing position for up to 20 seconds, holding the sight unit crosshairs on target until impact.

Other training concerns such as weapon employment criteria, rules of engagement, resupply, and fratricide apply to Javelin as they do to all weapon systems. Since Javelin is a one-shot one-kill weapon with a highly accurate seeker, we must continue to develop a reliable means of thermal identification—and make certain that gunners are thoroughly trained in its operation—if we are to ensure that potential targets are properly identified and that only the intended targets are engaged. Eventually, the Javelin Basic Skills Trainer will include an infrared training module. In the meantime, leaders will have to rely upon vehicle identification, improved situational awareness—down to the Javelin gunner himself—and direct-fire weapons control techniques to maintain this vital aspect of force protection. In the Javelin, the U.S. Infantryman now has at his disposal a man-portable antitank missile system that offers unsurpassed accuracy, reliability, lethality, and survivability. Soldier confidence in Javelin is steadily mounting as fielding continues and more and more gunners train with and use the system.

Throughout history, our nation has successfully fulfilled her role as leader of the free world because she had the teeth and the will to back up her diplomatic initiatives and those of her allies. Those bent on testing our resolve quickly found themselves faced with staggering losses in men and materiel, but some potential aggressors never stop trying. With Javelin, today's Infantryman will still be able to deploy rapidly, deliver the knockout punch against the best armor the enemy can field, and dominate the battlefield. That is the challenge, that is our mission, and that is what we are going to do.



INFANTRY LETTERS



WEAPONS FOR THE LIGHT DIVISION TOW COMPANY

In "Let's Reorganize the Light Infantry Division" (INFANTRY, May-June 1996, pages 16-19), Lieutenant Colonel Martin Stanton's proposal to reequip the TOW company's HMMWVs with a mix of .50 caliber and 40mm grenade machineguns makes a lot of sense for low-intensity conflict (LIC). This configuration worked well for 10th Mountain Division soldiers in the relief of Task Force Ranger in Somalia (see "Mogadishu, October 1993: Personal Account of a Rifle Company XO," INFANTRY, September-October 1994) and should prove equally valuable in future operations of a similar nature.

It may be worthwhile to take this concept a step further, however, by adding to this mix of weapons the M3 Ranger antiarmor, antipersonnel weapon system (RAAWS). An 84mm recoilless rifle, the RAAWS can give light forces the "shock action" firepower used so successfully in past wars to destroy bunkers, machinegun and mortar emplacements, and other fortified positions that were resistant to rifle and machinegun fire. A good example is found in "One Soldier—One Recoilless Rifle" (INFANTRY, May-June 1996, page 27), which relates how PFC Jose Alva used his 57mm recoilless rifle to destroy seven enemy machinegun emplacements that had been preventing the advance of friendly units in the 11 April 1951 attack on the Hwachon Dam.

At 20 pounds, the M3 RAAWS is considerably lighter than the new M240B machinegun, and easily man-portable. Instead of giving an antiarmor section 7.62mm machineguns for LIC (as Colonel Stanton proposes), swapping their Dragon/Javelin systems for the 84mm would give the unit commander greater tactical flexibility. While a 7.62mm machinegun can deliver fire equal to that

of enemy small arms, the RAAWS can provide an *overmatch* response through high-explosive and high-explosive dual-purpose ammunition. An M3-equipped antiarmor section could deliver supporting fires against enemy infantry; it could knock out any stray tank or light armored vehicle—something the section could not do armed only with 7.62mm machineguns.

The most commonly voiced objection to recoilless rifles centers on the idea that the firing signature would cause the gun crew to receive massive return fire. While the criticism seems as though it ought to be valid, I have yet to discover any documentation to support the theory. Indeed, the available testimony seems to indicate that backblast is not nearly the problem critics would have us believe, as evidenced by the following excerpts from "75mm Rifle Platoon in Korea," by Captain Phil R. Garn, *Infantry School Quarterly*, January 1952:

In most outfits during the early summer of 1950 there were many who shook their heads when the subject of recoilless rifles came up. Could they ever be employed successfully? They doubted it. Would the backblast, characteristic of the weapon, cause a lot of trouble—murderous counterfire? They were sure it would.

Used properly in combat, [recoilless rifles] proved themselves time after time. It didn't take the rifle companies long to learn the value of this accurate hard-hitting weapon. [A recoilless rifle] is one of the best supporting weapons, both in

the attack and defense, that the Infantry has. The backblast threat was soon forgotten as we developed our methods of employment.

With the demise of the XM8 armored gun system, and the pending retirement of the M551A1 Sheridan, airborne infantry units will soon be without a parachute-deliverable, direct-fire support weapon. The RAAWS (especially if equipped with a laser-ranging sight) mounted on an M1109 or M1114 up-armored HMMWV, could give airborne and light infantry a mobile shock weapon at relatively low cost. Can we afford not to field it?

Finally, a request: If any INFANTRY readers can provide first-hand accounts or documented stories of recoilless rifle use in combat—especially regarding the backblast or counterfire issue—I would appreciate hearing from you.

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BROTHERS-IN-ARMS

I am writing to offer a Canadian perspective on two articles that appeared in the May-June 1996 issue of INFANTRY. (I am Deputy Commanding Officer, First Battalion, Princess Patricia's Canadian Light Infantry, or 1 PPCLI, a position equivalent to the U.S. Army battalion executive officer.)

A number of INFANTRY articles have been used as elements of our ongoing officer warfare study program. It is extremely important for us, as officers in an army that has been at peace since 1953, to keep in contact with the flow of professional thought in a warfighting army such as yours.

As you may be aware, the Canadian Army has participated in every United Nations peacekeeping mission since the

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first one in Suez. The overwhelming majority of these missions have involved Infantry soldiers in some capacity. While each mission has been different in various ways, we in the Infantry have been able to deduce certain basic principles to be applied in preparing for and conducting such operations.

The two articles in question are "Establishing a Zone of Separation," by Captain Fred W. Johnson (pages 31-38), and "Situational Training Exercises in Stability and Support Operations," by Lieutenant John Brennan (pages 39-41). Both are excellent articles whose findings and recommendations almost exactly match our own experiences.

The first article is of particular interest to our battalion as we did many rotations in Cyprus where a longstanding UN zone of separation (ZOS) existed between the forces of the Republic of Cyprus and the "Turkish Republic of North Cyprus." Canada maintained an infantry battalion in Cyprus from 1964 to 1994, rotating on a six-month basis. Our battalion did at least 13 tours there, with many senior NCOs accumulating three or four tours to their credit.

As well, 1 PPCLI (as part of UNPROFOR Croatia Command) established the first UN ZOS to be formed in 1994 in Croatia, between the forces of the Republic of Croatia and the rebel forces of the self-styled "Serb Republic of the Krajina."

Our experiences in both cases were similar to those Captain Johnson described, although we were required to do the same task with only a tiny fraction of the engineers, aviation, and presence of force your battalions were able to apply in Bosnia.

Like your troops in Bosnia, in Croatia we found that our biggest threat was mines—on our six-month tour, mines cost us one dead and several seriously injured. Inability to clear certain areas reduced our counter-patrolling and ZOS surveillance capability. Our clearing procedures when working with the opposing force mine clearance parties were almost identical to those described by Cap-

tain Johnson, with the exception of the mineroller that we were unable to obtain from its base in Canada.

We were also plagued by inaccurate or nonexistent opposing force mine records, as well as by their reluctance to participate. Our advice would definitely be to take any information provided by local opposing forces with a very big "grain of salt."

Lieutenant Brennan's article reflects very closely our own training practices in preparation for any peace operation, and I am certain that it will be just as successful as our own methods, if not more so. However, I would like to mention at this point some of the principles that the Canadian Infantry regards as vitally important in preparing battalions for such operations:

Train for War. Peacekeeping is just another operation on the scale of the use of force. It is best carried out by the well-trained, disciplined and cohesive soldiers who are the products of a solid combat training program. Depending upon the nature of the mission and the stability of the situation, you may need to use force or the clear threat of it to enforce your mandate. From a purely practical point of view, if the ceasefire falls apart, you may very well have to fight your way out, or fight to hold your position. Opposing forces can quickly recognize professional troops trained for war, as opposed to the less professional forces that far too many UN nations send on such missions.

Build Teams. The best unit is the one in which soldiers, NCOs, and officers know each other well and have worked together for a long time. While this goal is becoming increasingly difficult for us to achieve in our under-manned battalions, it is something you must strive for. Avoid the "build from scratch" mentality: its few benefits will be greatly outweighed by a serious lack of cohesion in teams and sub-units.

Develop Junior Leaders. In peace operations, much depends on the individual soldier, the NCO, and the junior officer. These individuals must be taught, encouraged, and permitted to use their

initiative and be self-reliant. A section commander or platoon commander may find himself making life-or-death decisions with international implications, many kilometers from company headquarters. He must be able to think and act *now*, secure in the knowledge that his commander supports him. In effect, this is the spirit of maneuver warfare in action, which reinforces the need to train for war.

In closing, I believe that Infantry battalions of the Canadian Army may have much to offer their brothers in arms of the U.S. Army as you prepare for operations other than war. I strongly recommend that all U.S. Infantrymen establish informal channels of communication with a Canadian infantry battalion. You will find we are very willing to help, and the experience will be mutually beneficial.

DAVID J. BANKS
MAJ, Canadian Forces
Calgary, Alberta

RESEARCHING BOOK ON 1st SQUADRON, 4th CAVALRY

I am interested in locating men who served with the 1st Squadron, 4th Cavalry, during the Vietnam War. I am researching a book about the squadron's activities in Vietnam. My projected book will deal with the squadron's operations in South Vietnam between 1965 and 1970. It will focus on the memories and experiences of those who served with the squadron during its entire time in Vietnam. Additionally, I would like to hear from veterans who served between 1970 and 1973 with C Troop, 16th Cavalry, which was formed from the assets of D Troop, 1st Squadron, 4th Cavalry, when the squadron left Vietnam.

Veterans who served with either of these units may write to me at P.O. Box 1634, Manhattan, KS 66505-1634. I will provide them with information regarding my book and the association.

WILLIAM VAN HORN

INFANTRY NEWS



INFANTRY SCHOOL developers are constructing the first Infantry School training course using computer-based instruction (CBI) as the primary delivery tool. Designed to allow learning at locations away from the "schoolhouse" for members of the Active and Reserve Components, CBI is also aimed at making traditional military instruction more interesting and more interactive.

The first beneficiary of this new approach is the Tactics Certification Course (TCC), which "trains the trainers" in the delivery of tactical instruction. While the TCC plays a crucial part in the educational development of the combat arms community, attending the course is a challenge for Army National Guardsmen and Army Reservists with full-time civilian occupations, as well as for Active Army personnel deployed overseas or on real-world missions. Distance learning technology enables the Infantry School's Multimedia Training Development Department to take the schoolhouse to the student.

The most important breakthroughs may be in the pace of learning and in the CBI orientation on outcomes in training. Because conventional classroom learning is often paced to the slowest learner, more proficient students can become bored or lose interest in the material. With CBI, each student learns at his own pace, and the level of interest and enthusiasm is higher.

Added attractions of CBI in teaching the TCC include its interactivity and its orientation on context. Students are greeted by an interactive program of instruction that lets them work their way through the course, assisted along the way by contextually relevant examples, discussions of underlying concepts, and a context-based help glossary.

A less obvious benefit of CBI is its focus on training results, as opposed to a specified level of expertise a student must

bring to the course. Some students simply take longer to complete the course of instruction.

While far from complete, the use of CBI in reformatting the TCC clearly heralds future trends in training for the Infantry School and the military community. Planning is now under way for further forays into the world of computer-based training delivery, using the TCC as a testbed for other, more extensive infantry training experiences.

For more information on the CBI-TCC initiative, call MAJ Henderson, Multimedia Development Department, U.S. Army Infantry School, at (706) 545-6105, or DSN 835-6105.

THE U.S. ARMY OFFICER Candidate Alumni Association, Inc., is planning a membership meeting and reunion 3-5 April 1997. Events being planned at Fort Benning are those frequently requested by members and available at that time.

Included in the schedule will be a visit with officer candidates, an Association business meeting, a briefing on the current status of OCS, a visit to Wigle Hall, site of the Fort Benning OCS Hall of Fame, and Nett Hall, which is currently home to the OCS battalion's headquarters and headquarters company, a classroom, and the OCS Store. Also on the agenda are a banquet, a reception, a memorial service, and the recognition of graduation anniversaries. One class will celebrate its 50th anniversary and another its 40th at this time.

INFANTRY HOTLINE

To get answers to infantry-related questions or to pass on information of an immediate nature, call DSN 835-7693 or commercial (706) 545-7693.

For lengthy questions or comments, send in writing to Commandant, U.S. Army Infantry School, ATTN: ATSH-ES, Fort Benning, GA 31905.

Wigle Hall was recently rededicated after renovations. The names of those honored are now completely indexed so they can quickly be found in the record books, the photograph display, and the computer system that now stores the records, including the inductees' photos and biographical sketches. The National Infantry Museum staff has also prepared several exhibits about OCS graduates and placed them in Wigle Hall to enhance the experience.

If you would like more information about this event, send your request to Secretary, The U.S. Army Officer Candidate Alumni Association, Inc., P.O. Box 52192, Fort Benning, GA 31995-2192. You will be mailed information about membership in the association and its activities. You will also be placed on the list to receive a registration packet when it is available. If your class is planning a reunion in 1997 and would like to combine it with this meeting, let us know early so we can accommodate you.

Association membership dues are \$10.00 per year. Graduates of any Army OCS program are eligible.

A NEW MEDICAL IMAGING device is being tested in Bosnia. MUSTPAC-1 (short for medical ultrasound, three-dimensional and portable with advanced communications) allows a field medic or physician to do three-dimensional scans of an ill or injured soldier and have the scans interpreted by experts anywhere in the world.

Physicians are using Bosnia field operations to evaluate how the system's many aspects, including three-dimensional visualization, can make a difference in a remote environment.

MUSTPAC weighs about 85 pounds and fits in a backpack. It operates on standard 120-volt AC power and can be configured to operate on batteries.

PROFESSIONAL FORUM



Zeroing Techniques With Night Vision Devices

Dr. Jean L. Dyer
Dr. Seward Smith
Nancy R. McClure

Aiming points clearly improve a soldier's ability to engage targets at night by providing a point-and-shoot capability. Used with night vision goggles, aiming lights—the AN/PAQ-4A and AN/PAQ-4B—help soldiers see and hit targets at long ranges. A major problem with aiming lights, however, is zeroing them to the rifle. As part of the Army Research Institute's Nightfighter Program conducted by the Fort Benning Infantry Forces Research Unit, procedures have been identified that will reduce zeroing problems with the M16A2 rifle.

Why are definitive center-of-mass aim points hard to achieve during live-fire zeroing? Basically, the firer cannot see the 25-meter target clearly at night when using goggles and an aiming light. To most firers, the bloom of the aiming light through the goggles masks all of the silhouette in the target's center and much of the horizontal and vertical zero lines. In addition, parts of the target that can be seen are not clear.

Why is the target so hard to see from the firing point? A point of light blooms when viewed through an image intensification device such as night vision goggles. This blooming effect is particularly large when the light source is close or very bright, or both. The aiming light is zeroed at close range, against a 25-

meter target. When the aiming light strikes this target, light is reflected in the firer's goggles and blooms, making it difficult to aim consistently at the desired point. Consequently, zero adjustments are crude at best. Finally, the firer's visual acuity with night vision goggles is not 20/20. The best visual acuity that can be obtained with third-generation AN/

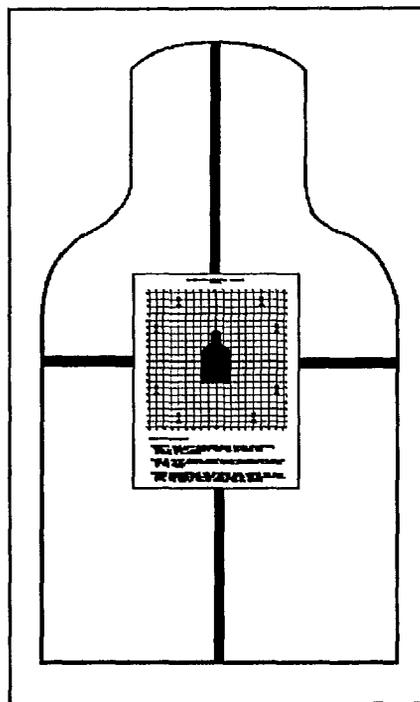


Figure 1. Target setup for zeroing AN/PAQ-4s at 25 meters.

PVS-7 goggles is 20/40; under many night conditions, it is worse.

The zeroing procedures recommended here have helped firers overcome the limitations and problems just cited. They include additional steps in preparing to fire and slight variations in the firing procedures.

The steps in preparing for zeroing are the following, in sequence:

Modify the 25-meter zero target to help the firer determine center mass of the target and maintain a consistent aim point when zeroing. Use the tan side of a cardboard E-silhouette and stripe the full length and width of the cardboard with 3/4-inch black electrical tape. These stripes should divide the E-silhouette in half, vertically and horizontally. Center and staple the 25-meter zero target at the intersection of these black stripes (Figure 1).

Mark the correct bullet impact point on the 25-meter zero target. When zeroing an aiming light, the firer points the aiming light at the center mass of the 25-meter zero target silhouette. Bullets must then hit the target at a pre-determined point. Aiming light adjustments are made until the shot group is centered over this point. The point differs for the AN/PAQ-4A and the AN/PAQ-4B, as they have different offsets from the rifle boreline and

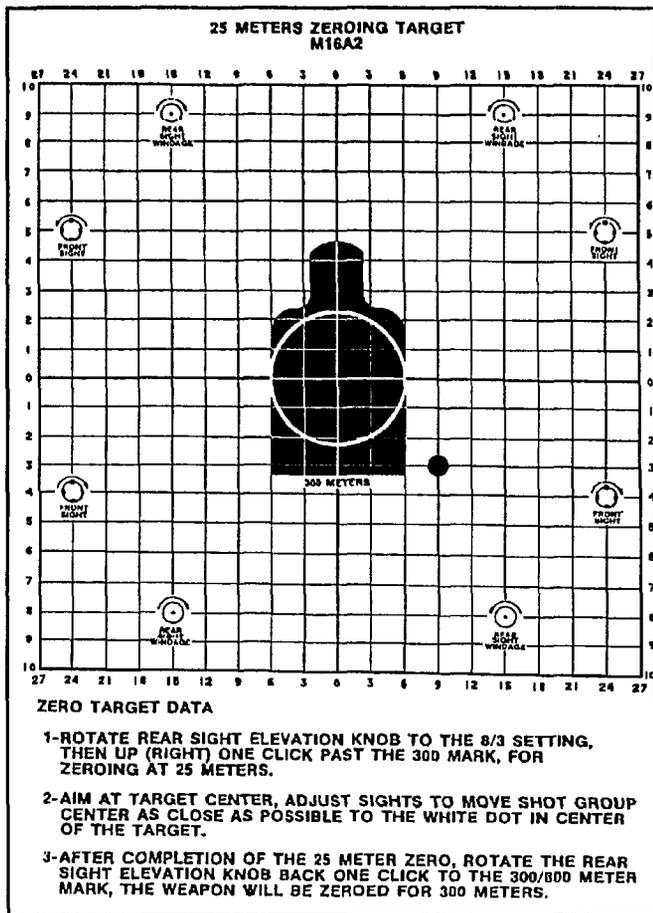


Figure 2. Live-fire zero target for the AN/PAQ-4A. (Bullet impact point is at the intersection of line 9 right and line 3 down; 3.1 centimeters right of target center and 2.8 centimeters below target center.)

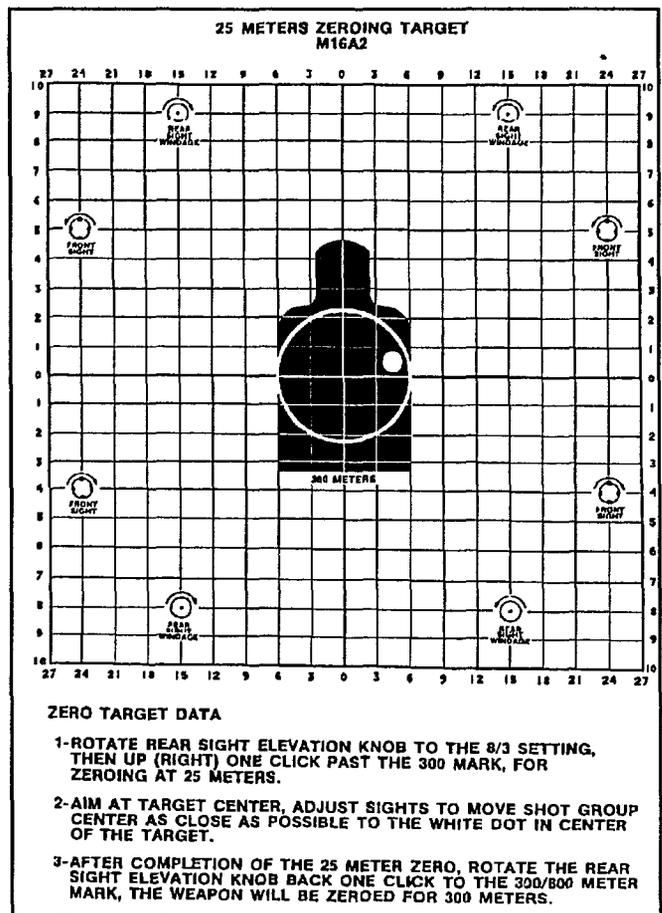


Figure 3. Live-fire zero target for the AN/PAQ-4B. (Bullet impact point is the "box" bracketed by lines 3 and 6 right and lines 0 and 1 up; 1.55 centimeters right of center and 0.45 centimeters above target center.)

are zeroed for different distances. (The AN/PAQ-4A is zeroed for 100 meters, and the AN/PAQ-4B is zeroed for 250 meters.) Mark the bullet impact point on the zero target as indicated in Figures 2 and 3 to ensure that bullets are adjusted to the right location for each aiming light.

Construct a ruler for determining the number of aiming light click adjustments for windage and elevation. The vertical and horizontal lines on the M16A2 zero target should not be used. They do not correspond exactly to the click size for either aiming light, and they do not form squares on the target. Therefore, these lines cannot be used to determine the number of clicks to adjust the aiming light up or down, right or left. Laminated rulers that withstand the damp night air should be constructed to reduce errors in the windage and elevation adjustments and to expedite the zeroing process. The rulers for each aiming light

are illustrated in Figure 4, but are not to scale. A 12-inch ruler works well for determining the distance between the correct bullet impact point and center mass of the shot groups. Label the rulers as shown to make sure they are used appropriately. During zeroing, place a ruler at each 25-meter zero target location.

Make a training aid showing which direction to turn the aiming light knobs to adjust bullets on the bullet impact point. Experience has shown that the markings on the aiming light knobs can be misinterpreted. Bullets can suddenly go off the zero target, off the E-silhouette, or in the wrong direction because the aiming light was not adjusted correctly. A training aid such as that shown in Figure 5 corrects this problem.

For the AN/PAQ-4B, it is important to stress that this aid, as illustrated, is appropriate only when used with the M16A2 rifle. It does not apply to weapon

systems on which this aiming light is mounted in a different position relative to the bore of the weapon.

Make a transparency showing the appropriate shot-group size. This step is needed for two reasons. First, the four-centimeter circle marked on the 25-meter target is not centered over the bullet impact point for either aiming light. Second, firers cannot be as precise at night as during the day. Our research showed that the four-centimeter shot group is an unrealistic standard for night firing, given the reduced visual acuity at night through goggles and the difficulties in aiming consistently. A 5.5-centimeter criterion is better. To help trainers and firers apply this criterion, a laminated see-through or transparent training aid marked with a black 5.5-centimeter circle should be used.

The actual zeroing procedures are as follows:

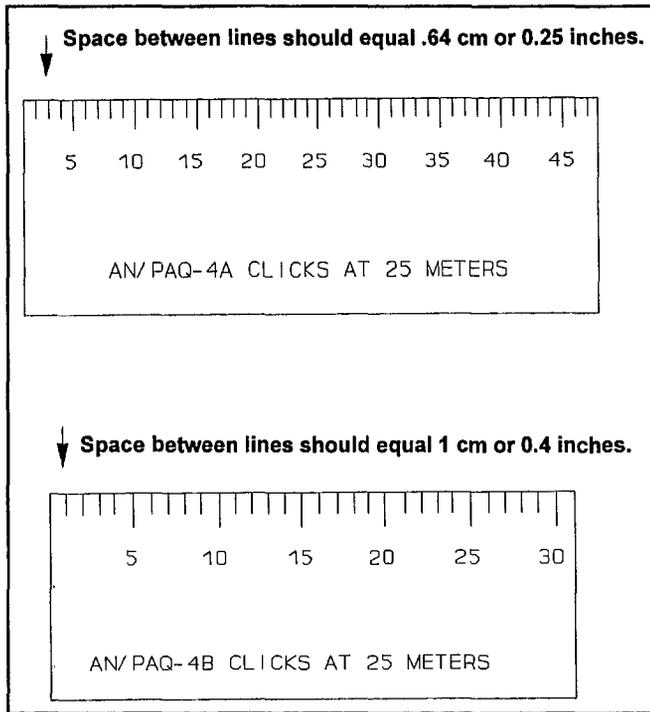


Figure 4. AN/PAQ-4A and AN/PAQ-4B aiming light rulers for the 25-meter zero target. (The rulers are not to scale.)

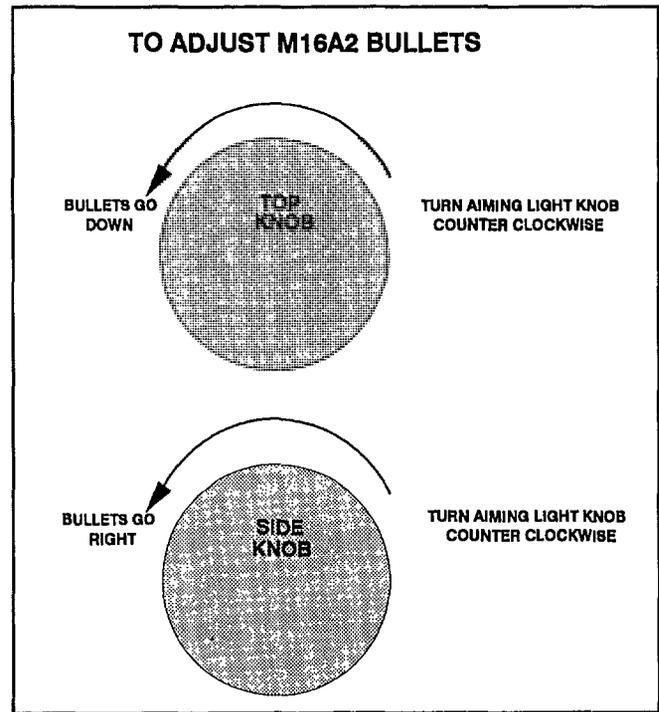


Figure 5. Aiming light knob adjustment guide shows movement of bullets with the M16A2 rifle when aiming light knobs are turned counterclockwise. (Bullets go in the opposite direction when the knobs are turned clockwise.)

Use the standard Army flashlight to light the target. The flashlight helps diffuse the bloom of the aiming light in the goggles and provides a more definitive aim point. Place the flashlight at the firer's position in a supported position such as a V-notched stake. The flashlight can be pointed directly at center mass of the target or slightly below the target, according to the firer's preference. If there is enough ambient light in the night sky, a flashlight may not be needed.

Fire two, three-round shot groups before making any aiming light adjustments. This will give a much better indication of the firer's aim point than a single three-round shot group. This procedure will avoid premature adjustments and "chasing bullets" in the dark. Triangulate and number each shot group. Do not adjust the aiming light unless the firer is shooting consistently and the aim point

can be determined.

Use the aiming light ruler to determine the number of clicks in windage and elevation required to move the strike of the bullet to the desired impact point. Use center mass of the shot group for these measurements. Check the knob adjustment guide to ensure that adjustments are made in the correct direction.

Center the shot-group size transparency (the 5.5-centimeter circle) over the bullet impact point to evaluate each shot group. All bullets should be within the circle and as close to the impact point as possible.

Fire no more than four shot groups for each 25-meter zero target to accurately assess shot groups. The wide dispersion of bullets frequently makes it difficult to mark shot groups distinctly and can result in an incorrect adjustment. Put up a new 25-meter target after this point.

Checklist

The following checklist summarizes the steps that should be taken when zeroing an aiming light. It assumes that all training aids and target modifications have been made.

Prepare for zeroing with aiming lights:

- Zero the M16A2 rifle for 300 meters during daylight hours.
- Use a striped E-silhouette.
- Use a 25-meter zero target marked with the correct bullet impact point.
- Center the 25-meter zero target on the stripes on the E-silhouette.
- Place the aiming light ruler and shot-group size transparency at each 25-meter zero target location.
- Place the aiming light knob adjustment guide at each firer's position.
- Zeroing procedures at night with aiming lights:
 - Be sure the rifle is set properly for zeroing at 25 meters, one click up from the 300-meter setting.
 - Shine a flashlight on the 25-meter zero target from the firer's position, as needed.
 - Fire and mark two, three-round shot groups before making the first aiming light adjustment.
 - Use the aiming light ruler to determine the number of clicks for windage and elevation adjustments.
 - Check the knob adjustment guide to ensure that adjustments are made in the correct direction.
 - Use the shot-group size transparency

Since the live-fire procedures described in this article were developed and tested, the Dismounted Battlespace Battle Lab at Fort Benning has developed a dry-fire boresighting technique that is effective, easy to use, and inexpensive. Soldiers will benefit from knowing both live-fire and dry-fire techniques.

to evaluate size.

- Put up a new 25-meter target after firing four shot groups.

When finished with these steps, move the elevation knob on the M16A2 down one click to ensure that sights are aligned for 300 meters. At this point, the rifle sights are battlesight zeroed for 300 meters; the AN/PAQ-4A is zeroed for 100

meters; the AN/PAQ-4B is zeroed for 250 meters.

These procedures will result in better aim points, better aiming light zeros, and more target hits at range. They will also save time and ammunition during the zeroing process. Fewer errors will be made in adjusting the aiming light. Do not omit steps; each is critical.

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CASEVAC for Light Infantry Units

At a Combat Training Center

CAPTAIN JAMES SISEMORE

The evacuation and treatment of casualties on the battlefield is one of the most frustrating and difficult missions for a light infantry unit during a rotation at a combat training center (CTC). It is also one of the most important.

Each unit that prepares for a rotation understands that it will suffer casualties. Most units try to prepare for casualties by implementing training that incorporates casualty evacuation (CASEVAC) into the scenario. But these units often find during a CTC rotation that they are not prepared to handle the large number of casualties they experience. And leaders do not realize the way these casualties affect the ability to complete a mission, or even continue it.

The techniques and options I cover here will not solve all the problems you encounter, but I believe they will help you prepare for a CTC rotation, or for combat.

Integrate evacuation and available medical treatment assets into your battalion planning sequence. The battalion S-1 and medical platoon leader play an important part in wargaming and should be included in the decision making process. It is during this process that the medical platoon leader can use his

ability to support the mission. By including medical support in the wargaming process and later in developing the synchronization matrix, you can tailor medical assets to support the tactical scheme of maneuver and increase the plan's effectiveness.

Using the course of action decided upon, the medical platoon leader should plan his support on the basis of the main effort. Medical support needs to focus

Medical support needs to focus on the point at which the commander, S-3, and S-2 plan for the main effort to encounter strong enemy resistance.

on the point at which the commander, S-3, and S-2 plan for the main effort to encounter strong enemy resistance.

Tailor the medical support to the mission. There are several ways to plan and conduct medical support during an operation. Depending on the assets available, a single or a dual aid station can be established to support the mission. The benefit of either type varies with the category of mission. The important thing

to remember in developing a plan is to tailor medical coverage to mutually support all company teams in both offensive and defensive operations.

The use of a single aid station may be beneficial in operations where large numbers of casualties are expected in a single operational area. With a single station, the complete assets of the medical platoon are available in one location, its sustainment and resupply are easier; and, since it is often located with the combat trains, it is easier to defend. A single station may also be necessary if medical crewmen have become casualties and you cannot man more than one.

The use of dual or mobile treatment teams can be an advantage in the treatment of casualties in offensive operations. A mobile team can move quickly to the site of the battle and treat the casualties on the objective (once it is secure or the fighting has advanced beyond the initial contact site). This "follow and support" concept assists triage forward, which in turn improves the treatment of casualties at the main aid station.

Most light infantry units, depending on the table of organization and equipment, are authorized a "professional doctor" (an active Army physician dedicated to the

battalion) and a physician's assistant (PA) assigned. The physician seldom deploys on operations short of real combat. With prior coordination, however, observer-controllers at a CTC will often allow a unit to put a senior soldier in MOS 91B in the PA position and to promote the PA to doctor status.

When task organizing the aid station, you can either designate the staff as separate treatment teams (Teams 1 and 2), or designate a main aid station and a forward (mobile) aid station. If you plan to use a mobile station, you can assign the PA to the forward station, the maneuver station. The doctor can remain at the main aid station, the stationary one, normally located near the combat trains. A mobile team (often dismounted with only a triage ruck sack) will not be able to carry as much as a stationary team (normally vehicle supported), but "on-site" treatment can save far more lives.

Either concept adds flexibility to the treatment plan. If your battalion is moving on two separate axes of advance, you can cover both advances by making both treatment teams mobile, thereby giving each element maximum medical coverage forward.

When attacking over a single axis of advance, designating a forward and a main aid station will increase the effectiveness of medical coverage. The for-

The use of dual or mobile treatment teams can be an advantage in the treatment of casualties in offensive operations.

ward station can travel dismounted at the tail of the maneuver element or, if given an adequate defensive force, can maneuver forward by phase line behind the trail combat elements, ready to come forward once the objective is secure. The main aid station can set up with the combat trains and prepare to treat casualties and control ambulance movement to evacuate casualties from the forward aid station.

When evacuating casualties to these two sites, it is important to send to the forward station only those casualties clas-

sified as *Immediate* (need medical assistance within two hours) and *Delay* (need medical assistance within four hours). Those classified as *Minimal* (needing medical assistance within 24 hours) can be evacuated directly to the main aid station. The forward station, in its mobile status, and depending on the number of casualties, should be used only to treat casualties whose survival may depend upon prompt attention.

While the use of dual treatment stations will greatly assist in the medical coverage of the maneuver element, the danger is that the mobile or dual treatment teams are not as well protected from the effects of both direct and indirect enemy fire. Depending on the enemy threat, the danger of losing an aid station may preclude the use of forward or maneuver treatment teams.

Consider defensive operations. When planning medical support for a defensive battle, remember that enemy initiative will decide where the attack will come. The establishment of one or two aid stations in the defense should be based on the size of the area of coverage. Dual treatment stations in the defense offer the advantage of redundancy in case either station is overrun or destroyed in an enemy attack. The use of forward and main aid stations may be favorable in the defense, with the forward station mounted on a vehicle, ready to move to the vicinity of the main enemy attack and offer forward medical treatment. The main aid station can be established out of imminent danger of the attacking forces, ready to receive incoming patients.

Plan for CASEVAC. The key to all successful CASEVAC is to rehearse it at home station under all possible conditions. If you do not already have a standing operating procedure (SOP) that addresses CASEVAC, you must include specific guidance in the operations order.

Once you have developed an SOP for CASEVAC, you must then include it in your training. Briefing the way your platoon, company, or battalion plans to conduct CASEVAC, and then ending an exercise as soon as the objective has been cleared or the enemy attack has been defeated, will set your unit up for failure. Your soldiers need to understand the hard-

ship of carrying a casualty 300 meters to a collection point. Leaders need to experience the handicap that CASEVAC imposes on their ability to reconsolidate and continue the mission. The medics in your unit need to endure the anxiety of treating multiple casualties while the company first sergeant or executive officer is trying to coordinate evacuation for those who need immediate treatment to the battalion aid station, and while the unit is still under indirect fire.

The depth and dispersion of the objective area may create time and distance

Leaders need to experience the handicap that CASEVAC imposes on their ability to reconsolidate and continue the mission.

problems for medical evacuation planning. No one can be sure where casualties will first occur on the battlefield. During the wargaming phase of a mission, a best guess of enemy action and reaction can be developed, and from that estimation, casualty collection points (CCPs) can be planned.

Casualty evacuation exercises must be incorporated into all training events at platoon and company level. The use of a poleless litter is not easy if it has not been taught to the new soldiers in the unit. Platoon leaders and company commanders should continually press to have combat lifesaver courses taught within the battalion. The goal should be to have two lifesaver qualified soldiers in each rifle squad and one in each antiarmor vehicle. Equally important, combat lifesaver bags must be carried and used. The habit of including one soldier with a lifesaver bag on every attack and on every patrol must be trained and enforced.

Locate and mark casualties. Once reconsolidation on the objective has begun, locating casualties can be time-consuming, especially at night or in dense woods. Depending on the size of the objective and the number of casualties, it can take from several minutes to several hours to find every wounded soldier in a training center environment. One tech-

nique that has been used effectively at night is to have an injured soldier, once he knows he has been hit, break out a chemical light and mark his position. In daylight, a visual signaling panel (VS-5 or VS-17) can be used to mark casualties, which will help the casualty collection teams as they sweep the objective.

The use of a CCP in day and night training has to be exercised. Platoon and company medical personnel have to practice their trade as often as possible. These are the soldiers who will save the most lives at a CTC. A senior company medic needs to ensure that each platoon medic and combat lifesaver understands the company SOP for marking casualties for evacuation.

Standardized marking and separation procedures will assist in a rapid evacuation of the time-urgent casualties. An easy way to separate casualties is the "ID-ME" system: I for *Immediate*, D for *Delay*, M for *Minimal*, and E for *Expectant* (those not expected to live long enough for evacuation). Each category of casualty is placed in a cardinal direction from the center of the CCP, with the expectant casualties removed from the view of the others. Any system will work so long as

every member of the company casualty collection team understands his part in it.

The medical platoon leader, in addition to planning for the establishment of the aid station, is also responsible for the movement and coordination of his ambulances. It is important that each ambulance team be provided with maps. Although every ambulance dispatched should have a security element to escort it to the company CCP, this is not always the case. Each medic in an ambulance needs to be prepared to move individually and be proficient at dismounted and mounted navigation.

The reconnaissance of evacuation routes, while usually possible only in defensive operations, will assist in the rapid evacuation of casualties. And a face-to-face coordination between the medical platoon leader and the company first sergeant or executive officer will ensure that the medical platoon knows the company plan, and that company leaders understand the medical platoon's evacuation plan.

The medical platoon leader is also responsible for the coordination of ambulance exchange points. These are designated points, usually on an operational

boundary, where the brigade medical support element is responsible for pushing evacuation assets forward. These points become critical during mass casualty operations, where the number of casualties quickly overloads the abilities of the battalion aid station.

Casualty evacuation and treatment are an important part of sustaining the force. The average number of died-of-wounds casualties at a combat training center is 50 percent. All of these are due to a lack of a timely evacuation or effective triage procedures.

The techniques listed here may help your unit decrease the number of its died-of-wounds casualties. Whatever evacuation and treatment technique your unit uses, it is the rehearsal, conducted to standard, that will achieve the most effective results and save the most lives.

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Information Systems

Let's Go Beyond Computer Literacy

LIEUTENANT COLONEL DONALD J. WELCH, JR.

Computers are everywhere. As we enter a new age—the Information Age—the magnitude of the changes we see will be similar to that of the changes when the Industrial Age replaced the Agricultural Age.

Computers and computer-related technologies are transforming the battlefield, much as the introduction of mechanization remade the battlefield earlier this

century. As we can see from efforts such as Force XXI, there are few officers today who think that computers don't have a place on the modern battlefield. One critical question is, "What does an officer need to know about computers to be successful now and in the next century?" "Computer literacy" is not enough; an officer must understand information systems.

Most officers have learned how to use computers and have become computer literate. Computer literacy means knowing how to use the tools—computers and software. A person who is computer literate can use a computer to help with many different tasks. But to thrive in the next century, our Army will need officers who know more about computer technology than just how to use a spreadsheet

or a word processor. Automated mission planning systems will be part of every unit.

Our administrative and logistics systems already rely on automation. Warfighters need to understand the systems their organizations depend on for success. They need to know the strengths and weaknesses of their units, and this includes their automated systems. They have to make decisions regarding automation from the perspective of understanding, not naivete.

Different categories of people are necessary for units to function in an automated environment—users, people on the automation staff, and unit leaders.

The users are the people who must be computer literate. They should understand their tools and how to apply them to solve the problems they face. To use a mechanization analogy, these are the vehicle drivers.

The people on the automation staff must know both the technical details and how the computers fit into the unit. They should handle all the issues involved with the unit's day-to-day computer operations. They must be computer literate only to the extent needed to help users better exploit the possibilities of the computers. In the mechanization world, these are the mechanics in the motor pool.

The leaders of the unit must be able to understand the big picture. They are the people who understand the computer systems and the way they relate to each other, the parts of the organization, and the mis-

As we can see from efforts such as Force XXI, there are few officers today who think that computers don't have a place on the modern battlefield.

sion. These people do not need to be computer literate, although it may help. (The commander of a mechanized unit need not be an accomplished driver, so long as he understands what it takes to drive and how to train and employ the drivers.)

As an example, a colonel I worked for lamented that it was taking too long for us to deploy Windows on our local area

network. He questioned our efficiency by comparing our job with his experience upgrading the operating system on his home computer. He had no idea of the difference between running Windows on a stand-alone personal computer and running it on a large network with a diverse user community. Fortunately, though, he did not force us to meet his schedule; if he had, our upgrade to Windows would have been disastrous.

In this case, the leader did not need to know the details, but he did need to understand when someone explained the advantages and disadvantages of changing a system, the resources required, and the risks involved in making the change. This is an example of a computer literate officer who needed a better understanding of the way computers fit into his organization.

Can an officer function in today's Army without understanding mechanization? Even in a light unit, he has to know about fuel, maintenance, and repair parts; how best to use vehicles; how to combine vehicles with other assets; and the strengths and weaknesses of those vehicles. Much the same is true with computers. Computers are in every unit in the Army. Embedded systems are part of almost every new piece of equipment. We use computers and computer technology in garrison, and more and more systems are going with us to the field every day. Understanding automation today is becoming as critical as understanding mechanization.

A captain I worked with made a decision to move his sensitive database to a different computer without consulting any of the automation staff. He was computer literate, and he had even worked with databases on his own, and he thought he was making his database more secure by putting it on a stand-alone computer. Unfortunately, he did not really understand the trade-offs. Once I explained them to him, he realized that he had needlessly exposed his database and moved it back.

Should a captain know enough about information systems to make a decision like this without consulting the automation staff? I say yes! He is the one responsible for the database; the automation staff is just that—staff. If an officer

identifies a problem, it is his job to correct it. We must ensure that he knows enough to identify systemic automation problems and take the right steps toward fixing them.

What do I mean by *understanding information systems*? I admit it is a fuzzy

Computer literacy is being taken out of most Army courses. But in the place of computer literacy, schools must teach information systems.

term. Some universities have Information Technology departments. Many schools have Information Systems, Management of Information Systems, or Systems Engineering departments. The United States Military Academy has a five-course sequence on Information Systems. I don't think every officer needs a minor in information systems to be effective. Commanders in a mechanized army don't need minors in automotive engineering, but they do need to understand the fundamentals.

Today's officer needs a high level of understanding of computer technology and software and the interaction between these and the organizations that use them. He needs to know the fundamentals of databases—the different kinds, what problems they solve best, the strengths and weaknesses of each.

He must be familiar with the security issues involved with local-area and wide-area networks. He must also be conversant with the principles, the benefits, and the limitations of computer networks. He needs to understand enough about computer architecture to approve decisions on what type of hardware to buy and how this hardware can help the unit's mission. Today's officer needs to know enough about software engineering to understand what reliability in software really means—particularly when dealing with mission critical systems.

This is not the kind of understanding that you get from knowing how to make great charts on a computer. When your unit is about to fly off to a conflict and every pound of weight and every cubic foot of space counts, you need to decide

how important your back-up automated mission planning system is to your unit's success.

Computer literacy is being taken out of most Army courses. This is not a bad idea, since most officers today come out of college knowing how to use computers. But in the place of computer literacy, schools must teach information systems. Just as the necessary mechanization topics are taught in branch officer basic courses, the beginnings of education in information systems must also be taught there. An officer's information systems education must then continue at every military education level, because the years between the courses can mark large advances in computer technology. In addition, higher level headquarters use information technology differently and more extensively than lower level headquarters. As an officer is being prepared for higher level staffs, he needs additional

education in information systems. For example, command and staff courses prepare officers for staff duty at division and corps levels. The understanding of information systems required by a corps staff is different from that required at brigade level, which is taught at branch ad-

Understanding automation today is becoming as critical as understanding mechanization.

vanced courses. The service schools should reflect this difference when teaching information systems.

This will require changes in the schools. We don't have enough system automation officers (Functional Area 53) to meet all the Army requirements now. Although system automation officers may not even be the best choices for instructors, the Army does not have a large

pool of instructors available to teach these topics in service schools and courses.

As the battlefield changes, the Army is relying on more and more automation. The officer corps must understand the big picture when dealing with the integration of computers into organizations. This level of understanding cannot be learned through computer literacy programs. An officer must receive an information systems education that spans his entire career. He cannot rely completely on an automation staff, especially on a topic that touches almost all aspects of his command.

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Chemical Company Support To Light Infantry with Non-Lethal Weapons

CAPTAIN RUSSELL A. FLUGEL

The U.S. Army Chemical Corps currently supports the Army's light infantry divisions (including airborne and air assault) with dual-purpose (smoke and decontamination) companies. It will always be essential that the Chemical Corps be prepared to support decontamination contingencies, but light division smoke support requirements are becoming increasingly limited.

As the Army redefines its role for the 21st century through the Force XXI concept, the Chemical Corps must make appropriate changes at the lowest level to support the redesign of the division as the central element of strategic land power. The best way for the Chemical Corps to secure a future role in support of the Force

XXI light division is to augment the current mission of dual-purpose chemical companies with the offensive capability of non-lethal weapons.

Because of the constraints involved with rapid strategic mobility, light divisions set their deployment priorities according to the level of threat. Since light division missions increasingly involve low-intensity conflict (LIC) or operations other than war, chemical companies often find themselves at the bottom of the division's deployment priority list, or not on it at all. The reason for this is that smoke offers no offensive capability and is seldom essential to light division missions. Outside of conventional operations, there are few smoke requirements

in light divisions that cannot be met by smoke pots or grenades. Non-lethal weapons, however, represent an essential offensive alternative for light infantry commanders as they prepare for more LIC missions in the 21st century.

The Army is already making the transition to the Force XXI concepts of power projection and broad-range missions, and many of these missions belong to the light divisions. It is clear from past operations that these types of light division missions do not require smoke.

The most recent example is Operation Uphold Democracy in Haiti, in which the benefits of non-lethal, crowd control assets outweighed those of smoke. During the 82d Airborne Division's September

1994 preparation for the mission, staff planners analyzed the threat and determined that there was only a minimal requirement for the deployment of two smoke HMMWVs (high-mobility multipurpose wheeled vehicles) for possible use in dispersing crowds. There was, however, a significant requirement (beyond the capability of military police assets) to control crowds and possible riots with incapacitating but non-lethal agents.

The 82d Division chemical section quickly focused its efforts on obtaining pepper spray from civilian agencies for use by military personnel. This operation demonstrated that non-lethal agents such as cayenne pepper can help commanders deal with hostile crowds and clear urban areas, but it also demonstrated that division leaders and soldiers lacked experience in employing pepper spray.

The Army's Training and Doctrine Command therefore assigned proponentcy for this issue to the U.S. Army Chemical School and directed that doctrine be developed to support training with and storage and employment of cayenne pepper.

A chemical company specializing in the employment of non-lethal weapons and doctrine based upon these requirements could give every light division commander a significant offensive alternative to lethal force. Ideally, chemical companies could store and employ non-lethal weapons and provide personnel decontamination as required.

The use of so-called "smart bombs"

during Operation *Desert Storm* represented a first step in the effort to reduce collateral damage. The evolutionary role of non-lethal weapons will continue to increase as this effort grows more important at all levels.

While it is quite possible that one day each soldier may head off to battle with a non-lethal weapon (such as a pepper spray can), it is also important that the Army take advantage of larger scale non-lethal weapons that require collective employment. Since these weapons involve the use of non-lethal chemicals, this mission would be well-suited to the Chemical Corps.

Less than lethal (LTL) and riot control agent (RCA) programs range from large volume RCA dispersers to RCA foam agent producers (for area denial). Even a relatively low-technology modification of the chemical company's organic pressurized water-spray equipment could enable light infantry commanders to control and disperse crowds with water. Chemical companies using the technologies described could augment military police (enabling them to continue their traffic control and enemy prisoner of war missions) by foaming large areas and denying them to personnel or by controlling riots using water spray equipment.

It is important to begin developing chemical units capable of using available basic riot control technologies. The Chemical Corps should commit to modernizing the force by placing a greater

emphasis on the development of non-lethal weapons as well as working to ensure that the Chemical Weapons Convention Treaty allows their incorporation into the force as soon as they are developed and tested for safety. By establishing non-lethal weapon units early, the Chemical Corps can best position itself for the successful future integration of developing technologies (including proposed antitraction, antimateriel, and metal embrittlement technologies).

Because most unconventional light division missions have limited smoke requirements, dual-purpose chemical companies are ideal for reconfiguration to incorporate existing non-lethal technologies. The chemical corps should pursue this requirement because the technology involves chemicals, or it could simply modify already existing water haul and spray equipment. Augmenting the military police in riot and crowd control could significantly assist light division commanders and also prove the value of having a chemical company at the division level.

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Tactical PSYOPs

Supporting the Infantry Brigade and Battalion

MAJOR JAMES C. BOISSELLE

Psychological operations (PSYOPs) have been a key part of every major military operation in the past several years. Elements of the 4th Psychological Opera-

tions Group (Airborne) and selected Reserve Component PSYOP units have operated alongside Army, Air Force, Navy, and Marine Corps forces in major opera-

tions, including *Just Cause* in Panama, *Desert Shield/Storm* in the Persian Gulf, *Restore Hope* in Somalia, and *Uphold Democracy* in Haiti. A PSYOP task force

is now a common element in the force structure of nearly every major contingency operation planned by the unified commanders-in-chief. Whether in combat or in peacetime, PSYOPs offer unit commanders some unique capabilities.

Because of the limited number of PSYOP assets, and the constant demand placed upon both the active and reserve components for contingencies and exercises, few infantry units have an opportunity to work with PSYOP elements outside of combat training center rotations and a limited number of division and brigade level exercises. Consequently, PSYOPs are not integrated into brigade and battalion contingency deployments or into training for combat and peace operations.

To help fill the information void concerning PSYOPs, I offer here some key terms, roles and missions, and tips for employment.

The most important terms for the infantry brigade and battalion are defined as follows:

Tactical PSYOP Team (TPT). A TPT is normally attached to or in direct support of a maneuver battalion. It consists of three soldiers (led by a staff sergeant), one M1025 HMMWV (high-mobility multipurpose wheeled vehicle), SINCGARS radios, and both mounted and manpacked loudspeaker systems. The TPT leader acts as the PSYOP staff planner for the battalion.

Brigade PSYOP Support Element (BPSE). The BPSE is normally attached to a brigade staff under the supervision of the S-3. It consists of five soldiers (led by a captain), one HMMWV, SINCGARS radios, and a communications specialist with tactical satellite equipment (if required) and high-frequency radios. This element coordinates its operations with a division PSYOP support element (DPSE), located with the G-3.

Psychological Operations Task Force (POTF). The POTF is normally force structured as a separate component command of a joint task force or theater headquarters. The POTF is responsible for developing the PSYOP campaign plan for an operation and disseminating or executing the supporting products and actions. All PSYOP actions at any level must be

coordinated with the POTF. Such a task force may be joint or combined.

PSYOP Objective. This objective is a statement of a measurable response that reflects the desired attitude or behavior change of a selected foreign target.

PSYOP Program. This is a sequential, coordinated presentation of a series

The ability of PSYOP teams to encourage surrender and desertion is well documented.

of actions or products to achieve a specific PSYOP objective.

Theme. A subject, topic, or line of persuasion used to achieve a psychological objective.

Target Audience. An individual or group selected for influence or attack by means of psychological operations.

Roles and Missions

The major roles and missions of tactical PSYOP elements can be best illustrated with a series of vignettes drawn from recent operations:

PSYOP Intelligence Collection. Tactical PSYOP teams act in a manner similar to a scout platoon for the POTF, operating in widely dispersed areas and forwarding relevant information for analysis. PSYOP intelligence is normally time sensitive, reflecting a group's attitudes and emotions that could change on the basis of any number of variables. The

Today, commanders at all levels must communicate with local leaders and dignitaries in other countries to achieve specified objectives.

teams must quickly gather PSYOP intelligence and forward it through higher PSYOP support elements to the POTF. Intelligence specialists and target audience experts at the POTF analyze the data for possible development into a theme or an addition to a program.

During Operation *Restore Hope*, several PSYOP teams supported the 2d Bri-

gade, 10th Mountain Division, during a period of unrest in Kismayu, Somalia. The brigade, designated the United Nations element's local quick-reaction force, deployed to the southern port city in response to violence between rival clans. Upon their arrival, the teams began gathering critical intelligence that clearly showed the city divided between two clans, one in the north and another in the south.

As part of the PSYOP preparation for a planned cordon and search of the city and confiscation of weapons, PSYOP teams learned that the people of one clan feared that only their section would be searched while the other would be left in a stronger position to attack. When this information was presented to the brigade commander, he changed the sequential search plan and directed that areas in both sections be cordoned and searched at the same time. PSYOP teams, using vehicle-mounted loudspeakers, broadcast throughout the area that the entire city was being searched and that weapons should be placed outside on the ground. The timely PSYOP intelligence and subsequent change to the maneuver plan contributed to the success of the cordon operation.

Tactical Dissemination. Because tactical PSYOP teams are a constant presence among the people in operations other than war, they are effective communicators. In Northern Iraq, in Somalia, and throughout Haiti, it was recognized that TPTs provided credible information. Among the many ways of disseminating this information were handbills, newspapers, posters, and loudspeaker broadcasts. Nontraditional methods of communicating have also been used effectively, including the distribution of T-shirts in Mogadishu and Port-Au-Prince as a gesture of the good will and friendship of U.S. forces.

Obviously, tactical dissemination also has a significant combat role. The ability of PSYOP teams to encourage surrender and desertion is well documented. There are several types of loudspeaker systems that can be mounted in helicopters, on armored or wheeled vehicles, on small boats, or carried in rucksacks. Enemy forces cannot escape the message

in a broadcast, and an effective message can significantly affect their will to fight.

The most vivid example of a surrender message in combat occurred on Faylaka Island during the first days of the ground war in the Persian Gulf. A PSYOP team, operating a 2,700-watt loudspeaker from an armed U.S. Marine Corps UH-1N helicopter, flew several times around the island accompanied by two Cobra gunships. The PSYOP message was simple—surrender tomorrow at the island's radio tower compound in troop formation without weapons. The combined effect of the message and the show of force succeeded. When the Marine forces arrived at the appointed time, more than 1,400 unarmed Iraqi soldiers, including a general officer, were waiting in formation at the tower.

Face-to-face Communications. Operations other than war have caused a renewed emphasis on face-to-face communications. Although practiced daily in business and other civilian pursuits, this type of interpersonal communication was not trained to any great extent in military units. Today, commanders at all levels must communicate with local leaders and dignitaries in other countries to achieve specified objectives. In Somalia, company, battalion, and brigade commanders were frequently involved in discussions with local people.

PSYOP teams train to be effective communicators. Team members are aware of cross-cultural communication techniques and are skilled in the use of interpreters. They are aware of the intricacies of dealing with local leaders and other key communicators who often have hidden agendas that could cause trouble for the unit. PSYOP team members advise the units they support to avoid making any promises, as hard as that might be in certain circumstances.

In Somalia, PSYOP teams used face-to-face communications techniques extensively while working with a clan in the northern section of Mogadishu in the supported brigade's sector. The clan was trying to establish a district council as part of the United Nations initiative to rebuild Somalia's governmental infrastructure. The successful establishment of this council was critical to the force protec-

tion of infantry and armor units that had established bases in the area. The attached BPSE developed a PSYOP program to support this effort and received the approval of the brigade commander and the POTF to execute it.

Working with civil affairs personnel, PSYOP specialists visited the district daily to gather PSYOP intelligence and talk with key leaders. In their conversations, PSYOP personnel were careful to articulate the appropriate PSYOP themes without being trapped into making promises to provide construction supplies, police uniforms, or other items requested by the district leaders. The PSYOP objective was to increase local support for the new council, and face-to-face communications techniques helped accomplish this goal.

Crowd Control. Few situations can be more unnerving to an infantry squad or platoon than being caught in the middle of thousands of people with hostile elements operating from within the crowd. Rules of engagement cannot always provide an appropriate range of options for the maneuver element faced with the mission of protecting itself while accom-

Graduated response offers the tactical commander a way to clear the objective of noncombatants and those who want to surrender.

plishing the specified mission that caused it to operate near the crowd. Warning shots often prove ineffective; crowds can sense that no serious action will follow. PSYOP teams can provide a suitable, effective crowd control option that enables the infantry element to continue its mission.

In Haiti, elements of the 10th Mountain Division had the mission of crowd control in Port-Au-Prince during the 30 September anniversary commemorating the 1991 coup. Several days before that date, the joint PSYOP task force initiated an intensive program aimed at discouraging violence and encouraging a peaceful demonstration. Tactical PSYOP teams disseminated products on "how to demonstrate" and broadcast non-violence

themes by ground and aerial loudspeaker systems. Similar messages were conveyed to the armed forces of Haiti and police as well. On 30 September, the joint task force conducted a show of force with four battalions throughout the city. This show of force, combined with the PSYOP program, resulted in a calm crowd with no major incidents.

Graduated Response. PSYOP elements have become an integral part of graduated response, a tactic designed to reduce the loss of life on both the friendly and enemy sides and to reduce collateral damage as well. This tactic was employed frequently by units in Somalia and Haiti during raids of militia compounds, weapons caches, and safe houses.

Graduated response offers the tactical commander a way to clear the objective of noncombatants and those who want to surrender. Once the objective is prepared in this way, a reasonable amount of force can be applied to accomplish the mission. Once again, rules of engagement may dictate that a series of warnings and displays of force that escalate in severity be used before applying overwhelming force. PSYOP teams enable the tactical commander to execute a successful graduated response plan. During Operation Uphold Democracy in early October 1994, one task force planned a series of raids on suspected locations of members of an activist political organization and other hostile individuals known as *attaches*. The tactical commander decided to use a graduated response tactic that began with TPT's broadcasting surrender messages, followed by a countdown sequence. Approximately 80 percent of the individuals at each objective surrendered and the rest offered no resistance when the assault teams entered the building. Not a shot was fired during the entire operation.

Deception Operations Support. PSYOP elements are uniquely qualified to provide support to deception operations. Too often, however, PSYOP elements are tasked with *developing* rather than *supporting* the deception plan. Tactical teams can provide sonic deception as part of a larger deception story developed by the battlefield deception element at division level or by the S-3 at brigade

or battalion. Teams have access to sets of tapes with recordings of tracked vehicles, weapons fire, dismounted movement, trucks, helicopters, and other battlefield sounds. To be convincing to the enemy force, these loudspeaker tapes should be used with the actual equipment or personnel that the sounds are imitating. If a TPT is trying to portray an M1 tank platoon in a certain area, an actual M1 tank should drive around the area for at least a brief period to enhance the effect.

Tips for Employing PSYOPs

The following five tips will help an infantry brigade or battalion in using PSYOPs:

Integrate PSYOP planners in the S-3 section to achieve the best results. To be effective, PSYOPs must be integrated closely with current and future operations. Too often, the PSYOP planner is attached to the S-5 section, if there is one, or at battalion level attached to a company and forgotten. The planner can offer unique information concerning the enemy or civilians in the area and can coordinate effective external PSYOP support. To best accomplish these tasks, PSYOP planners need to be active players in the operations section.

Allow the PSYOP planner time to brief the commanders and staff. PSYOP personnel have access to special studies and assessments that provide unique information pertaining to hostile, neutral, and friendly elements operating in the supported unit's sector. This information is constantly updated and analyzed on the basis of PSYOP intelligence

gathered by the tactical teams and other sources. Allow the PSYOP planner the time to present this information during operations order or tactical operations center updates.

Give the PSYOP planner clear guidance on the brigade or battalion mission and intent. The PSYOP element is there to support the commander. The planner can employ or coordinate for a variety of unique information assets to help the unit accomplish its mission. To do this, the PSYOP representative needs to discuss with the commander his intent for the employment of PSYOPs. The PSYOP planner owes the commander a concise laydown of the overall PSYOP campaign to help him with his own plan for PSYOP support.

Include the PSYOP planner early in the mission analysis process. The recent operations in Somalia and Haiti have shown that there is a great demand for PSYOP assets. There were many competing requests from brigades and battalions for PSYOP products to support their operations. The earlier a request reaches the POTF, the better the chances it can be filled. The earlier the PSYOP planner is involved in the mission analysis, the sooner he can submit a request for support.

Maintain a distinction among PSYOPs, civil affairs (CA), and special forces (SF). Although they fall under the umbrella of special operations forces, PSYOPs, CA, and SF have distinct missions. In an operations other than war scenario, you might find the PSYOP soldiers trying to prevent civilian interference at a roadblock or village market

by distributing handbills, talking with the people, and working through key communicators. At the same time, the CA soldier might be coordinating for a new water well to be dug to improve the quality of life for the local populace. The SF soldier might be conducting special reconnaissance in a remote area or training a local police or army force. The tasks complement each other but are not interchangeable among the specialties.

Although scarce during peacetime training, PSYOPs are critical to brigade and battalion operations during contingency deployments. The integration of PSYOP elements in the combat training centers is a step toward gaining an understanding of their unique capabilities. As the information age continues to affect the conduct of war and operations other than war, PSYOPs can be expected to play an increased role in the management of foreign perceptions, attitudes, emotions, and behavior. As the infantry brigade and battalion deploy into the global information environment, PSYOPs will continue to provide the commander with a tool and the ability to accomplish the mission quickly, cleanly, and with minimal losses in men and materiel.

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platoon's capabilities and limitations. Commanders must emphasize their scouts' ability to fully understand the enemy's order of battle and TTPs. Then they can anticipate enemy actions and sense when something is unusual.

In addition, training must focus on developing other senses besides sight. The goal is to achieve the "gut feeling" and anticipate the enemy's next move. Leaders can develop this instinct through numerous rehearsals, war games, and sandtable exercises. For the OPFOR scouts, the terrain and missions have become second nature. Through monthly repetition and constant exposure to different units, these scouts can focus on and follow their

instincts while mentally analyzing their enemy.

Although incorporating these TTPs into traditional U.S. doctrine is not simple, it can be done, once units realize that doing so will enable them to operate more effectively against an adversary. The difficulties lie in training and testing scout platoons to reach and maintain the OPFOR scouts' level of proficiency. Overall, we must demand more from our scouts to provide timely and accurate combat information. We must also train our scouts to execute in-depth analysis of the enemy and terrain instead of just identifying and counting enemy equipment, vehicles, and personnel.

As leaders, we must learn to support our scouts with time, resources, and training (with guidance from S-2s). By incorporating these techniques, we can redefine the mission and training of our scouts and better focus our reconnaissance efforts.

Captain Peter J. Don served as an OPFOR scout platoon leader, rifle platoon leader, and company executive officer at the National Training Center and is now assigned to the 1st Battalion, 10th Special Forces Group in Germany. He is a 1990 ROTC graduate of Claremont McKenna College.

FIFTY YEARS AGO IN HISTORY SEPTEMBER-OCTOBER 1946

Events in China had captured world attention by the autumn of 1946. Nationalist and communist factions had already claimed portions of that immense land as their own, and the likelihood of conflict in contested areas was increasing daily. To the south, the role of U.S. forces in South Korea was being redefined as South Korean forces were becoming more self-sufficient. Meanwhile, U.S. Marines and their units returned from the Pacific Theater in increasing numbers as part of the postwar drawdown. In Germany, Soviet hopes for greater influence were dashed as communist candidates were defeated in the first postwar elections.

These and other highlights of the postwar years have been provided by Mr. Bud Hannings, in preparation for his upcoming chronology of the Korean War.

- 6 September** *The Chinese Nationalist Army assumes responsibility for the protection of the coal fields and rails lines running between Chinwangtao and Peiping (Beijing).*
- 11 September** *Believing—one year after the end of the war and Japanese occupation—that South Koreans should become self-sufficient, General Lerch, the U.S. Military Governor of Korea, orders all Americans in the Korean government to cease their day-to-day responsibilities and act only as advisors.*
- 13 September** *Special Representative George C. Marshall informs President Truman that his and Ambassador Stuart's diplomatic efforts to bring about a peaceful resolution to the crisis in China have reached an impasse.*
- 2-5 October** *Frustrated by the intransigence of both the Nationalists and the Communists, Marshall informs President Truman that there appears to be no workable solution to the Chinese situation and requests that he be recalled. Learning of this, Chiang Kai-Shek proposes a ten-day truce to encourage further negotiations.*
- 9 October** *Marshall visits Shanghai to meet with the Communists' Chou En-lai in an attempt to arrive at a compromise between the two factions. Chou En-lai subsequently accuses Marshall of favoring the Nationalists, and Marshall withdraws from serving as mediator in future negotiations.*
- 20 October** *The people of Berlin go to the polls for the first postwar free elections. The Soviets have agreed to this move because they believe that the Soviet-backed Socialist Unity Party will sweep the elections. To their dismay, the party is able to gain less than 20 percent of the vote. This democratic victory means, however, that the Allies will find the Soviets much harder to deal with in future negotiations concerning Germany.*

INFANTRY Interview

Thoughts on U.S.-Ukrainian Training

COLONEL GENERAL VASYL T. SOBKOV, UKRAINIAN ARMY

*Colonel General Vasyl T. Sobkov, Deputy Minister of Defense, Commander of Ground Forces, Ukraine recently visited Fort Benning as his country's senior representative to the 1996 United States-Ukrainian Staff Talks, and agreed to an interview with *INFANTRY* Magazine to discuss issues relevant to the Army of Ukraine and of interest to readers of *INFANTRY*.*

Colonel General Sobkov graduated from the Military Academy in Kazan, Ukraine, in 1966 and has commanded at platoon, company, battalion, regiment, division, corps, and army levels; has served as Commander, Trans-Carpathian Military District; and has been the Deputy Minister of Defense, Commander of Ground Forces of Ukraine, since 1994. He is a graduate of the Military Academy, Moscow; the Military General Staff Academy, Moscow; and the Senior Level Course of the Military General Staff Academy, Moscow. Colonel General Sobkov's staff assignments include division chief of staff and Chief of Main Staff, Ukrainian Armed Forces.



What do you consider the greatest challenge facing the Army of Ukraine today?

The greatest challenge—and the most important duty—of the Army of Ukraine is to provide national security and protect the sovereignty of the State. This mission also includes the security and protection of our borders.

What type of professional development programs and schools are available for officers and noncommissioned officers of the Army of Ukraine?

The Ukrainian Army has good, well-developed programs for the training of its officers. Army officers are trained in several ways, at the Odessa Army Institute, at the Kiev Ground Forces Academy, at the service branch schools for Artillery and Armor, and at the Kharkov Military University. The term of study for commanders is four years, while the engineering faculty program lasts five years. Upon graduation, officers are commissioned as lieutenants with a military education and receive as well a civilian degree in engineering. Noncommissioned officers receive specialized training

that lasts six months at military training centers. There are seven such centers in the Army of Ukraine. During their military career, officers receive additional training according to their military specialty, in specialized training centers and military faculties in civilian academic institutions.

How much emphasis does your Army place on physical fitness and conditioning? Are physical fitness standards based upon a common required level of fitness, or are commanders allowed to set their own standards?

We pay a great deal of attention to physical conditioning and training. Our officers, noncommissioned officers, and soldiers receive from five to six hours of physical conditioning per week, and many continue to conduct additional individual training on their own. The Army has specific, high PT standards, and units throughout the Army participate in competitions based upon physical proficiency. Half of the Olympic medals won by Ukraine in the Atlanta Olympics were won by Army competitors. Our athletes are regular participants in the international Sigma competitions, and during the latest one—held in Italy—placed in the top ten among 70 nations participating. The Ukrainian Army has Army-wide physical fitness standards, based upon age and branch of service, but commanders are authorized to set their own standards initially, until their units reach the desired level of proficiency.

What branches of the Army does Ukraine train, and what do you see as the role of infantry forces?

The Ukrainian Army trains mechanized, armor, missile, artillery, air defense, artillery, airmobile, and armed aviation forces. We see the mechanized infantry as having the primary role in our Army, although we train both light and airmobile infantry as well. You must remember that our military doctrine is defensive in nature, since our mission is to defend the State and its borders. We also feel that these infantry forces will be well suited to our new mission of peacekeeping in conjunction with the forces of other nations.

What is the reaction of members of your Army to conducting training and operations with the United States Army?

We are now in the third year of the Partnership for Peace, where we met and worked with U.S. forces for the first time. Our soldiers were naturally curious and interested in working with Americans. In 1996 Ukraine hosted the Peace Shield multinational exercise, and in spite of the fact that more than nine nations participated, all of the soldiers worked well together, and there were no misunderstandings of significance as they spoke a specific "soldiers' language," which is common for all armies.

How long must today's soldier of the Army of Ukraine serve on active duty? Is it possible to maintain the necessary level of combat readiness with an active duty tour of this length?

Today's term of service in the Army of Ukraine is 18 months. Up to the present time, it is still national law that all men must perform military service and take part in the defense of the nation. It is certainly possible to sustain a combat ready force with an 18-month tour of service, so long as the soldiers train hard, take their work seriously, and perform their duties well. As we develop higher skill proficiency and receive additional funding, we will be able to continue to reach and maintain the level of combat readiness we want. Our experience as part of a multinational force in the former Yugoslavia has shown that Ukrainian soldiers compare very favorably with those of other nations. The way in which a soldier can perform his duties depends in large part on his attitude toward those duties and the military service.



Do you feel that training in logistical and support operations is receiving enough emphasis in the Army of Ukraine?

The subject of logistical operations receives a great deal of attention in our Army. We have a number of military academic institutions that train our officers and non-commissioned officers in logistical areas. Our junior noncommissioned officers receive their training in their own service schools. Logistics systems are included as part of all combined arms exercises. We have gained a great deal of experience, from World War II through Afghanistan, and logistics is an area of major attention in our Army.



To what extent do environmental concerns affect the use of training facilities and field maneuver areas for the Army of Ukraine?

Environmental concerns have become significantly more important than they were in the past. When we were part of the USSR, less attention was paid to environmental issues, but now much more attention is being paid during operations of not only our Army but our Navy and Air Force as well. Within our armed forces there are now special control teams whose mission is to focus on environmental issues.

Approximately how much time do units of the Army of Ukraine spend training either in the field or in garrison?

By regulation, units of the Army of Ukraine must spend no less than 50 percent of their time in the field. In spite of the 18-month tour of service, combat training in the field is heavily stressed. Our training during exercise *Peace Shield 96*, for example, was so intensive that some commanders were questioned if they were in danger of violating the human rights of the soldiers. But our soldiers worked hard, because they understood that their mission was an important one.

Based upon your Army's missions and your own experience, what type of armament do you think an infantry fighting vehicle should have? Should antitank missiles be part of it?

The experience in Afghanistan has shown that the BMP-2, with its 30mm cannon, 7.62mm machinegun, and antitank missile is an effective infantry fighting vehicle. This is the ideal armament, given the defensive mission of the Ukrainian Army. The missile is reliably effective against tanks out to 4,000 meters, and the 30mm cannon is ideal against APCs and other vehicles, as well as against low-flying helicopters. The infantry squads in the BMPs have grenade launchers that can effectively engage targets as far as 500 to 800 meters out. With these and the small arms of the squad, a BMP can engage targets from point-blank range out to four kilometers. The antitank missile should be part of the infantry fighting vehicle's armament.

In our dealings with the armies of other nations, soldiers of the United States Army have always learned a great deal from contact with other forces' soldiers. What would you like U.S. soldiers to learn from training with your soldiers?

During training with our soldiers, I would like U.S. soldiers to have the opportunity to conduct operations on the large ranges and maneuver facilities we have available. They will have the experience of coordinated operations between arms and services, as well as all branches such as air defense and air mobility. We have the facilities to maneuver and train large units and elements, and on terrain that includes mountains, plains, forests, and swamps. Live-fire exercises are also possible. If the United States Army wants to train under difficult conditions and in areas with which they are not familiar, we can offer the opportunity to do it successfully.



RANGER COMPANY NIGHT LIVE-FIRE RAID

LIEUTENANT COLONEL P.K. KEEN
CAPTAIN JAMES LARSEN

During night live-fire rehearsals for the Son Tay Raid in 1970, Colonel "Bull" Simons found that even his best shooters were getting only about 25 percent of the rounds into torso-size targets at 50 meters. He immediately bought Armalite sights and Singlepoint night sights, which enabled the M16 riflemen to put every round into E-type silhouettes out to 50 meters. The only problem was finding a proper mounting bracket for the sight. The quick fix was black electrician's tape, an example of the type of solution many squad leaders still rely on today, in spite of all our technological advancements.

Since the 1970s, there has been a dramatic improvement in the individual soldier's ability to acquire, identify, and accurately engage targets at night with individual and crew-served weapons. The 1st Battalion, 75th Ranger Regiment, recently conducted live-fire air assault raids at night in a near total in-

frared (IR) spectrum. The only conventional lights used were close-quarter battle (CQB) flashlights mounted on individual weapons for room clearing. All other markings (friendly forces, breach points, and cleared bunkers, buildings, rooms), the acquisition and illumination of targets, enemy prisoner of war (EPW) searches, and casualty evacuation operations were accomplished using night vision devices (NVDs) with the aid of IR sources.

All of the weapon systems organic to a Ranger rifle company were used, including the M16A2 rifle, M4 carbine, M203 grenade launcher, M249 light machinegun, M240G machinegun, shotgun, 84mm Ranger antiarmor weapon system (RAAWS), M24 and .50 caliber sniper rifles, 60mm mortar, M72A2 LAW (light antiarmor weapon), AT4, M18A1 claymore mine, and the bangalore torpedo. In addition, the special

operations helicopter support unit used its 2.75-inch rocket, 30mm main gun, and 7.62mm Miniguns.

Each Ranger had night vision goggles (AN/PVS-7A or 7B) and an aiming device or night vision scope for his weapon. Since knocking out several bunkers near the breach points was a critical task, leaders emphasized identifying, acquiring, and accurately engaging these targets with the LAW, AT4, and RAAWS. Leaders used several types of devices to designate and illuminate targets for the support and assault elements, as well as the attack helicopters.

This article will discuss some of the tactics, techniques, and procedures (TTPs) used during the company air assault raid, discuss the training and equipment required for operations in the IR spectrum, and share the major lessons learned from the exercise. Much of what is outlined here is already standing operating procedure (SOP) in some infantry units that are already training aggressively to “own the night.”

The Raid

The scenario for the raid involved an enemy terrorist training camp of 30 trainees and 12 cadre spread throughout nine plywood buildings (see diagram). These people were equipped with small arms and, near the center of the camp, had one .50 caliber heavy machinegun employed in an antiaircraft role. They did not have NVDs or chemical weapons.

The camp was surrounded by triple-standard concertina wire and eight bunkers. The cadre compound inside the camp was separated from the trainees by a double cyclone fence. Enemy vehicles were stored in a motor pool adjacent to the camp. Upon attack, the terrorists were expected to defend the camp until overwhelmed. During the time of the attack, illumination was zero percent.

The company mission was to destroy the enemy camp to prevent the reinforcement of another critical target within the battalion’s area of operations. The concept was divided into three phases:

Marshaling and deployment. This phase began with the marshaling of the air assault task force and ended with the pre-assault fires on the objective. The airlift package included three U.S. Air Force medium-lift helicopters, four Chinook medium-lift, and four Black Hawk helicopters, supported by two light-attack and two medium-attack helicopters. The task force was controlled by the air assault task force commander (battalion command and control element) in a Chinook with a command and control console.

Assault. The assault phase began at H-3 minutes with the pre-assault fires from attack helicopters on key targets inside the objective—the .50 caliber machinegun position, bunkers 4 through 6, and building 10. At H-Hour, the support force on three medium-lift helicopters—consisting of the company’s weapons platoon with two 60mm mortars, two RAAWS, seven M240G machineguns, two snipers armed with an M24 and a .50 caliber Barrett rifle, and the company alternate command post—landed approximately 300 meters from the objective at HLZ SEAGULL and immediately suppressed the objective area until the assault force arrived.

The support element leader used the ground commander’s

pointer and a Maxibeam flood light with IR filter to illuminate the objective area and designate key targets (bunkers and buildings) for the RAAWS and M240Gs. This enabled all sections on the support-by-fire (SBF) position to acquire their targets quickly and adjust fires to achieve suppression. The RAAWS and M240G machinegunners used the Litton M937 scope or the PVS-7B with an AIM-1 laser aiming light to engage targets out to 400 meters.

The assault force in the four Black Hawk and four Chinook helicopters landed at HLZ VULTURE—150 meters to the east of the objective and to the south of the SBF position—at H+4 and H+5 minutes, respectively. As the Black Hawk helicopters approached HLZ VULTURE, the door gunners engaged bunkers 5 and 6 and buildings 23 and 24.

The assault force consisted of three rifle platoons, two M240G machineguns, and one RAAWS, under the control of the company command post. The assault element was deployed with 1st and 2d Platoons abreast and 3d Platoon back as the initial company reserve. The plan called for 1st and 2d Platoons to seize breach points in the vicinity of bunkers 5 and 6, clear bunkers 4, 5, 6, and 7, then clear, in sequence, buildings 23, 24, 22, 21, and 20. Once bunker 7 and building 20 were cleared, 3d Platoon would pass through 1st Platoon, breach the fence on the east side of building 12, then clear buildings 12, 11, 10 in sequence while being supported by 2d Platoon. Assault forces would move to the buildings using night observation devices, but once “stacked” outside a building, members of the clearing team would flip up their PVS-7Bs and clear the rooms and the building using “white light” flashlights mounted on their individual weapons.

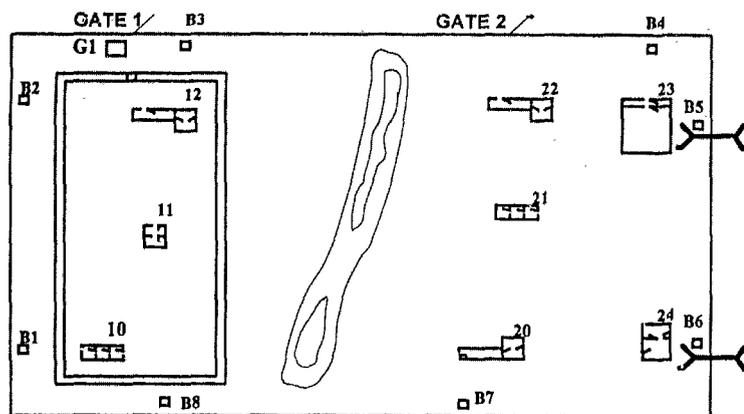
Initially, the assault force achieved suppressive fire on the objective and again engaged bunkers 4 to 6 at a range of approximately 100 meters with one RAAWS and two AT4s—one with an AN/PVS-4 and the other with a PVS-7B and an AN/PAQ-4C laser aiming light. Once the company commander was satisfied that the breach points were isolated and the objective was being suppressed, the 1st and 2d Platoons launched two breach teams. The teams conducted fire and movement to two breach points on the triple-standard concertina obstacle and at each point emplaced two sections of a bangalore torpedo primed with a three-minute nonelectrical firing system. The right flanks of the breach teams were marked with either an IR chemlight or a Phoenix IR beacon so that the attack helicopters and the SBF position, which was still suppressing the bunkers near the breach site, could identify the forwardmost friendly elements.

Before the team reached the breach point, the signal was given for the SBF element to shift fires, moving the left limit of the SBF suppressive fires to building 23. With bangalores emplaced and time fuses burning, the breach teams bounded back 100 meters to the assault element position, and the SBF element shifted back to bunkers 5 and 6. Once the bangalores blew, the breach teams immediately bounded back to clear and mark the breach with IR chemlights; they shifted the SBF element back to building 23 and knocked out bunkers 5 and 6.

With the movement through the breach point, the next signal was given to shift the SBF element once again to building

OBJECTIVE PANTHER

GUARD SHACK (G1)/GATE 1: MANNED
 GATE 2: UNMANNED
 MANNED BUNKERS: B2-B5
 UNMANNED BUNKERS: B1, B6-B8
 BLDG 10: ARMS/COMMUNICATIONS ROOMS
 BLDG 11: CADRE BARRACKS
 BLDG 12: OFFICES/ORDERLY ROOM
 BLDG 20: CLASSROOM
 BLDG 21: SHOWER/LATRINE
 BLDG 22: DAY ROOM
 BLDG 23: BARRACKS
 BLDG 24: STORAGE FACILITY



12. With the breach points seized and direct fire suppression on buildings 20 through 24, and with attack helicopters isolating and suppressing buildings 10 through 12, 1st Platoon launched a squad to clear building 23. With that building cleared, the SBF element lifted its fires and assumed responsibility for preventing enemy withdrawal to the north.

As each cleared building was marked with an IR chemlight, another squad launched to continue clearing a successive building. With building 20 cleared and bunker 7 knocked out, 3d Platoon became the main effort and was passed through to breach and seize its objective (buildings 10 through 12). Before the breach could be executed, bunker 3 was engaged from about 75 meters with a LAW. The LAW gunner wore a PVS-7B with an AIM-1 aiming laser on the weapon. The attack helicopter responded to calls for fire from forward observers—identified by IR strobes as friendly—to engage targets on and around the objective.

Exfiltration. Once the assault force had secured the objective, the exfiltration phase began, and the company began to consolidate and reorganize. As searches were being conducted with IR lights, several enemy vehicles were engaged about 100 meters west of the objective using four LAWs with either PVS-4s or aiming lasers.

Crucial to the success of this phase was the triage, treatment, and immediate extraction of friendly casualties. Observer-controllers identified between 12 and 15 casualties so that the

company's combat service support system could be fully exercised. Once the casualties were evacuated, the assault force withdrew from the objective to HLZ VULTURE while the support element overwatched. Following the familiar "Fire in the hole" warning and the destruction of captured enemy weapons and equipment, helicopters returned to pick up the assault force. The support element was recovered two minutes later under the overwatch of the attack helicopters. The entire operation lasted about 45 minutes, even with the total darkness and the intensive casualty play.

Preparations for the Raid

Many infantry units occasionally perform night air assaults (raids or attacks) under live-fire conditions. But few can achieve the level of proficiency necessary to sustain a "Trained" status, and fewer still can conduct the mission in a near total IR spectrum.

Achieving a "Trained" status in the IR spectrum has two essential components: the necessary equipment and extensive training and rehearsal.

A unit cannot operate completely in the IR spectrum unless each soldier has night vision goggles (NVGs) mounted on his head. Furthermore, the goggles are of little value if he does not also have an aiming device on his weapon.

The training and rehearsals for this mission are much the same as for any other mission or task. They must be gradual,

progressing through the *crawl, walk, run* stages as outlined in Field Manual (FM) 25-101, *Battle Focused Training*. They must address the individual, leader, and collective tasks that support the terminal training objective specified in ARTEP 7-8 MTP, *Mission Training Plan for the Infantry Rifle Platoon and Squad*, and ARTEP 7-10 MTP, *Mission Training Plan for the Infantry Rifle Company*.

Although the training principles are the same as for other missions, train-up for the night live-fire air assault raid in the IR spectrum presents unique challenges to infantry leaders from fire team to battalion level.

Night Vision Equipment

Although Ranger resources differ from those of conventional infantry units, most of the equipment is the same. Rangers often receive the latest weapons and equipment in the Army inventory, such as the M4 carbine, which is replacing the M16A2 in Ranger units; the M240G, which has replaced the M60 machinegun; the RAAWS, which replaced the Dragon; and the Litton M845 and 937 night vision scopes, which augment the PVS-4.

With new equipment come new challenges and the responsibility to develop TTPs for its use. A Ranger company can outfit every soldier with NVGs, scope, and/or aiming laser. Like other units, Rangers are waiting for better equipment (such as replacing PVS-7As with PVS-7Ds), maintaining what they have, and relying on NCOs and their ingenuity to accomplish any mission they are given.

To assist in fielding new night vision equipment and developing innovations for using what is already in the inventory, the 1st Ranger Battalion formed a night vision committee at battalion level, made up of several NCOs, the platoon leaders, the headquarters company commander (who is the battalion

A unit cannot operate completely in the IR spectrum unless each soldier has night vision goggles.

force modernization officer), and the battalion commander. The committee's efforts have helped establish an SOP that spells out who carries which NVDs.

The following is a list of the equipment and TTPs used to operate in the IR spectrum:

Night Vision Goggles. Every soldier on the battlefield, whether he has a night vision sight mounted on his weapon or not, must have NVGs. Without them, he is severely handicapped during movement, which results in a loss of control for the unit and a diminished ability to acquire and engage enemy targets.

The PVS-7B with the flip-up head mount is considerably better than its predecessor, the 7A. The Generation III tube in the 7B provides far more clarity, which increases the soldier's ability to identify and acquire targets. The PVS-7D will be even better. The flip-up head mount enables a soldier to remove the goggles quickly before entering a lighted room. The compass that comes with the 7B helps the soldier navigate and maintain his orientation. Units will find, however, that the com-

pass is off approximately 15 degrees because of the metal in the new flip-up mount.

Another improvement on the PVS-7B is the IR intensifier tube, which can be placed over the IR source on the goggles. This enables the soldier to focus the IR from a "flood light" to a "spotlight," thus changing the need for IR intensity based upon terrain (movement through woods instead of built-up areas). While the use of white light is a preferred technique for room clearing, in large open areas (hangars, airport terminals) the use of the IR source on the goggles may be the best way to illuminate the area while clearing. The only problems with the PVS-7B are the need to use protective eye cups around helicopters, the limited range of head motion when worn along with Ranger body armor, and an occasional black-out during individual movement techniques (IMTs) due to a loose switch.

Aiming Devices, Pointers, Illuminators. The best set of goggles will not do a shooter any good without an aiming laser, such as the AN/PAQ-4A or 4C, or an AIM-1 that is zeroed to his weapon. The PAQ-4C is much better than the 4A because the laser is stronger, eye-safe, and not intermittent.

Mounting the PAQ-4C on the M4 has been one of our greatest challenges due to a shortage of mounting brackets. Although the M4 mounting bracket is noted as an additional authorized item in the PAQ-4C training manual, it is still not available in large quantities. Thanks to NCO ingenuity and resourcefulness, however, the battalion has progressed from electricians' tape to modified aim point mounts to finding a supplier.

Every Ranger armed with an M16A2, M4, M203, or M249 has a PAQ-4A or 4C, or an AIM-1. All M240G machineguns and the RAAWS can use the AIM-1, but the challenge of a proper mounting bracket remains. Because of its greater range and intensity, the AIM-1 is used primarily for squad leaders, the .50 caliber sniper rifle, the M240G machineguns, and the antiarmor systems. The AIM-1 on high power stands out on the battlefield and is easy to distinguish from other lasers. Platoon leaders and forward observers use the handheld LPL-30 laser target designator to mark targets for attack helicopters, machinegunners, snipers, and antitank systems. Leaders usually tape the LPL-30 on top of their PVS-7s to keep their hands free.

Another device used to direct or illuminate a target is the Maxibeam search light, which is a lightweight handheld, battery-operated IR or white light search light with an illumination of several million candlepower. Its beam can be narrowed to illuminate small targets such as a bunker or breach point or widened for large areas such as a portion of the objective. Rangers have used the Maxibeam from the support element with great success, particularly on nights with limited illumination.

Other IR aimers, pointers, and illuminators the Rangers have been testing are the ground commander's pointer-infrared (GCP-1A, GCP-2) and the IR target pointer/illuminator/aiming laser (ITPIAL). These have proved effective in augmenting and in some cases replacing Maxibeam lights. They are much lighter, are eye-safe at low power and, in the case of the GCP-2 and ITPIAL, can be mounted on a weapon.

Night Vision Scopes. Rangers have generally progressed from the PVS-4 to the Litton M845 and M937 night vision scopes. Normally, the M249 gunner mounts the M845, and the M240G machinegunner and the RAAWS gunner mount the M937 on their weapons. Rangers still use the PVS-4 for the LAW and AT4 due to the availability of scopes and mounts.

A few months ago the battalion received the advanced combat optical gunsight (ACOG) scope, one for each rifle fire team leader. The ACOG is an excellent small 4-power scope for daylight operations, but it also works well at night if there is some illumination. The ACOG augments the battalion's stock of Aimpoint 1000s and is normally mounted on the fire team leader's M4.

The battalion recently tested a scope called the computerized laser-assisted sight system (CLASS) and was pleased with the results and potential application to the Mk 19 grenade machinegun, RAAWS, and the M2 .50 caliber machinegun. The CLASS enabled Rangers to engage targets out to 1,000 meters with a near first-round hit using the Mk 19; the results were equally impressive with the RAAWS and the M2.

Markings. For the night live-fire raid, each Ranger was marked with a two-inch strip of IR-reflective tape on his arm and a one-inch square on his helmet. All cleared breach points, buildings, and bunkers were marked with either IR chemlights, or Phoenix beacons, as was the casualty collection point. The battalion also used IR strobe lights or Phoenix beacons to identify the flanks of assaulting elements. Landing and pickup zones were marked with either strobes or swinging IR chemlights.

Using only IR sources for marking has an advantage and a disadvantage. The advantage is that an enemy without night-vision devices has a lot of trouble identifying the friendly locations and actions. The disadvantage is that friendly forces can get confused trying to navigate through an objective that is marked all in the same color and contains several blinking IR lights. The supporting attack helicopters also can have a hard time identifying the source of a laser (for example, telling a Phoenix beacon from an IR strobe light).

CQB Lights. CQB lights mounted on individual weapon systems are the one exception to operating in total darkness. Although these lights come with IR filters, Ranger experience indicates that the white light clearing of buildings is generally preferred. It increases peripheral vision, enhances target acquisition and control, and increases the speed of the room-clearing team. For those without CQB lights, the field-expedient flashlight taped to the handguard is a must. But the use of white light, even in room-clearing operations must depend upon the mission analysis. When clearing large open areas, the use of CQB lights, without IR filters, is not the preferred technique. Use of the CQB lights with IR filters also enhances EPW search operations.

Train-up

The 1st Ranger Battalion relies heavily upon the professional competence of its NCOs, and particularly the team and squad leaders. These junior NCOs are trainers who know and enforce the highest standards. Each must ensure that his team or

squad is mentally and physically prepared for the Ranger mission. It is not uncommon to see a Ranger fire team or squad practicing CQB in the battalion area, conducting battle drills on the physical training field, or gathered around a chalk-board during some down-time in garrison. In the field, companies try to spend 75 percent of their time training at squad and platoon level. This is common throughout the Ranger Regiment and reflects the core belief that if a battalion has excellent squads, it will have excellent platoons and companies as well.

The junior NCOs have a crucial role in the train-up process for a night live-fire air assault raid in the IR spectrum. Whether it is understanding the capabilities and limitations of weapons

Train-up for the night live-fire air assault raid in the IR spectrum presents unique challenges to infantry leaders from fire team to battalion level.

and night-vision devices, marksmanship, battle drills, or CQB, each junior NCO must be technically and tactically proficient, must have time to train his team or squad, and must have the confidence of his soldiers.

Leader training for this mission can take the form of NCO and officer professional development sessions or train-the-trainer classes. To gain and maintain proficiency in CQB, many Ranger leaders attend the Special Operations Training Course at Fort Bragg, forming a school-trained base of NCOs from which to draw. Ranger leaders have also attended specialized demolition courses to learn nonstandard methods of entering buildings.

To build upon that base, the battalion has conducted professional development sessions at ranges to share the latest techniques in reflexive firing and advanced marksmanship techniques. Recently, the platoon leaders spent a day at Fort Stewart's shoothouse live-firing different scenarios and increasing their proficiency in CQB. The platoon leaders have also increased their overall night fighting capability and their understanding of battle drills by conducting a live-fire squad attack drill. These leader training techniques can be applied to other air assault raid battle drills such as *breach a wide obstacle, enter and clear a trench line, knock out a bunker, and support-by-fire* exercises.

Individual Training

Like the leader tasks, most of the specific individual training tasks required for the night live-fire mission are clearly spelled out in ARTEPs 7-8 and 7-10 MTP. What is not so apparent is the soldier's proficiency and familiarity with his weapon and NVD system. It entails more than just engaging targets with the M16 and PVS-4/Litton, or the PVS-7 and the PAQ-4/AIM-1. The soldier and his weapon and night vision system must become one. He must be able to zero the PAQ-4/AIM-1, reduce stoppages in his weapon, perform IMTs as a member of a fire team, and engage targets out to 300 meters at night as well as he can during the day.

Advanced marksmanship training, day and night, is key to

success, and individual proficiency focuses on reflexive firing. Although these tasks require few resources, they are vitally important and must be mastered before a team or squad can progress to collective training.

Collective Training

Once the chain of command is satisfied that leaders and individual Rangers are proficient at their tasks in preparation for the night air assault raid, the companies use a building block approach to the collective train-up. For the scenario described earlier, the companies broke down collective training into four separate tasks and drills that are normally done concurrently the week before the company mission. The tasks, conditions, and standards for these drills are found in ARTEP 7-8 MTP, with the exception of CQB. For the CQB drill, the Ranger Regiment uses its own Regimental Training Circular 350-2 (CQB Program of Instruction).

Support-By-Fire Exercise. Generally, the SBF exercise is conducted day and night, immediately following the zeroing of the machineguns and qualification of the crews. Companies first focus on gun crew proficiency through basic crew drill, then transition to the machinegun squad, which consists of three M240G teams, three men per team, and a squad leader who is normally the senior staff sergeant in the platoon. The squads must be able to work in absolute harmony with each other. The machinegun squad leader designates targets and directs the fire of the squad to ensure total coverage of assigned sectors and minimal lulls in fire. He also maintains the ability to stop the squad's fire immediately upon command.

Companies occasionally incorporate mortars, snipers, and the antiarmor sections into the SBF exercise, as they did for this one.

Breach wire obstacle/knock out a bunker. These two drills are normally conducted using blank ammunition and live demolitions. Depending on the time elapsed since a unit's last demolitions training, platoons may cover some of the basic tasks involved in priming electrical and nonelectrical demolitions

In the SBF exercise, companies first focus on gun crew proficiency through basic crew drill, then transition to the machinegun squad.

before starting the breach drill. On occasion, these drills are also part of a platoon attack, a day and night live-fire exercise, or a battle drill situational training exercise lane.

Ranger companies generally plan to breach triple-standard concertina and cyclone fence as these are the wire obstacles they expect to encounter in some areas of the world. The battalion has developed a field-expedient bangalore torpedo (called a Brashier Breach for one of the first sergeants); it has a minimum safe distance of 50 feet, compared to the 300 meters required with the Army's bangalore or 100 meters with two sections and troops in a defilade position. Although this method has not yet been approved, the initial test results are promising. Meanwhile, the battalion will continue to use two sec-

tions of the bangalore torpedo, laid diagonally beneath triple-standard concertina. If properly laid, it will blast a hole large enough for a truck to drive through. The cyclone fence usually requires a ladder charge, which is simply several strips of C4 explosive taped to detonator cord and hung vertically on the fence. Both electrical and nonelectrical blasting caps have advantages and disadvantages as primers. Normally, Rangers prefer nonelectrical priming because of the virtual certainty of detonation.

Squad/Platoon Attack. Maintaining basic proficiency in the squad/platoon attack battle drill, as outlined in FM 7-8, is essential to everything Rangers do. It is a battle drill that includes nearly every task on the battalion and company mission essential task list. The battalion spends a considerable amount of time working this drill day and night and trains it under live-fire conditions as well. Companies usually conduct the drill every six to eight weeks and always before a company live-fire raid or attack.

The drill's supporting tasks are varied to keep the Rangers focused. Sometimes companies incorporate *knock out a bunker* or simply *assault*. Sometimes they add machineguns, antiarmor, or mortars in support of the platoon. The battalion continues to experiment with new techniques to keep the training innovative and challenging and improve night fighting ability. This drill is the infantry's bread and butter. Before attempting to do the platoon attack drill or progress to the company night live-fire air assault raid in the IR spectrum, a unit must be able to conduct the squad attack at night as well as it can during the day.

Enter Building/Clear a Room (CQB). The days of throwing a hand grenade into a room and then rushing in and sweeping the room with automatic weapons fire went out with the Berlin Wall. Furthermore, it is a waste of ammunition that may not be resupplied in a timely manner. The restrictive rules of engagement (ROEs) such as those U.S. forces encountered in Panama, Somalia, and Haiti do not allow for indiscriminate fire. Adhering to restrictive ROEs while fighting in a built-up area requires training and discipline. The knowledge and discipline of when to shoot and when not to shoot comes with good CQB training.

Like the squad attack battle drill, Rangers try to execute this clearing drill up to squad level every six to eight weeks. The training starts with reflexive firing and advanced marksmanship training, taught by the junior NCOs, and it takes a full day and night to execute to standard. Once the chain of command is satisfied with the individual level of proficiency, four-man teams practice "single-team, single-room," then "single-team, multiple-room" scenarios. The Ranger goal is always "multiple-team, multiple-room" day and night live fire. The battalion recently began using "blue-tip" ammunition with the M4, M16, and M249. The blue-tip is a low-velocity 5.56mm round that disintegrates upon impact. It requires the use of a special bolt and "bullet traps" (plywood sheets with foam padding in between). It enables units to conduct live-fire exercises in training facilities not designed for live fire.

Conducting CQB to standard requires a lot of time, and the skills are highly perishable. While a Ranger is initially trained

as the Number 1, 2, 3, or 4 man in a clearing team, depending on his duty position in the squad, each must be cross-trained so he can do any job on the team.

Lessons Learned

The following is a summary of the lessons learned from the Rangers' night live-fire raid:

Proficiency with NVDs is the first step toward being able to operate in the IR spectrum. Leaders and soldiers must be fully trained on their equipment and know both its capabilities and its limitations. The best set of NVGs is of little use to a shooter who does not have a PAQ-4/AIM-1, or who has one

Before attempting to do the platoon attack drill or progress to the company night live-fire air assault raid in the IR spectrum, a unit must be able to conduct the squad attack at night as well as it can during the day.

but has not learned to zero it. Until a few months ago, the 1st Ranger Battalion did not have enough PVS-7s to outfit every Ranger and was forced to task organize night vision equipment within the company so squads and platoons could train to standard at night.

This is not unrealistic; a commander can weight his main effort before a fight by giving one element most of the NVGs in the company. He must use the available night vision equipment to employ all weapons, such as the LAW and the AT4. The PVS-4 needs to be replaced with a scope that makes the best use of the capabilities of the M249 and M240G/M60 machineguns. Currently, a unit is better off mounting PAQ-4Cs on these weapons and having the soldiers wear PVS-7Bs.

Light discipline has an entirely new meaning. Rangers have found that there is a point of diminishing returns in regard to the number of IR lights and lasers. As in most operations, SOPs guide what will be used and by whom. At the same time a unit must carefully assess the enemy's night vision capability as well. Clearly the covert (IR) marking of breach points and friendly elements should become SOP.

CQB techniques work. CQB may be a critical element of special operations and works extremely well, but there is nothing secret about it. Every rifle squad, given the training time, can use these same techniques.

Under current Army doctrine, the indiscriminate tossing of hand grenades and burst firing upon entering depend upon the ROEs, but this technique still has flaws. Rangers stack a team outside a door or desired point of entry, use a shotgun to break any lock or a demolitions charge to breach a wall, then flow into the room as a team. Grenades are used by exception, depending upon the ROEs and building construction. Rangers never send one man in alone, as advocated in some of the latest manuals on the subject. Once in the room, Rangers use white light to clear under most conditions; it works much better than IR.

The squad/platoon attack is the infantry's fundamental battle drill. If there is no time to do anything else, this drill is

the one collective task that should be performed. From it, the infantry derives virtually every other task needed to perform offensive operations.

The 1st Ranger Battalion has succeeded in maintaining proficiency in all of its offensive METL tasks—as well as in increasing the individual and collective proficiency of fighting at night—simply by focusing on the squad platoon attack battle drill and CQB with a training frequency of every six to eight weeks.

Establish unit SOPs for night fighting. Because of the command and control challenges of operating in the IR spectrum, units should establish SOPs that incorporate the Army's technological advances. These SOPs must be thoroughly wargamed and tested, then updated when new equipment is fielded.

Consider forming unit night fighting committees at company and battalion levels. The 1st Ranger Battalion's night fighting committee provides a forum that allows the junior NCOs and platoon leaders to demonstrate the latest innovations and share their experiences and lessons learned. They developed a battle roster for the battalion that shows which duty position uses which NVD. As new equipment is fielded, the committee makes recommendations to the commander on its disposition and distribution.

IR should be used to mark landing and pickup zones (LZs/PZs). When using numerous IR sources on the battlefield, a swinging IR chemlight works best for marking LZs/PZs. It is easily identified by aviators and is distinguishable from other light sources that may be used.

Although this article has outlined many of the TTPs and lessons 1st Ranger Battalion learned in its efforts to operate entirely within the IR spectrum, it is only one unit's experience. Force XXI envisions every infantry unit—light, mechanized, airborne, air assault, and Ranger—outfitted to operate in the total IR spectrum. Being outfitted correctly, however, is just a part of the picture. We, as the total infantry force, must share the information we learn during today's night training—the TTPs and the capabilities and limitations of current and new equipment—and apply it to tomorrow's night battle.

As we receive new night vision equipment, commanders must take the time to field it correctly, carefully analyzing which duty positions need which devices. The individual soldier, his weapon, and NVD must become one; and we must encourage NCOs and soldiers to be innovative. Although we may never get away from the use of electrician's tape, it is the ingenuity of soldiers that has led to some of the infantry's greatest breakthroughs in our efforts to "own the night."

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OPERATIONAL CONSIDERATIONS FOR SUB-SAHARAN AFRICA

LIEUTENANT COLONEL MARTIN N. STANTON

Given the recent history of U.S. military operations in Somalia, Rwanda, and Liberia, it is reasonable to assume that we will again be committed to some sort of action in Sub-Saharan Africa in the near future. This action may range from strictly humanitarian operations (as in Rwanda) to noncombatant

evacuation or hostage rescue operations (Congo 1964-65, Kolwezi 1978, Liberia 1990) to peacekeeping (Angola) to low-intensity conflict (LIC) peacemaking or peace enforcement operations (Somalia).

The U.S. experience in Somalia revealed many of the opera-

tional challenges that face armies operating in Africa. Although some of the considerations discussed here were unique to Somalia, many of them are true of the entire area.

The single most important factor is the sheer size of an area of operations. Somalia, for example, is the size of California, and at the height of UN participation, there were fewer than 30,000 soldiers of all nations in and around the country and a high ratio of support and nation-building units to combat units. This meant that small units were given large areas of operation (AOs), in terms of either population density (one Marine battalion for Mogadishu) or area (one Army infantry battalion with an AO bigger than Connecticut).

Another consideration is logistics. After the relatively benign environment of Operation *Desert Shield/Desert Storm*, Somalia came as a shock, and it is reasonable to assume that in future interventions we will face what we experienced there to one degree or another. In many nations in Africa, the infrastructure dates from the 1950s or early 1960s at best. Everything logistical is an issue, even such simple things as potable water. Nothing is available from the host nation.

Intelligence is likely to be inadequate. As in Bosnia or any number of areas of conflict in the former republics of the Soviet Union, many of the conflicts we are likely to face in Africa will be multi-sided. Far from being simple operations against a national adversary (such as Iraq) or even operations against a formally organized guerrilla force (such as the Viet Cong), many of the combatants in African conflicts are organized along tribal and familial lines. Gathering intelligence on the plans and operations of these closed groups can be extremely difficult. A dozen armed groups may be vying for the dominance of their particular clan power base.

It is important that we consider now, before our next commitment, the best organizations and tactics for employment in this unique environment.

Organizing for Extended Operations

Although organizing for extended operations is in many ways based on METT-T (mission, enemy, terrain, troops, and time), most force packages for African interventions will share several common characteristics:

They will be heavy on combat support (CS) and combat service support (CSS). Because of the austerity of the environment and the possibility of supporting allied units as well as our own, U.S. forces will have a higher tail-to-tooth ratio than they would have in Europe or Southwest Asia. This will be especially true of transportation units, both ground and air. Extensive engineer efforts will have to restore (or create) the transportation infrastructure to support extended operations.

They will require extensive augmentation to command and control. Because of the size of the AOs, normal doctrinal distances will be at least quadrupled. Units that normally communicate with their higher headquarters and adjacent or subordinate units on FM or secure radio may find that their equipment does not have the necessary range.

In Somalia, both Army and Marine Corps units were extensively augmented with tactical satellite (TACSAT) teams, and these were often the only way the separate units could commu-

nicate with one another. It is even more critical than usual that J-6 personnel be in on the initial planning for operations in this part of the world so they will fully understand the communication requirements and task organize effectively to meet the challenges of distance.

Psychological operations (PSYOPs) and civil affairs participation will be critical. In spite of the ultimate failure of the Somali mission, the role played by PSYOPS and civil affairs personnel cannot be overstated. PSYOPs units should be included in all tactical operations. Leaflet drops can also be useful, but care must be taken that these are not at cross-purposes with tactical operations. (If you're trying to surprise and apprehend bandits, it's not a good idea to have a leaflet drop the previous day telling them you're coming. Coordination can help eliminate such problems.)

Along with PSYOPs, civil affairs units can help build rapport between the local people and the U.S. and UN forces. Various programs—medical missions, public construction assistance, food distribution, and agriculture assistance—will help keep the populace non-hostile.

PSYOPs and civil affairs units must have enough interpreters with them. Because of the non-threatening nature of these operations, local-hire interpreters can be more successful with them than with units involved in actual tactical operations.

Tactical units must have enough organic or attached transportation to move all their assets. Light units such as airborne, air assault, light infantry, or Marine should receive transportation assets that will allow them to "motorize" themselves. Although the actual tactical operations are normally on foot, units need the additional transportation to get to the AO. The fleeting nature of most intelligence and the distances involved make it impractical to coordinate for centrally controlled transportation. In this kind of environment, when you need to go, you need to go *now*.

Much of the deployed combat power will be involved in securing logistics bases and transportation hubs. Although CS and CSS units ostensibly provide their own security, in practice this has its drawbacks. The austere nature of the environment causes them to expend most of their efforts just meeting their support responsibilities. Although still responsible for interior guard, these units cannot be expected to guard the outer perimeter of the base cluster or transportation hub as well.

Planning for operations in this kind of environment must include tactical units (light infantry) to secure logistics bases. Unlike the tactical units on offensive operations, these light battalions will not require extra transportation because their role will be a more stationary one, consisting mainly of perimeter defense and local patrolling.

Tactical Operations

The considerations for tactical operations can be broken down into the eight battlefield operating systems:

Intelligence. The threat in these kinds of operations can vary widely, from lightly armed, poorly disciplined bandits to heavily armed, highly motivated, and well trained soldiers of political factions. Therefore, human intelligence is vital.

Most opponents on the African continent will have access to

the most modern arms and equipment. Although this can include a relatively large amount of rolling stock (usually confiscated commercial vehicles with some military-type vehicles mixed in), most of the opponents faced by U.S. forces in future LIC operations will fight as light infantry. They will carry small arms of U.S., Soviet, Chinese, French, Italian, German, or British manufacture. They will normally have mortars and simple antiarmor weapons such as rocket propelled grenades (RPGs) or recoilless rifles. They may have such air defense artillery (ADA) weapons as .50 caliber and 12.7mm machineguns as well as the single and dual variants of 14.5mm and 23mm cannons. They may also have shoulder-fired surface-to-air missiles such as SA-7s.

Although the mix of these weapons will not normally follow any organization and equipment structure, the weapons can be approximated into loose groupings of tactical units based on tribal or political affiliations. Building an intelligence base on a specific group should focus on getting a count of its weapons and their type. (For example, if only one group in your area of responsibility is known to have a ZSU 23-2 and you're taking fire from one, either you've found a portion of this group or there's another one you didn't know about.)

The weapon of choice for operations against ground columns will be mines (command-detonated and the traditional buried kind) and ambushes ranging from small point-type to the large well-organized kind covering several kilometers (in the manner of the one that destroyed Group Mobile 100 in 1954 French Indochina). It is important that realistic appraisals of the threat determine the tactics used (and the risks assumed) by the force commander.

These tactics can vary with different locales in the same operation. In Somalia, for example, operations against bandits in the lower Shabelle Valley called for squad-sized patrols and vehicles on the major roads. Operations against warlord forces in Mogadishu, on the other hand, called for large multi-battalion operations with a lot of supporting firepower in the form of helicopter gunships and AC-130s.

Because of the fragmented nature of many of the combatant elements, developing an intelligence base on them will be difficult and laborious. And it will be made more so by the requirement to cross-check information, much of which will contain inaccuracies, half truths, or downright lies. Thus, a large part of the S-2's function will be finding out whom and what to believe.

Intelligence gathering will be hampered by a lack of qualified linguists in the many African dialects. In Somalia, the forces had to hire local interpreters who often brought their tribal biases and interests with them.

S-2s will have to be on the lookout for local interpreters and constantly watch them to ensure that they are not gathering intelligence for opposing factions. Local interpreters should always be excluded from the tactical operations center, and troops must be cautioned not to talk about operational plans in their presence.

Maneuver. A study of operations in Africa in this century reveals the fairly constant theme of relatively small maneuver forces operating independently over vast distances. Prime ex-

amples of this are the German *Schutztruppen* in World War II, the British in their 1941 campaign in Italian Somaliland, and more recently the operations of Major Hoare's 5 Commando (a mercenary battalion recruited by the government of the Congo to combat the Simba insurrection). Operating from bases of logistical support, independent columns would conduct operations for weeks and months at a time. Each of these columns was a self-contained combined arms unit of infantry, artillery, engineer, signal, and logistical elements.

In more recent history (the Congo in the 1960s, Chad, the fighting in Rhodesia and Namibia), light armor has been used

It is important that realistic appraisals of the threat determine the tactics used (and the risks assumed).

as well, with column strength normally varying from a two-company battalion to a brigade-size element. These columns could operate either as part of a larger scheme of maneuver in a conventional or semi-conventional war (the World War I campaigns in East Africa, the World War II campaign in Italian Somaliland and Ethiopia) or independently in an unconventional or LIC environment (the Congo in the 1960s, Rhodesia, Angola). In some cases, the operations of these independent columns were combined with air-dropped, air-landed, or air assault forces.

The recent U.S. operations in Somalia were also of this type. Although most of the serious fighting took place in the major metropolitan areas of Mogadishu and Kismayu, both Army and Marine forces operated over extended distances, especially in the early days of the deployment. In fact, the Marine movement from Mogadishu through Baledogle to Baidoa and Bardera in December 1992 was a model of expeditionary warfare. The long counter-bandit and security operations conducted by the 2d Battalion, 87th Infantry, in the lower Shabelle Valley were good examples of operations over extended areas.

U.S. forces employed in similar tactical operations will have to be task-organized to cope with the challenges of the environment. Although this task organization will again be subject to specific considerations of METT-T, we can make certain assumptions:

- Dispersed forces will operate over great distances.
- Reaction forces will have to respond to tactical emergencies and opportunities.
- Security forces will have to secure base and logistics sites, maintain presence in designated areas of operation, and conduct aggressive patrolling to keep the enemy off balance.

On the basis of these considerations, we should look at the following types of task organization:

- Independent combined arms maneuver columns—predominantly motorized or mechanized—to conduct sustained operations throughout a designated area of responsibility.
- Reaction force elements consisting mainly of attack helicopters and airborne or air assault infantry. These assets could quickly reinforce units in trouble and provide extra firepower.

They could also capitalize on tactical opportunities by quickly providing surge combat power to an area.

- Security elements consisting of mainly light infantry or military police for site or base security, dismounted patrolling within designated areas of operation, and local convoy security.

All three of these functions will take place at the same time and in coordination with each other. For example, both a reaction force and an independent maneuver element may be tasked to develop a contact that has been initiated by a security patrol. In other cases, it would not be uncommon to see airborne, air assault, and ground maneuver elements being used simultaneously to cordon off a suspected guerrilla area.

Due to the sudden nature of the requirement and the need to project power immediately, initial deployments to Africa will probably be light forces. Typically, supporting arms would be apportioned to maneuver battalions, and each separate maneuver battalion task force would become its own self-contained “flying column” with artillery, engineer, signal, and other CS or CSS attachments.

Although they would be METT-T dependent, typical columns would look like this:

- Mounted infantry (at least two companies).
- Mounted cavalry element in HMMWVs (high-mobility multipurpose wheeled vehicles).
- Armor, if available.
- Indirect fire assets (81mm mortars or towed artillery).
- Engineer platoon with mineclearing devices and demolitions as well as basic pioneer tools.
- Signal element to allow for long-range communications—TACSAT or high-frequency (HF) radio.
- Supply section, Classes I, III, V.
- Maintenance section.
- Medical section.

If the requirement to deploy is known well ahead of time, and the deployment itself is more deliberate, units may be able to task organize with special non-TOE equipment. For example, an M113 with the old Vietnam armored cavalry assault

The long counter-bandit and security operations conducted by the 2d Battalion, 87th Infantry, in the lower Shabelle Valley were good examples of operations over extended areas.

vehicle (ACAV) kit is in many ways ideal for these types of operations. Armed with either M2 .50 caliber machineguns or Mk 19 grenade machineguns, in addition to the two M60 machineguns, the M113 ACAV has formidable firepower. In addition, its mechanical reliability and limited amphibious capability are an important advantage in this austere environment, and because of bridge weight capacity, it is more useful than heavier vehicles.

Units tasked to deploy for peace operations could be reconfigured to a modified J-series TOE mechanized formation (three or four line companies, no antitank company). Ideally, the mechanized units could be formed from existing Bra-

dley units because this would require the least train-up and equipment transition. Light units could also be designated for M113 fielding, but this would require considerable CS and CSS augmentation. The Army has a rich data base from Vietnam on the employment of an M113 mechanized battalion in a LIC environment, and many of those lessons are still applicable.

As useful as the M113 units would be, their employment reflects a deliberate involvement in LIC or operations other than war. Most U.S. involvement in such operations comes from sudden policy decisions that require the rapid deployment of light forces, normally by air. Neither light infantry, airborne, nor air assault units have enough rolling stock to haul their organic infantry. These units will have to be augmented with either transportation units (five-ton trucks) or locally contracted vehicles. In addition, their antitank companies will have to reconfigure for LIC—specifically, leaving their TOW systems at home station and carrying a mix of .50 caliber machineguns and Mk 19s.

Armor units can come equipped with either the standard M1A1 or, if time permits, M60A3-type vehicles. The type of tank will be dictated by a number of factors. The M1A1s are more survivable and would decrease crew casualties from RPGs and mines. On the other hand, M1A1s weigh a great deal more than M60A3s, and there are places the smaller tanks could go, and bridges they could cross, that the newer tanks could not. In addition, M60A3s have better fuel economy than M1A1s.

Another advantage of the M60A3 is the internal stowage of ammunition—65 main gun rounds compared to 40 in the M1A1. This extra internal ammunition would be important in urban fighting and close infantry support. Also, the 105mm family of ammunition is more varied and includes high-explosive plastic and APERS (antipersonnel) as well as high-explosive antitank and sabot like the M1A1. Armor units designated to deploy to operations in sub-Saharan Africa would re-equip with M60A3s, just as Bradley units would re-equip with M113s.

A key advantage U.S. forces have in this environment is night vision. Few of our potential opponents will have more than rudimentary first-generation passive or infrared (IR) night vision devices, and not many of these will be working. Units deploying to this environment must make sure all night-vision equipment, both passive/IR and thermal, comes with them.

With a general dearth of good roads, Army and Marine Corps aviation will be key to the logistical support of operations. Aviation units will have to practice carrying maximum cargos over extended distances. In addition, attack aviation and air cavalry will play important roles in aerial escort and reconnaissance or economy-of-force missions.

The mainstays of logistics operations will be Army UH-60s and CH-47s and Marine Corps CH-53s. On more than one occasion in Somalia, air assaults and aerial logistics missions used both Army and Marine aircraft. Planners will have to be familiar with the endurance and FAARP (forward area aircraft refueling point) requirements of sister service aircraft—what may be easy for a CH-53 may be impossible for a UH-60.

Planners must also take the changes in temperature and altitude into account in their flight plans. Although Somalia was

relatively flat, temperature and humidity varied from place to place. Other parts of Africa have these variations and those of elevation as well. Nothing could be more embarrassing and detrimental to a mission than having to return to a staging area to offload some cargo because the aircraft couldn't climb high enough to reach its destination.

Sling riggers must be familiar with all the aircraft. In addition, all units deploying to this AO should carry extra sling equipment and practice using it. Every organization that can conceivably operate independently should have personnel capable of configuring sling loads and rigging vehicles.

Attack helicopters and air cavalry will find themselves in roles reminiscent of Vietnam. A large part of their time will be spent in escort duty for resupply and air assault troop carriers and ground convoys. The minimum escort package for any mission—no matter how routine—should be two gunships and one scout. This will allow suppressive capability as well as a command and control ship (the scout) to coordinate the action.

In addition to escort duty, attack helicopter and air cavalry units will make up a major portion of the aerial reaction forces that respond to tactical emergencies. An air assault infantry company combined with gunships or scouts will be one of the most popular reaction force packages in this type of environment.

Air cavalry units with their ground troops will also be used to conduct security patrolling and main supply route security missions. Although this type of patrolling is less effective than light infantry in actual foot patrolling, it can keep the enemy from massing and possibly provide early warning of larger enemy movements.

Attack helicopters are also useful in a counterbattery role in areas with restrictive rules of engagement (ROEs). For example, in Somalia, mortar positions could be pinpointed using counterbattery radar, but it was impractical to fire on those positions because of their proximity to large civilian populations. As a result, attack helicopters were kept on short notification to move to and attack or suppress the mortar positions based on the locations identified by counterfire radar.

Given the distances over which forces in Africa will operate, the requirement to conduct FAARP operations assumes even greater significance. Aerial resupply missions, medical evacuations, air assaults, and aerial convoy escort missions may have to refuel many times in each direction from their base of operations. Ground maneuver units may find aviation support elements integrated into their columns to rearm and refuel aviation assets. This may be as part of the overall scheme of maneuver or—in the case of a task force operating independently an extended distance from the major logistical bases supporting the deployment—in support of normal operations. FAARP operations should include the use of Air Force tactical airlift to either drop or land replenishment fuel or ammunition supplies for FAARP detachments operating with deployed task forces.

Fire Support. Fire support in this environment will be more decentralized than on conventional battlefields. There will be fewer opportunities to mass the fires of single or multiple artillery battalions on large lucrative targets. Fire support will often consist of mortars and a direct support artillery battery. In

addition, the requirement to keep collateral damage to a minimum will limit the use of both indirect fires and Air Force assets.

Although heavy artillery offers more range and weight of metal, light artillery will be the most useful because of its rapid deployability, air transportability, and weight of systems that enable it to access the regions with less infrastructure. Bridge weight limits are a key consideration.

The lack of massed armored targets, along with the light forces flavor of the operations, gives the 105mm howitzer a utility it does not have in Europe or the Persian Gulf, for example. This is not to say that self-propelled or towed 155mm artillery units do not have a place on this battlefield. In fact, if the terrain and climate support mechanized units and the tactical situation requires it, heavier artillery should be deployed. In many cases, however, the lack of trafficability, the dependence on aircraft for movement and resupply, and the logistical burden of supporting heavier artillery units will drive the deployment of field artillery toward the lighter side of the spectrum.

If both heavy and light artillery units are deployed (for example, a Marine Corps 155mm battery from an amphibious

If the requirement to deploy is known well ahead of time, and the deployment itself is more deliberate, units may be able to task organize with special non-TOE equipment.

ready group and U.S. Army light artillery), the heavy artillery would be best used in the counterbattery role near major logistics and command and control nodes, freeing the more flexible light artillery for the direct support of maneuver units.

If a column includes both mortars and artillery, the mortars should carry a larger proportion of illumination rounds while the artillery carries mostly lethal munitions. If necessary, illumination can also be set to ground-burst for a thermal effect on dry vegetation or on grass or wooden structures.

Indirect fire elements must be ready to come into action at a moment's notice. Hipshoot missions will be much more frequent than in normal conventional fire support operations.

In many cases, columns will not operate in areas that have maps of 1:50,000 scale to conduct calls for fire using UTM grid references. Therefore, both observers and batteries need to practice calls for fire using the polar plot method. Small lightweight GPS (global positioning system) receivers (SLGRs) are critical for all observers who are directing fires and equally critical for laying batteries. Without dependable maps, both groups must know exactly where they are in relation to each other and to the target.

Mortars and artillery will also be used in a direct-lay role more often because of restrictive ROEs and the sudden nature of many contacts. The 105 can provide accurate direct fires in terrain that is unfavorable to wire-guided missiles. The 105 should carry some beehive rounds for reaction to ambush and

close combat against bandits. The amount of ammunition carried should depend on the duration of the mission, the likelihood or severity of expected contact, and the ease with which the column can be resupplied by helicopter or airdrop.

Indirect fire units will find major employment in the counterfire role, especially in the protection of critical nodes. Although counterfire radars will be much in demand, there will not be enough to go around, and commanders will have to make hard choices in force protection for the employment of these radars. If indirect fire is coming from areas with large civilian populations, the possibility of collateral damage will preclude counterfire missions.

If there are few artillery units in country, these units must be prepared to airlift from one location to another to support operations. Like maneuver units, artillery units should bring extra sling equipment and practice slingload procedures frequently. They should also be prepared to sling under internal loads in other services' or other nations' aircraft.

Fire control measures will normally be the boundaries of unit areas of responsibility, restrictive fire lines or areas, and no-fire areas. Although aircraft control areas are impractical at this decentralized level of execution, the direction of fire and maximum ordinates should be communicated to aircraft working with the column.

The direction of tactical air support will be in accordance with normal SOPs. The emphasis should be on controlling tactical air in support of forces in close contact with the enemy. Vehicles or units should always carry the appropriate signaling devices to reduce the chances of fratricide. Units should carry smoke grenades and strobe lights to mark their own positions and smoke rounds for indirect fire weapons to mark targets.

The ROEs for the employment of tactical air are likely to be restrictive. The weapons of choice will be precision air support such as AC-130s or precision guided missile-equipped fast movers. Unit leaders down to platoon level, all forward observers, and certainly attached tactical air control parties should be intimately acquainted with the procedures for directing and adjusting AC-130 fires.

Air Defense. Since the air threat in Africa is almost nonexistent, air defense units will most likely be used to augment

Attack helicopters and air cavalry will find themselves in roles reminiscent of Vietnam. Indirect fire units will find major employment in the counterfire role, especially in the protection of critical nodes.

transportation (Stinger HMMWVs with their missile racks removed, battalion support platoon vehicles) and as critical site security troops (batteries deployed with small arms and without Avenger systems). Units with Vulcan systems may also be used in the ground role to augment critical site security. The air defense battalion headquarters probably will be best used as a rear area operations center or a base cluster defense head-

quarters. This will free the CS and CSS unit headquarters to concentrate on support operations.

Mobility, Countermobility, Survivability. Mines will be one great counter to mobility, and poor trafficability will be another. Periodic minesweep checks of heavily travelled roads are essential. In addition, engineers must be quickly available to deal with any newly discovered mine threat. Roads and other corridors must also be inspected after any radical change in weather conditions, and units must always be ready to do hasty repairs.

Independent columns should have at least a platoon of engineers with countermine equipment and basic breaching equipment, in addition to pioneer tool kits, block and tackle equipment, and ground clearing equipment such as chainsaws. Each vehicle in the column should have its full operator's vehicle material as well as an extra D-handled shovel. The engineers' time will be largely spent in mobility tasks such as filling holes in the road, removing mines, improving fords, repairing bridges and buildings, repairing or improving airstrips, and creating helicopter landing zones. Engineer leaders must use the materials at hand (local lumber, labor, building materials).

During countermobility operations, units should carry rolls of concertina on each vehicle to be used in the perimeter defense of a night defensive position or laager site. If space permits, vehicles should also carry RPG screens made of cyclone fencing to be erected around the vehicle itself.

If a unit is to operate from a base camp for an extended time, additional concertina and building supplies should be brought in. Antipersonnel mines should be added to the perimeter, but these minefields must be surrounded by triple concertina fences and clearly marked in the local language as minefields. This will not reduce the deterrent effect of the minefield, and it will help prevent civilian casualties.

Units on operations should dig survivability positions at all extended halts or overnight defensive laagers. The depth of the positions will depend on the indirect fire threat. For a low threat (bandit groups with small arms), shallow prone fighting positions will be enough. If the enemy is armed with indirect fire systems, positions must, of course, be deeper.

In base camp areas, fighting positions should be standard armpit-deep with overhead cover. In addition, there should be revetments for all vehicles, key pieces of equipment, and logistics sites. Hopefully, engineer assets will be available to help; if not, the unit will have to fill a lot of sandbags.

Class IV supplies will be at a premium, and units will probably have to use local materials to improve their defenses. Knowledgeable personnel must inspect these materials to ensure that they can stand up to the weights and stresses placed on them. Soldiers will also have to clear fields of fire to ensure that concealed approaches are devoid of foliage, trash, and other obstructions.

All wheeled vehicles, except armored HMMWVs and Marine light attack vehicles, should have no doors and canvas only over the driver's compartment. Troop-carrying trucks should have their seats reconfigured so that the troops sit facing outward. All vehicles should have their driver and troop compartments sandbagged.

Nuclear, Biological, Chemical (NBC). Few African nations or tribal-political entities have chemical weapon capabilities. This means that NBC personal decontamination units can be used as troop showers in conjunction with clothing exchange and other CSS services. NBC defense units can also be used for site security and local convoy security in low-threat environments.

The most likely employment of NBC will be riot control agents. These agents will have a dramatic effect on both rioting civilians and armed opponents due to the general lack of chemical defense equipment. Major considerations for using riot control agents are the proximity of friendly forces and the effect on the personnel in the area being gassed. Units about to employ riot agents should warn the units around them and those downwind. Ideally, the people being gassed should have adequate avenues of retreat available to them. Units should avoid using gas on a crowd in a confined space if at all possible, because the people may panic and trample one another.

In addition, powdered CS (tear gas) can effectively improve obstacles if placed between rows of barbed wire, but the downwind hazard should be carefully considered before using this type.

Command and Control. Most, if not all, major operations conducted by U.S. forces in Africa will be combined as well as joint, and command and control of a combined joint task force (CJTF) should be based around an existing tactical headquarters. This offers the advantage of a clear chain of command and trained staff members who are used to working together. Ideally, this will be a corps-sized headquarters. Due to the limited number of corps left in the force structure, however, the most probable base component will be a division headquarters heavily augmented for the specific mission (for example, the 10th Mountain Division in Somalia and Haiti). The CJTF will have to rely heavily on liaison officers and communications augmentation to ensure that coalition partner units are adequately integrated into the overall plan.

In cases where the CJTF headquarters is not a U.S. one, the U.S. force commander will have to rely heavily on liaison and coordination to ensure that his units are being used to best exploit their capabilities and as intended by the national command authority.

The nature of a CJTF opens up many command and control problems that are not normally addressed in training. These problems become especially acute when dealing with coalition partners that do not have a habitual working relationship with U.S. forces.

Ideally, all units in a coalition should be able to operate under a single set of ROEs and take operational direction from the CJTF headquarters without any requirement to obtain permission from parent nations. Unfortunately, this is not usually the case. In Somalia, for example, the commander of UN Operations in Somalia (UNOSOM II) was often unable to conduct operations because coalition forces ostensibly under his command were not permitted by their parent nations to take certain tactical actions. It is reasonable to assume that at least some of our future coalition partners in Africa will have this kind of restriction. The most important thing for a CJTF com-

mander in his relationships with units from other nations is a clear understanding of their capabilities and their permission to conduct operations.

To begin with, the capabilities of the coalition partner force must be thoroughly appraised. The battlefield operating systems are a good guideline for this. This analysis should be made with an eye on the compatibility of systems and the ability of the partner force to accomplish complex tactical tasks.

Units on operations should dig survivability positions at all extended halts or overnight defensive laagers.

Most critical is its ability to communicate with the U.S. units in general and the CJTF headquarters in particular. This analysis will drive considerations for liaison elements.

Liaison requirements will vary. Forces such as those that come from our NATO allies are accustomed to working with us and will require minimal liaison. Other nations will need large staffs located with their headquarters as well as subordinate liaison teams with their maneuver units. This is especially true of forces that do not have compatible communication systems and must have liaison and communication teams attached. Many of these teams will be special operations coalition support teams consisting of as many as a dozen soldiers who have a high skill level in command and control of tactical operations and who come with a communications package sufficient to support their mission.

Because of the extended distances associated with operations in sub-Saharan Africa, satellite communications or HF will often be the primary means of communication between units. Because of the limited number of TACSAT sets available, a commander may have to allocate most of the radios to the units operating farthest from the headquarters. The communications plan must take into account those who can be reached only by TACSAT, those who can be reached by both TACSAT and HF, and those who are within the range of FM, and allocate resources accordingly. A certain number of TACSAT sets should be placed in "communications reserve" to replace broken sets or to provide TACSAT teams to units moving to operate farther afield than the HF/FM profile allows.

Communication officers must be prepared to extend the range profile of their FM systems by such means as directional antennas and retransmission or relay sites. Security considerations in placement of a retransmission site must be paramount to ensure its survival. It does little good to have found a great site if you don't have the people available to protect it.

Communications within task force maneuver columns will be primarily through FM with enough wire to set up hot loops and other internal security communications. Communications with higher headquarters will normally be by TACSAT or HF. If the column is operating with the forces of other nations, care must be taken to insure communications compatibility, including the exchange of liaison officers and vehicles.

In Somalia, the most common control measure used by both JTF Somalia and UNOSOM was the area of operations. This involved assigning responsibility for operations in a given area to a specific unit. This unit would then be responsible for all operations within that area, and units passing through or operating in the area would have to coordinate with the headquarters of that unit. Other control measures used frequently were main supply routes, checkpoints, assembly areas, and designated base camps.

A maneuver unit can be given an objective or a series of march objectives. All the normal control measures for a tactical road march, movement to contact, deliberate attack, or air assault can be used to plan and control the movement of the unit. Units will normally operate within designated boundaries or tactical areas of responsibility. Maneuver or fire outside these boundaries must be coordinated with higher headquarters and, if possible, with the affected units on the other side of the boundary. If a column is converging on or operating near another friendly element, a restricted fire line should be established.

Another problem will be maps. Often those available will be little better than nothing. Units must get used to operating off large-scale maps (1:250,000, 1:500,000) or even commercial road maps. Even when relatively good maps are available (as former Soviet 1:100,000 scale maps were for Somalia), they do not help for operations inside urban areas. In many cases in Somalia, maps of large towns did not exist.

Units operating in such areas may have to create their own street maps using SLGRs to confirm grid coordinates of the street intersections and the distances between points. Maps can then be produced with a simple draftsman's kit. Although limited in scope, they can be surprisingly accurate. Whatever maps are available, however, they will not be as good as the ones a unit uses at home station. To prepare for this, units need to train their troops using maps other than the 1:50,000 maps and operating from strip maps or no maps at all.

Combat Service Support. The austere environment of Africa will place more strain on the logistical support structure of the forces operating there. Logistics operations are most likely

Command and control of a combined joint task force should be based around an existing tactical headquarters.

to be conducted from a series of fixed or semi-fixed bases that support the mobile operations of maneuver forces. This is especially true of operations other than war and low-level guerrilla warfare, but it is also true to a lesser extent of conventional war. The tyranny of distance, combined with the lack of infrastructure, makes logistics the primary consideration in most operations.

Logistic bases will need to provide all classes of supply except VI and VII, as well as some services such as vehicle and equipment repair. A logistics base can be positioned alone but will normally be located with command and control nodes and

aviation units to facilitate services to subordinate units and the security of the base itself.

Key factors in the emplacement of a logistics base are all-weather access and trafficability, defensibility and security of the location, and proximity to the forces being supported. In some cases, logistics bases in an African deployment will look very much like their Vietnam ancestors of 30 years ago—heavily fortified and bunkered positions with an eye to survivability and security—as opposed to dispersion and displacement in more conventional combat operations.

Major logistics bases that support the operation of the entire CJTF will be very large, on the order of Long Binh in Vietnam or the logistics support infrastructure in Mogadishu. At the smaller end of the spectrum will be bases normally consisting of forward support battalions with augmentations specific to the mission and deployment (such as an aviation support slice). In most cases, these bases will be located near or with their command and control counterparts.

The base will have to be secured by the tenant units themselves with augmentation from infantry, armor or cavalry, and military police units. Ideally, these units will provide reaction forces as opposed to local security. Additionally, in an environment that has an indirect fire threat, large logistics bases may have indirect fire units with counterbattery radar positioned in support of them. The overall security of the base can be either under the command of the senior tenant unit or delegated to a subordinate headquarters that has security as its primary task. In an environment with no air threat, the divisional air defense battalion is the most logical, but any unit can be designated.

Any support of coalition partner troops must be agreed to in detail before those troops are committed to the theater, if at all possible. Few things are as disruptive to logistics operations as suddenly finding out that an 800-man battalion that just arrived in country is yours to sustain and that this sustainment begins tomorrow. Just as command and control requires a frank and honest assessment of coalition partner capabilities, so does CSS.

Supply compatibility is a big consideration. Some of the issues are potential war-stoppers, such as partners that have incompatible fuel or ammunition requirements or vehicles and equipment not in the U.S. supply system. The best way to prevent such problems is extensive coordination at the outset of the support relationship.

Maneuver units within the AO of a logistics base will draw sustainment from it in either ground or air-delivered logistical packages. Vehicular maneuver elements operating in combined arms columns will be accompanied by sustainment packages that allow for several days of independent operations. Units far from their logistics base may have to halt operations until more supplies reach them. Fuel is the sticking point for these types of operations. Each vehicle in a column should have two five-gallon cans of fuel to be used only in operational emergencies.

In many cases, the distances involved will be such that only air-delivered supplies are practical. Units should try to take advantage of aerial resupply as much as possible to extend their

range and endurance. If a CJTF is looking to sustained operations (as opposed to limited, one-time in and out) in an area more than one day's drive from a logistics base, serious consideration should be given to establishing a base farther forward.

In maintenance and recovery, the doctrine of "fix forward" is still valid. Vehicles and equipment that can be fixed on site should stay with the parent unit. Items that cannot be fixed promptly enough to keep up with the maneuver unit should be evacuated to a secure area. Each maneuver element should bring with it Class IX supplies and mechanics to address the most common occurrences in motor operations for this particular environment (flat tires, broken torsion bars). Vehicles that cannot be repaired should be sling-loaded out if possible, or towed back to a secure area. If towing a vehicle would impede the column too much, the unit commander must have the authority to strip the vehicle of all useful parts and destroy the hulk.

In the area of medical support, Africa has a long history of swallowing up armies that do not practice good field hygiene and preventive medicine. Unit leaders have to be relentless in their demands that soldiers receive immunizations and follow appropriate preventive measures. Leaders must also ensure that troops maintain high standards of hygiene, particularly in base camps where latrines can become major health hazards if poorly supervised. Soldiers must also be cautioned against eating unapproved foodstuffs because of the parasite hazard most of these present.

Units on operations some distance from the logistics base should have a physician assistant or doctor with them as well as an emergency treatment team and the usual unit medics. In extended range operations, it could be several hours before evacuation helicopters reach the column, and casualties will need to be stabilized in the meantime.

The distances and the time it would take to evacuate casualties must always be considered in planning. Units may have to operate at such distances that evacuation helicopters will have to resupply to reach them and resupply again on the return flight. Units anticipating contact may consider requesting that medi-

cal evacuation assets be moved forward to temporary FAARP sites to be closer to the action when it occurs.

One of the principles of medical evacuation and treatment is to get the casualty to the nearest treatment facility, but caution is required in using the services of coalition partner units. Although some of these medical facilities are as good as (even superior to) our own, others do not meet our standards in terms of equipment and personnel training. The senior CJTF medical officer and his staff must evaluate their capabilities.

The African environment is extremely hard on clothing, and units should expect to do clothing exchange or new clothing issue at least once a month. Even if there can be no new issue, troops should be given an opportunity to have their laundry done and repair their uniforms and other items of personal equipment.

Troop showers with approved water are also important. Although streams and rivers are plentiful in many parts of Africa, they should be avoided as untreated sources. Several soldiers in Somalia required medical evacuation because of parasites they picked up on unauthorized swimming or bathing trips. Salt water from the ocean is the safest in most places, but salt-water soap must be made available, along with a limited amount of fresh water for thorough rinsing.

Sub-Saharan Africa presents some of the most severe environmental and operational challenges encountered by U.S. soldiers in this century. The U.S. Army has no large historical background of operations in this area to draw upon. We must analyze in detail our operations in Somalia and Rwanda and also look to the campaigns that were conducted in Africa earlier in this century. Only through a study of our own experience and that of other armies will we become better prepared for operations in this most challenging area.

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TRAINING NOTES



Modoc Indian War, 1873 A Battle Staff Ride for Company Leaders

CAPTAIN JAMES R. BRANN
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In the Army National Guard and Army Reserve, professional development at company level is difficult because of the limited training time available. In an infantry rifle company such as ours, inactive duty training (IDT) periods must focus on mission essential tasks at squad and platoon level. There is rarely an opportunity to train on the doctrinal subjects that are essential to a military leader's professional development.

The battle staff ride is an effective tool for training leaders in applying doctrine, specifically that in Field Manual (FM) 100-5, *Operations*. Through the study of an actual battle and personal observation of the terrain on which it was fought, leaders can better visualize the effects of training, planning, and effective (or ineffective) execution of a variety of operations.

At the company level, this is especially true when the staff ride covers a battle that took place in the western United States in 1873. Unlike the large-scale engagements of the Civil War, the conflicts that occurred during the Indian campaigns of that era were primarily small-unit actions, usually involving elements of company size or, at most, battalion.

The Modoc Indian War of 1873 is an excellent example of this type of campaign. Operations were focused in the region surrounding Tule Lake and the

Modoc Indians' ancestral homeland, which sits just below the Oregon-California border, south of the city of Klamath Falls and adjacent to or within the Lava Beds National Monument.

Since the area of operations was easily accessible to our unit in Eugene, Oregon, this is the campaign we chose to study for our company level battle staff ride.

The Modoc Indian War involved elements of the 12th and 21st Infantry Regiments, the 1st Cavalry Regiment, the 4th

Unlike the large-scale engagements of the Civil War, the conflicts during the Indian campaigns of that era were primarily small-unit actions.

Artillery Regiment, the Oregon "Volunteers" militia, and some ad hoc militia units from Northern California and various settlements in the region. In all, about 1,000 U.S. troops were fighting about 50 Modoc warriors for six months.

The Modoc Indians were a relatively small but warlike tribe dwelling in the chaparral region of the headwaters of the Klamath River. As early as 1853, they had developed a fearsome reputation for raiding settlers traveling the Applegate branch of the Oregon trail. To put a stop

to this, the United States government moved the Modocs to a reservation on the shores of Upper Klamath Lake about 45 miles to the north of the Modocs' ancestral home. Dissatisfied with reservation life, a party of Modocs under the leadership of "Captain Jack" left the reservation and returned to the Tule Lake region, where they resumed their old practice of raiding ranches and wagon trains.

Various peace commissions were sent to put a stop to the band's depredations, the final one under the personal direction of Major General Edward R. S. Canby of Indiana. General Canby was given wide discretion in trying to solve the problem, including the authority to grant the Modocs their own tribal lands as their exclusive reservation. This offer was never made, however. The Modocs smuggled weapons into the peace negotiations on the southern shore of Tule Lake and killed or wounded the unarmed members of the peace commission in a surprise attack. General Canby was one of those killed. The Modocs then withdrew into the natural fortifications of the nearby lava beds.

Having anticipated a need for combat troops, the War Department had already sent a combined arms force into the region to force the Modocs back to the reservation. This force proceeded to invest

the Modocs in their stronghold, and the terrain, weather, poor logistics, inadequate training, and bungled execution of operations on the part of the Army protracted the campaign into one of many months.

The operation unfolded like a real-life "Duffer's Drift," but this time the same mistakes were made over and over. Eventually, the Army accomplished its objectives, but this resulted more from enemy attrition—through hunger, exposure, and illness—than from any decisive victories on the battlefield.

Preparing for Training

To prepare for this training, we had to develop subject-matter experts on the specific engagements. Six months before the scheduled training, the commander gave a warning order that we would conduct a staff ride. Four months ahead, he assigned battles and orientation subjects to each of the company's key leaders. He decided against requesting teaching support from the National Park Service. Although this help would have been educational, it would have impeded the training value of having the junior officers and NCOs become subject matter experts and trainers.

The instructors for this event were primarily platoon leaders and platoon sergeants, with the commander, the executive officer, and cadets briefing orientation topics. These leaders were required to research their topics on their own time, to backbrief the commander periodically on their progress, and to develop a presentation designed to discuss their assigned topics using the tenets of FM 100-5 as an interpretative tool. Progress and planning sessions took place off-duty, usually either immediately after company training meetings or after IDT periods. The need for relevant visual aids was strongly emphasized.

The XO had to come up with transportation, lodging, and a means of feeding the soldiers who would be attending the staff ride. Assuring attendance was also a problem that had to be addressed, since asking soldiers to spend an additional weekend away from their families is a hardship that many are reluctant to undertake.

We determined that a 44-passenger Army bus would be the most economical, the safest, and the most comfortable means of transportation available to us. An Air National Guard base in Klamath Falls proved to be ideally situated for billeting. (A bivouac site in the field would have required a more extensive advance party and the use of more Army vehicles to transport tents, cots, and the like.) In addition, we needed a classroom for the first phase of our training, and the base was happy to provide such facilities.

Paying for the meals and lodging was another issue. Our company had some discretionary RMA (readiness management assembly) funds earmarked for leader training, one RMA usually being used for one individual's eight-hour training period. We determined that by providing two RMAs to each individual participating in the weekend-long training we would be able to reimburse our lead-

To fully involve all participants, it is important that the campaign be studied from the perspective of both sides of the conflict, and that everyone understand the cultural context in which the events occurred.

ers for their lodging and meals. While these funds did not match the earnings of a normal MUTA-5 weekend, particularly since the participants had to pay for meals and lodging, they did ensure that no one lost money as a result of the training event.

To make the most of the training time without conflicting with civilian work schedules, we deployed from our home station on a Friday night and arrived at Kingsley Field in the early hours of Saturday morning. The company leaders were able to get a few hours of sleep, were bused to a local restaurant for breakfast, and then returned to Kingsley Field for half a day of classroom lectures. Meals for the entire training exercise were handled this way, with our soldiers being bused to a restaurant before or after

training, and buying sack lunches from local markets and delicatessens for the field phase of the training.

Training

The four-hour block of classroom instruction involved briefings designed to orient the participants on the Modoc Indian War. It included lectures on the conduct of a staff ride, Modoc culture, the customs and problems of the settlers, the political situation leading to the conflict, Army organization, equipment, and training in the post-Civil War era, and the specific events that led to the initiation of hostilities.

The second phase consisted of ten vignettes selected for their particular suitability to our training objectives and for their accessibility (many of the locations are now on privately owned land). On site, the platoon leader assigned as the subject-matter expert for that site was given ten minutes to set up his graphics and orient himself and his platoon sergeant to the terrain. He then briefed the rest of the participants on the events at that location, pointing out how the terrain was used by both sides and drawing analogies to modern infantry operations. The platoon leader then analyzed the battle using the characteristics of the offense outlined in FM 100-5; he was immediately followed by his platoon sergeant, who discussed the characteristics of the defense as it applied to the situation.

The same pattern was repeated at the location of all ten engagements covered during the staff ride. A few short orientation stops to give the soldiers an overview of the battlefield were planned and executed from various viewpoints. At the site of the first engagement of the campaign, instead of focusing solely upon the characteristics of the offense and defense from FM 100-5, the platoon leader determined that the nature of the engagement was more suitably analyzed from the perspective of present-day operations other than war. More specifically, that particular operation was a poorly planned and executed cordon and search, an exercise that our company had trained on earlier at the Jungle Operations Training Center in Panama.

In the final phase of training, the commander conducted a brief review of the key concepts discussed over the two-day training period. He then incorporated the lessons learned into a discussion of current U.S. Army doctrine and its application to small-unit infantry tactics of the type on which our unit regularly trained.

Keys to Success

Before parceling out the subjects to be briefed, the commander must be thoroughly familiar with the campaigns so he can designate subject-matter experts. To bring everything together, one leader must be in charge, and the company commander is the logical choice. He has the clout to demand things and see that they are done. He is also the most likely expert on staff rides, since he participated in a staff ride in the Infantry Officer Advanced Course. Because of the limited time available, he must be clear on the importance of each event so that he can include the incidents and engagements that will have the most training value.

A detailed timetable must be laid out early in the planning stage, with the instructor, the location, and the subject clearly communicated to the designated trainers, along with a clear expression of the tasks to be accomplished and the standards to be met. The commander must require all instructors to submit a copy of their briefing outlines for inspection well before the event. In an IDT unit such as ours, where we see each other only once or twice a month, this is critical to quality control and keeping the instruction in line with the commander's intent.

To fully involve all participants, it is important that the campaign be studied from the perspective of both sides of the conflict, and that everyone understand the cultural context in which the events occurred. Without this sort of preliminary information, it is more difficult for the group to grasp the constraints under which the military operations took place.

The exercise of and improvement in research and briefing skills was a significant secondary learning event, and some very relevant and meticulously done graphics were used to support the briefs. These graphics required some innovation on the part of a few of the trainers, since

a number of the battle sites were accessible only on foot over rough, lava-strewn terrain.

After-action reports (AARs) should be required from each participant. These reports enable the chain of command to assess the training value of the event, to determine whether such an event should be repeated, and to learn how future training along these lines can be improved. Generally, the response was that the staff ride was a highly successful learning event and should be repeated each year if possible. The platoon leaders learned some of what will be expected of them during their officer advanced course and the platoon sergeants had an opportunity for professional development not generally available to them. The trainers were all aware that the written and oral communication skills they demonstrated during this event would be reflected on their evaluation reports, a knowledge that tended to encourage great attention to detail and ensure a professional presentation.

Every soldier who participated in the staff ride appeared motivated, despite the fact that most had never heard of a staff ride or the Modoc Indian War. Some of the officers and NCOs felt that the squad leaders who participated as observers in the staff ride should be encouraged to do briefings themselves at the next such opportunity, and the consensus among squad leaders was that they would like to have been more heavily involved in the instruction. Some platoons did use their staff sergeants to help prepare graphics and—to a limited extent—as briefers, though most squad leaders participated as observers only. The drawback to heavier involvement by more junior NCOs is that it detracts from the training opportunity such an event offers to platoon leaders and platoon sergeants, who have a more immediate need for such skills.

A well-executed staff ride can also serve as a bonding experience, lessening the effect of the time lost from home and family and the low pay provided. In an IDT unit, there are few opportunities for the kind of social interaction that is normal among active units.

The photographs we took for display in our unit armory let the soldiers who

had been unable to participate know of the efforts of their leaders to develop their professional knowledge and skills. In fact, each participant received a training certificate, either as an instructor or as a student, to help emphasize the importance of continuing professional development.

A staff ride provides an excellent professional development experience. It showcases current doctrine through a comparative analysis with the operations as they actually occurred. It is also an effective means of applying theory to practice at a pace that enables leaders to absorb the subject matter being studied. It compels soldiers to devote time to concentrating on and learning about their profession. Orders drills and terrain-board exercises are also useful for this purpose, but a staff ride is a novel and effective teaching tool that accomplishes many of the same goals.

The primary training objective of this particular exercise was to teach FM 100-5, and we believe we succeeded in that goal. It also developed research and communication skills in officers and NCOs and built esprit de corps in the group. One platoon sergeant (referring to an engagement that involved a company-sized element that was surprised and overrun while establishing a temporary bivouac site without local or far security) mentioned that he would never again occupy an assembly area without thinking about the numerous errors made by the officers and NCOs of that unit and the tragic consequences of those errors. That engagement still has special meaning to all the key leaders of our company, and the Modoc Indian War staff ride was well worth the effort.

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Southern Guam, 1944

The Fan Technique of Zone Reconnaissance

MAJOR KEVIN J. DOUGHERTY

Scout platoons and other elements conducting zone reconnaissance at the Joint Readiness Training Center often disregard the techniques in ARTEP 7-92-MTP, *Mission Training Plan for the Infantry Scout Platoon/Squad and Sniper Team—the fan, converging routes, and successive sector techniques*. Many scouts seem to think these “by the book” methods are academic rather than practical solutions. The following example of a World War II zone reconnaissance should correct this misconception and illustrate the relevance of these methods to today’s missions.

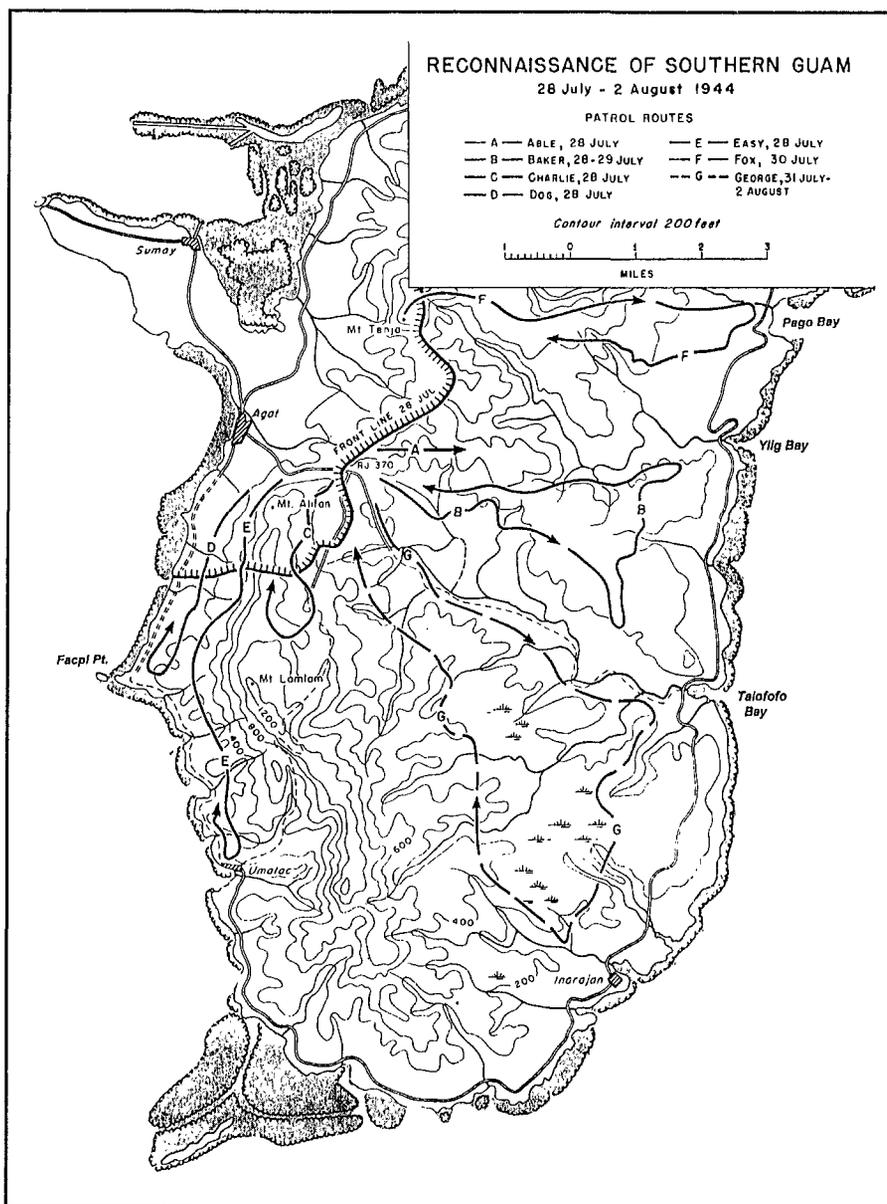
After the 21 July 1944 amphibious assault and subsequent capture of the Orote Peninsula by the III Amphibious Corps, the 77th Reconnaissance Troop used a basic version of the fan method to conduct a zone reconnaissance of the southern half of Guam.

Despite the fact that the island of Guam had been a U.S. possession for more than 40 years, the military had little intelligence on its terrain and road network, let alone the Japanese defensive positions. Southern Guam in particular was a mass of jungle and mountains with few if any roads suitable for military vehicles. For that reason, the III Amphibious Corps commander, Lieutenant General Roy Geiger, felt that the Japanese would con-

centrate their defenses in the north, but he could not be sure without a detailed ground reconnaissance of the south. Geiger assigned the mission to Major General Andrew Bruce’s 77th Infantry Divi-

sion, and Bruce passed it on to his 77th Reconnaissance Troop.

Early on 28 July, the troop departed friendly lines at Road Junction 370 (see map). It was organized into five small



AUTHOR'S NOTE: The discussion of the 77th Reconnaissance Troop's recon of the operation has been extracted from U.S. Army in World War II: The War in the Pacific: Campaign in the Marianas, by Philip A. Crowl, Office of the Chief of Military History, 1960, pages 326, 374-376. The map is from the same source.

patrols, each consisting of five men accompanied by a native guide. Patrols Able and Baker were to proceed directly east to the coast and return. Patrols Charlie, Dog, and Easy were to move directly south along the ridge below Mount Alifan with Charlie heading toward Mount Lamlam, Easy to Umatac, and Dog along the coast below Facpi Point. Each patrol was to send a radio report every two to three hours and call for artillery support if needed. Except for these general instructions, the patrols were to move according to their own discretion.

Patrol Able got less than halfway to Ylig Bay when two of its members and the guide came down with yellow fever and had to return. Patrol Baker then assumed responsibility for the entire area from Ylig Bay to Talofof Bay. The patrol spotted a few Japanese the first day but avoided contact. The next morning they moved north along the coast some four and one-half miles, where they met some Chamorros (native people of the Marianas) who told them that all Japanese of platoon size or larger had moved north. With this information, Patrol Baker returned to friendly lines.

Meanwhile, Patrols Charlie and Dog reached the slopes of Mount Lamlam but were turned back by rifle fire. Patrol Easy was able to slide between its flank patrols and reach Umatac on the west coast below Facpi Point. Patrol Easy found little evidence of enemy activity and returned along the coastal road without any of the contact Patrol Dog had experienced.

On 30 July, Bruce sent out Patrols Fox and George to recon Pago Bay and the southeast portion of the island. Patrol George penetrated more than seven miles toward Inarajan and did not return until 2 August. Neither patrol observed any enemy activity.

The information brought back by the 77th Recon Troop confirmed Geiger's assumption that there was no organized Japanese resistance in southern Guam. With this knowledge he could then concentrate his efforts to the north. The 77th Recon Troop had given their commander the information he needed.

Defining boundaries for the reconnaissance of southern Guam was easy enough since the end of the land marked an obvious limit of advance. The beachhead secured by the III Amphibious Corps served as the objective release point for the 77th Recon Troop and provided the patrols with security in case they had to break contact. When Patrols Charlie and Dog did not receive fire, it was easy for them to return to the safety of established friendly lines. Not all of the troop's patrols overlapped, and there was, in fact, a large gap between Umatac and Inarajan that was not patrolled. But Geiger was concerned only with an enemy large enough to threaten his corps, so he could afford to sacrifice total coverage for time. Where contact was made—as in Patrol Dog's area, for example—another patrol—in this case Easy—did overlap and found no organized resistance.

Because of the long, narrow shape of the island, the 77th Recon Troop did not have to worry about limiting themselves

to just a couple of adjacent patrols for fear of enemy contact in more than one direction. But they did have to be concerned with the enemy getting between the longer and shorter range patrols. Thus, the longer patrols, Fox and George, did not leave until the others had returned.

Although the 77th Recon Troop's zone reconnaissance of southern Guam may not be a textbook rendition of the fan method, the idea is the same. Perhaps more important, the operation shows how the factors of METT-T (mission, enemy, terrain, troops, and time) can allow a commander to take some shortcuts in the interest of time. In this case, Geiger was looking for a target for his corps-size force. If he had been looking for scattered bands of guerrillas, he would have had to take a different approach.

Soldiers who are faced with zone reconnaissance missions at the JRTC and elsewhere will do well to consider this example. The 77th Recon Troop tailored a "by the book" technique to meet the specific METT-T situation. This is the proper application of doctrine. Scout platoon leaders, S-2s, and commanders can use this historical example as evidence that the ARTEP techniques are not just academic drills but combat-proven solutions to real problems.

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Using the Company Mortars

SERGEANT FIRST CLASS ERIK P. HENRIKSEN

Company mortars are often ineffective on the Joint Readiness Training Center (JRTC) battlefield. Among the problems

are the lack of proper positioning and carrying of mortar ammunition, the suitability of an objective release point or

patrol base from which to fire mortars, and a failure to plan 60mm mortar fire for squad, platoon, and company mis-

sions. My observations are based on lessons learned, as well as discussions with section leaders and other key leaders while training at the JRTC.

Examining four areas will help a commander turn a burden into an asset:

Command relationship and planning. The company commander and the mortar section leader must establish a solid working relationship. This will help the mortar NCO understand how the commander plans to fight the battle. He must be the subject-matter expert, advising the commander on employing the mortar section. Because of the importance of his recommendations, the section sergeant must understand offensive and defensive infantry tactics and the ways his section can best support the company.

A commander can conceptually use his indirect fire assets, but he generally lacks specific expertise regarding the capabilities and limitations of 60mm mortar employment. Because of the complexity of missions, the section leader's responsibility as the commander's advisor has increased dramatically. The section leader's advice can benefit the commander's planning process in the areas of mortar support location, how best to tie the mortars into the scheme of maneuver (split section, handheld), and where best to be located in the movement. A technique that facilitates proper planning and execution of company mortar support is for the commander to develop courses of action (COAs) along with the section leader.

Employment considerations should be based on mission requirement, type of support required, commander's guidance for fire support, and engagement criteria. Specific items to address are the location of the mortar section, the range of ammunition, radio communications, and the amount and type of mortar ammunition to be carried by the company. This COA development and subsequent wargaming will help the commander in his planning and decision making process—where, when, and how to use the mortars to support the maneuver plan.

It is essential that the mortar section leader attend all company orders. He needs to be at company briefbacks to stay abreast of each platoon's planned execution, and even more important, to con-

duct his own briefback. By listening to each brief, the section leader can ensure that his plan supports the platoon's ground tactical plan—targets and final protective fires (FPF), mortar round drop-off location.

Battle tracking and responsiveness. Battle tracking is more than just knowing the company's objective. It consists of knowing the route to be taken, having all company graphics properly drawn, knowing the order of march, and keep-

The section leader needs to attend all company training meetings and present his training plan for the mortar section to the commander.

ing an updated situation map of current unit and adjacent unit locations. Company mortars follow the ground tactical plan with multiple targets along the movement axis. They shift from the various targets, which gives the commander continuous indirect fire coverage.

The most significant characteristic of the 60mm mortar is its responsiveness, and if the section leader is not tracking the battle, his ability to respond quickly is greatly reduced. An aggressive section leader will periodically get with the

Leaders need to be aware of all the ammunition an injured soldier is carrying before evacuating him.

commander and the company fire support officer (FSO) to report critical mortar information and retrieve the information he needs for his mission, such as platoons that may have shifted their defensive positions because of terrain.

In the defense, the commander should inspect the mortar position when checking the company positions to ensure that the mortars complement his scheme of maneuver just as he would do with a Dragon position. The commander should check the mortar section's situation map

as he would inspect range cards. This will ensure that the map, target/FPF list, obstacles, and trigger points are accurate. An up-to-date map with the correct grids or unit locations will help reduce the probability of fratricide.

The section chief can also track the battle by actively monitoring the radio. When the mortar section hears that a unit is in contact, it can reduce the response time by advising the leader in contact that the mortars are available. At the same time, the mortars shift the guns in that direction on a pre-plotted target. In essence, the mortar section leader's actions will help remind the leader in contact that another asset is available to attack the target.

Another problem is that the mortar section has one radio (PRC-119), and it is usually set on the company mortar frequency. The mortar net creates two problems:

- The mortars rely on the FSO or forward observers (FOs) for information. As a result, the mortar section misses out on the development of the battle being communicated over the company net.

- Individual soldiers cannot talk to the company mortars without having to find a PRC-119. (Most squads carry the PRC-126, which does not hop frequencies and is not secure.) Information that reaches the mortar section over the mortar net is usually outdated or too late to act upon. Some units monitor the company frequency and then drop to the mortar frequency when a call for fire is initiated, or they locate another radio with the mortar section. Information that is transmitted on the company net is critical to the mortar section's effectiveness on the battlefield.

Ammunition management. Generally, companies do a good job planning to get mortar ammunition onto the battlefield but not to the mortar position. On numerous occasions during mortar fire missions, mortar men have to search through unit rucksacks or assault packs to recover mortar rounds. Also, rounds are often evacuated with casualties. Leaders need to be aware of all the ammunition an injured soldier is carrying before evacuating him, and companies should have standing operating procedures for



ammunition distribution, drop-off, and retrieval.

Some units train with mortar canisters wrapped with tape (for durability) and filled with sand or concrete. PVC tubing also works well in the place of mortar canisters because the plastic is weather resistant. Using 3x5 index cards to represent mortar rounds is another technique. Although soldiers do not experience the weight of the rounds, this forces units to go through the procedures for moving mortar rounds.

A unit's key to success is to train as it will fight, so the best possible training aids should be used. The intent is to train the company on mortar ammunition procedures in all field training and live-fire exercises.

Training. The section leader needs to attend all company training meetings and present his training plan for the mortar section to the commander. Mortar training should be annotated on the training schedule and then conducted as scheduled. All live-fire exercises should include the use of mortars, forcing the platoon and squad leaders to plan for and call indirect fire.

One technique is to conduct a movement-to-contact range. As the lead platoon comes in contact, and within safety constraints, the mortars move to a location on the flank and fire in front of the platoon in contact. The mortars should move with the company. This will be more realistic when the mortars need to locate to a suitable firing position and put

the guns into action. The trail platoons file by the mortar position and drop off mortar ammunition according to company SOP.

Another technique is to incorporate the 60mm mortar section into a platoon live fire and combine the M60 machineguns and 60mm mortars in support-by-fire positions. The mortars can support from these positions on a single target or on separate targets that need to be suppressed. In this scenario, the leader can choose to fire the mortar in the handheld or conventional mode.

The biggest concern when planning mortar fires is firing directly over the heads of soldiers. Another concern is the impact of the round close to soldiers. The bursting radius of the 60mm is 25 meters; although this allows for maneuverability, probable error should be factored in.

A live fire of this complexity requires a lot of planning. Good coordination between leaders and range control and identifying ways to reduce risk (rehearsals and wearing flak vests) can provide the necessary "train as you fight" training.

The mortars must receive a balance between their own separate section training and training that is incorporated with the company. If all training is separate, the "train as you fight" principle is lost. Separate training is needed to sustain skills in gunnery and live-fire ranges for missions described in ARTEP 7-90, MTP, *Mission Training Plan Infantry Mortar Platoon, Section, and Squad*. This training offers a good opportunity for leaders to see the capabilities of the 60mm mortar.

A commander and mortar section sergeant can ensure that the section is properly employed by focusing on the four critical areas of command relationship and planning, battle tracking and responsiveness, ammunition management, and training.

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OPFOR Reconnaissance Techniques Worth Adopting

CAPTAIN PETER J. DON

Many commanders believe that the opposing force (OPFOR) scouts at the National Training Center (NTC) are the best in the world. Certainly, their ability to gather intelligence leads to their success on the NTC battlefield. Some observers contend that this success stems from their detailed knowledge of the terrain and the fact that they can practice and perfect their skills with each new training rotation. Although these factors contribute to success, other elements are more significant.

While U.S. Army doctrine relies heavily on technology as its edge on the battlefield, OPFOR reconnaissance doctrine emphasizes ground assets, and the scouts are organized to support their mission. Experience has taught the OPFOR scout platoons that success in reconnaissance depends mostly on infiltration skills, command and control, force structure, and tactical intuition.

By learning and understanding the tactics, techniques, and procedures (TTPs) the OPFOR scouts use, a standard Army scout platoon can operate more effectively and efficiently on the battlefield.

Infiltration Skills

Infiltration skills are crucial to a scout platoon's success. When planning a traditional reconnaissance mission and issuing an operations order, leaders tend to disregard the scouts' ability to infiltrate into enemy territory, focusing solely on the commander's priority intelligence requirements (PIRs) and subunit instructions for each vehicle. As a result, soldiers and vehicles never reach their final positions. They are destroyed and do not obtain the information the commander

needs. Infiltration is both a science and an art that scouts can understand only if they realize the critical principles involved and then constantly practice them.

Infiltration techniques differ for OPFOR scouts, depending on whether the mission is offensive or defensive. During an offensive mission, such as a movement to contact, scouts must understand the doctrine used by the opposing force. The scout platoon leader must ensure that his soldiers know where to expect enemy reconnaissance and counterreconnaissance

Experience has taught the OPFOR scout platoons that success in reconnaissance depends mostly on infiltration skills, command and control, force structure, and tactical intuition.

elements on the battlefield, along with the key terrain (as determined by the commander) and the PIRs from the S-2.

The commander's intent for an offensive mission is to have a scout occupy or clear a piece of key terrain for the main body. This is often a race against the clock and against the enemy's reconnaissance unit. Therefore, the unit must infiltrate quickly and securely into sector to reach vantage points from which to watch enemy reconnaissance elements and combat forces.

A scout platoon leader should position himself so that he can see where contact between forces will occur. His under-

standing of the enemy's mission, doctrine, and standing operating procedures will help him track and report the battle.

When facing a deliberate defense, infiltration becomes precise and requires more planning. This is where a scout's infiltration ability is tested. OPFOR scouts first determine whether to infiltrate into sector early or late. One successful technique has the scouts infiltrate early, before the Blue Force (BLUFOR) establishes a counterreconnaissance or screenline, which often means infiltrating in daylight or at dusk. It succeeds because it is unexpected. Upon establishing the screenline at night, the BLUFOR counterreconnaissance element scans deep in sector to identify movement or activity. By this time, the OPFOR scouts have identified the composition and location of the screenline and are well on their way into the main defensive area.

BLUFOR commanders and S-2s must make sure the reconnaissance and surveillance plan is finished and their scouts are deployed early, even before the task force or brigade order process is complete. Failure to execute in a timely manner gives the OPFOR scouts more time to infiltrate unopposed. OPFOR scouts will position one vehicle to track the screenline and guide the rest of the scouts through it. Another benefit of infiltrating early is the time window it provides. The scouts have the flexibility to decide whether to halt movement, wait out the screenline, or seek another infiltration route.

Infiltration late at night relies on the idea of exploiting any problems enemy security forces may encounter, such as

confusion, vehicle identification, and synchronization between scouts and the counterreconnaissance force. Timely infiltration can result in gaps in the enemy's screenline. Another consideration is that in many cases vehicle crews tend to be more alert and maintain stricter security between 1900 and 2300 than between 0100 and 0300. But this should not always be assumed. Scouts must base late-night infiltration on the enemy's morale, capabilities, strength, and experience. A disadvantage to late-night infiltration is the time constraint, which limits a scout's ability to reach his objective and complete the mission.

The OPFOR scouts excel at negotiating and exploiting enemy screenlines by initially conducting a thorough map reconnaissance and rehearsal. Each vehicle commander is well-versed on enemy disposition and locations and knows when and where he is likely to encounter a screenline. Each operation is divided into phases of contact. An example—in the order of contact—is: counterreconnaissance element, engineer/obstacle, main defensive area, and rear support element (brigade support area or tactical operations center). Also, the entire crew understands the unit's mission, enemy situation, and infiltration route through the screenline, and crewmen are cross-trained to execute their duties and responsibilities. Successful infiltration depends on the entire crew (track commander, gunner, and driver).

Another technique the OPFOR scouts use successfully is to have two soldiers in the hatch during infiltration. Two can scan twice as much area as one, increasing the chances of identifying the enemy early and reducing eye fatigue for the soldiers. The vehicle commander and gunner scan (using the clock method), alert the driver to an enemy vehicle, and guide him along the terrain. This enables the driver to adjust his route and take evasive action in case his vehicle is engaged. This is something all Army scouts should consider implementing into their training. The traditional technique of having the vehicle commander sitting alone in the front seat limits his field of view and his ability to read a screenline.

The final concept of successful infil-

tration is slow, steady, continual movement into sector. The scouts successfully infiltrate in accordance with the situation of the enemy screenline. They avoid the high ground and move low, avoiding enemy strengths and taking advantage of weaknesses. Continuous movement during infiltration decreases the chances of being identified. If an OPFOR scout vehicle is identified by an enemy scout or a counterreconnaissance vehicle, it adjusts

The OPFOR scouts excel at negotiating and exploiting enemy screenlines by initially conducting a thorough map reconnaissance and rehearsal.

its route so that the enemy can no longer track its movement. Conventional U.S. scouts would stop their advance upon identification and wait, hoping to develop the situation. When a scout vehicle continues moving slowly, the enemy counterreconnaissance is forced to guess its location and also alerts adjacent vehicles to its whereabouts. The time required to contact a vehicle, relay a report of enemy infiltration into a defensive sector, and coordinate movement is long enough for a scout to exploit the screenline and move deep into the defensive area. In addition, it is difficult for any electronic warfare direction-finding assets to obtain a cut or fix on scout vehicles continuously moving into sector while using radio listening silence.

Command and Control

The next advantage the OPFOR scouts exploit over their counterparts at the NTC is that offered by their command and control structure. The OPFOR re-

The OPFOR scouts operate on a single radio frequency and report directly to either the scout platoon leader or the S-2.

connaissance company deploys and operates more independently than BLUFOR scouts. Each vehicle is a self-contained, independent reconnaissance element. A well-trained crew can oper-

ate independently of the others, thereby allowing each vehicle—even if it is the sole survivor—to collect PIRs and cover named areas of interest (NAIs). Each member of the OPFOR scout unit understands his mission as well as that of others in the vehicle. This enables a single crew to create a contingency plan for continuing to obtain information on the enemy.

The OPFOR scout platoon leader's role differs from that of a BLUFOR scout platoon leader. He may conduct reconnaissance instead of relying only on his other scouts for the required information. This technique gives the OPFOR scouts two distinct advantages:

First, upon establishing his final set, the OPFOR scout platoon leader helps the regimental commander determine the best route or course of action for the motorized rifle regiment to adopt. This concept would seem absurd for a BLUFOR unit, but the logic is sound: The OPFOR scout platoon leader is the senior lieutenant, the senior scout, and the junior officer with the most tactical experience. Thus, by positioning himself forward and observing the fight, he can advise the commander on the enemy's weaknesses and intentions. And having a direct communications link to the regimental commander, the S-3, and the S-2 decreases the probability of losing or misinterpreting crucial combat information because of communications security and radio transmission problems. Experience at the NTC has proved this tactic sound. The command staff receives combat information that has already been analyzed by the scout platoon leader. It is combat intelligence that goes down to the subunits for their final preparations.

The other command and control OPFOR advantage involves the role of the S-2, the communications net, and the reporting method. The OPFOR scouts operate on a single radio frequency and report directly to either the scout platoon leader or the S-2. This alleviates the problem of excessive radio traffic and ensures that the S-2 knows the enemy situation. In a normal BLUFOR unit, individual vehicles report to either the scout platoon leader or the platoon sergeant. Once the reports are received and recorded, the

traffic is relayed to the battalion S-2. This process is too time-consuming.

OPFOR success with this technique results in strict communications and operations security and proper reporting methods. During the infiltration phase, the platoon leader has overall command and control of the reconnaissance elements. During the actual battle, however, the S-2 may direct the scouts to answer any PIRs or cover NAIs. This works well because the OPFOR scout platoon leader reports combat information on the regimental net to the maneuver commanders. It also facilitates the OPFOR reconnaissance effort and collection plan.

Force Structure

The BLUFOR scouts, and the Army as a whole, can learn a lot from the force structure of the OPFOR scouts. The scout organization is a hierarchy. There are two reconnaissance companies; one replicates division reconnaissance and the other regimental reconnaissance. Each unit basically consists of four BRDM-2s, four BMP-1s, six dismounted reconnaissance teams (DRTs), and attachments (BRDM-2Rkh: chemical reconnaissance, tanks; IRD: engineer reconnaissance, and ground surveillance radar). A reconnaissance company is tailored specifically for each mission during a training rotation.

The order of importance for the unit are the DRTs, followed by the BRDM-2s, the BMPs, and tanks if available. The BRDM-2s are responsible for inserting the DRTs, the BMPs assist in the BRDMs' infiltration, and the tanks enable the BMPs to exploit the counterreconnaissance screenline. Using this structure gives the OPFOR scouts more firepower and provides additional combat power to help infiltrate priority vehicles. In the past, the tanks have proved to be a greater asset when used as a distraction on a flank, because the entire BLUFOR counterreconnaissance force focuses and collapses on them, allowing the BMPs and BRDMs to infiltrate on the opposite flank or through a gap.

As an example of this process, an OPFOR BRDM-2 that is detected or engaged while inserting DRTs will use a BMP as a distraction or penetration in the screenline. Thus, the BMP, which has

more firepower and protection, becomes decisively engaged instead of the BRDM, and the unit retains the crucial BRDM-2. It evades the screenline and the conflict and proceeds with its mission of inserting the DRTs to their positions. It also establishes its own final set before the battle. The DRTs provide most of the

The force structure is a simple and flexible relationship between OPFOR scout vehicles that may apply to both offensive and defensive scenarios.

combat information and maintain continuity between the OPFOR division and regimental reconnaissance elements entering and leaving the sector.

Because of their size, speed, and stealth, the BRDMs always infiltrate ahead of the BMPs, attachments, and tanks. They also receive the deep infiltration missions to gain and maintain visual contact with the enemy's rear combat service support, reserve force, and assembly areas or battle positions. The BMPs infiltrate relatively shallow into sector to maintain observation of the enemy scouts and counterreconnaissance forces. The tanks are used as a shallow reserve or quick-reaction force to punch

A well-trained crew can operate independently of the others, thereby allowing each vehicle—even if it is the sole survivor—to collect PIRs and cover NAIs.

a hole in the enemy screenline if necessary. The chemical and engineer reconnaissance vehicles act as extra eyes on the battlefield and may act as yet another scout element if the need should arise.

The force structure is a simple and flexible relationship between OPFOR scout vehicles that may apply to both offensive and defensive scenarios. BLUFOR scout platoons could adopt this tactic by restructuring the unit to include M2 Bradley fighting vehicles and M1 tanks with their inventory of ten HMMWVs (high-

mobility multipurpose wheeled vehicles). The added firepower and protection would increase the scouts' infiltration and survivability rate on the battlefield.

Another idea is to incorporate the former antiarmor company (Echo company) into the force structure. This company's secondary mission is reconnaissance, which would increase the effectiveness and survivability of today's scout platoon.

Tactical Intuition

The final advantage of the OPFOR scouts over their counterparts is tactical intuition. The goal is to sense the enemy on the battlefield, anticipate his actions, and take advantage of the situation. This intuition is difficult to measure, develop, or even describe. Many combat veterans of past campaigns and wars understand what it is like to sense the enemy, the terrain, and the battlefield. Through countless missions, rotations, and training at the NTC, the OPFOR scouts develop a battlefield instinct that helps them function in the uncertainty of battle and make decisions based on unknown actions of the enemy. Although experience gained is also important, it often becomes obsolete. Thus, the OPFOR relies on tactical and technical training to develop this intuition so it can take precedence over experience. Any soldier who has experienced a field training exercise or actual combat knows that events on the battlefield are not premeditated, but spontaneous, and these events are met with tactical intuition.

OPFOR scout platoon leaders ensure that their soldiers fully understand the enemy's capabilities, disposition, and composition as well as they do the terrain. This is reiterated and reinforced through countless rehearsals. The intent is to focus the soldiers' minds for the upcoming mission and help them visualize the battlefield. The result is a unit fully in tune with the enemy and his mission, and no discrepancy or abnormality goes unnoticed throughout the operation.

Any scout platoon preparing for an NTC rotation can achieve this state through tough and realistic training. The training must include detailed study of the OPFOR, the terrain, and the scout

platoon's capabilities and limitations. Commanders must emphasize their scouts' ability to fully understand the enemy's order of battle and TTPs. Then they can anticipate enemy actions and sense when something is unusual.

In addition, training must focus on developing other senses besides sight. The goal is to achieve the "gut feeling" and anticipate the enemy's next move. Leaders can develop this instinct through numerous rehearsals, war games, and sandtable exercises. For the OPFOR scouts, the terrain and missions have become second nature. Through monthly repetition and constant exposure to different units, these scouts can focus on and follow their

instincts while mentally analyzing their enemy.

Although incorporating these TTPs into traditional U.S. doctrine is not simple, it can be done, once units realize that doing so will enable them to operate more effectively against an adversary. The difficulties lie in training and testing scout platoons to reach and maintain the OPFOR scouts' level of proficiency. Overall, we must demand more from our scouts to provide timely and accurate combat information. We must also train our scouts to execute in-depth analysis of the enemy and terrain instead of just identifying and counting enemy equipment, vehicles, and personnel.

As leaders, we must learn to support our scouts with time, resources, and training (with guidance from S-2s). By incorporating these techniques, we can redefine the mission and training of our scouts and better focus our reconnaissance efforts.

Captain Peter J. Don served as an OPFOR scout platoon leader, rifle platoon leader, and company executive officer at the National Training Center and is now assigned to the 1st Battalion, 10th Special Forces Group in Germany. He is a 1990 ROTC graduate of Claremont McKenna College.

FIFTY YEARS AGO IN HISTORY SEPTEMBER-OCTOBER 1946

Events in China had captured world attention by the autumn of 1946. Nationalist and communist factions had already claimed portions of that immense land as their own, and the likelihood of conflict in contested areas was increasing daily. To the south, the role of U.S. forces in South Korea was being redefined as South Korean forces were becoming more self-sufficient. Meanwhile, U.S. Marines and their units returned from the Pacific Theater in increasing numbers as part of the postwar drawdown. In Germany, Soviet hopes for greater influence were dashed as communist candidates were defeated in the first postwar elections.

These and other highlights of the postwar years have been provided by Mr. Bud Hannings, in preparation for his upcoming chronology of the Korean War.

- 6 September** *The Chinese Nationalist Army assumes responsibility for the protection of the coal fields and rails lines running between Chinwangtao and Peiping (Beijing).*
- 11 September** *Believing—one year after the end of the war and Japanese occupation—that South Koreans should become self-sufficient, General Lerch, the U.S. Military Governor of Korea, orders all Americans in the Korean government to cease their day-to-day responsibilities and act only as advisors.*
- 13 September** *Special Representative George C. Marshall informs President Truman that his and Ambassador Stuart's diplomatic efforts to bring about a peaceful resolution to the crisis in China have reached an impasse.*
- 2-5 October** *Frustrated by the intransigence of both the Nationalists and the Communists, Marshall informs President Truman that there appears to be no workable solution to the Chinese situation and requests that he be recalled. Learning of this, Chiang Kai-Shek proposes a ten-day truce to encourage further negotiations.*
- 9 October** *Marshall visits Shanghai to meet with the Communists' Chou En-lai in an attempt to arrive at a compromise between the two factions. Chou En-lai subsequently accuses Marshall of favoring the Nationalists, and Marshall withdraws from serving as mediator in future negotiations.*
- 20 October** *The people of Berlin go to the polls for the first postwar free elections. The Soviets have agreed to this move because they believe that the Soviet-backed Socialist Unity Party will sweep the elections. To their dismay, the party is able to gain less than 20 percent of the vote. This democratic victory means, however, that the Allies will find the Soviets much harder to deal with in future negotiations concerning Germany.*

INFANTRY CAREER NOTES



RANGERS NEEDED

The 75th Ranger Regiment routinely has openings for warrant, company, and field grade officers in the following branches—Infantry, Military Intelligence, Field Artillery, Chemical Corps, Signal Corps, Medical Corps, Chaplain Corps, and Judge Advocate General Corps. The positions are located within the regimental headquarters at Fort Benning, Georgia, and the 1st, 2d and 3d Ranger Battalions, located at Hunter Army Airfield, Georgia; Fort Lewis, Washington; and Fort Benning, Georgia.

The regiment also needs enlisted soldiers in the following MOSs: 11B, 11C, 31C, 31U, 31Z, 35E, 54B, 63B, 71D, 71L, 71M, 73D, 75B, 75H, 88M, 91B, 92A, 92G, 92Y, 96B, 96D, and 97B. Soldiers in MOSs 11B, 11C, 11Z and 13F in the ranks of sergeant and above must possess skill qualification identifier "V" (Airborne Ranger). All volunteers must be Airborne-qualified or willing to attend Airborne School and must pass an indoctrination and orientation program before assignment to the 75th Ranger Regiment. Personnel who are assigned to the regiment, regardless of branch or MOS, are eligible to attend the Ranger Course. Many of the MOSs within the regiment qualify for special duty assignment pay.

Enlisted personnel who are interested in assignment to the Ranger regiment should send a copy of DA Form 2A, DA Form 2-1, and a completed DA Form 4187 to Commander, PERSCOM, ATTN: TAPC-EPMD-EPK-I (Ranger Team), Alexandria, VA 22331, requesting assignment within the 75th Ranger Regiment.

Senior NCOs must provide additional documentation to the Ranger Regiment.

For more information, enlisted personnel should call the regimental PSNCO, SFC Lowman, at DSN 835-3790/5673 or

commercial (706) 545-3790/5673. Officers interested in submitting a packet should call the regimental assistant adjutant at DSN 835-5124, commercial (706) 545-5124.

INFANTRY BRANCH DIRECTORY

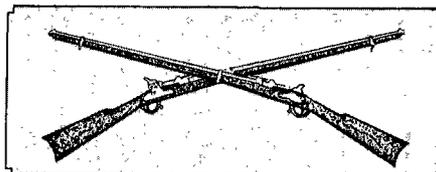
POSITION	NAME	DSN 221-XXXX (703) 325-XXXX EXTENSION	E-MAIL USERID	TOPMIS USERID
Branch Chief	LTC Marchant	4376 0445	MARCHANR	RMARCH
Branch XO	Mrs. Henderson	4376	HENDERSN	NHENDE
LTCs Desk	MAJ Pettus MAJ Tolleben Ms Hairston	5521 5524 0445	PETTUSR TOTLEBER HAIRSTOD	RPETTU RTOTLE DHAIRS
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BOOK REVIEWS



***Hazardous Duty.* By David H. Hackworth, with Tom Mathews. William Morrow, 1996. 350 Pages. \$27.00.** Reviewed by Lieutenant Colonel Albert N. Garland, U.S. Army, Retired.

In this book, the author writes "soldier talk"—simple, direct, earthy, and often profane. He is a retired Army colonel of Infantry with a chestful of combat awards earned in two wars, Korea and Vietnam.

Many readers may be turned off by his writing style, and rightly so. With them, I believe he could have made his points without the amount of profanity he apparently felt he had to use to impress his young military readers and to emphasize the points he was trying to make.

This is his second major book. In the first, *About Face*, which was published in 1989, he tells of his early life, his military experiences, and his 17-year self-imposed exile in Australia. He is considered our most decorated living combat soldier, and there is little question he earned each of his 27 awards.

He begins this book where he left off in *About Face*, with his return to the States by way of Hawaii in 1989 and his eventual employment that same year with *Newsweek* Magazine as a roving war correspondent.

Hackworth came back carrying a lot of mental baggage from his Vietnam War years. He tells us, "Vietnam left me full of bitter anger and disappointment, mainly with the military but also with my country and how it treated the warriors who fought there." He says he is over that anger and disappointment, but I don't think he is or ever will be. It's buried too deep in his soul.

He detested many of the Army's senior leaders in Vietnam—for example, General William Westmoreland was "a reckless butcher." And he detests just as many of today's senior Army leaders, whom he refers to as "Perfumed Princes." He believes that, in the Army today, "once you get beyond the rank of lieutenant colonel very few real war fighters are left....They become politically correct....All that counts is getting the star and moving on up the galaxy."

If there is one central theme in this book, it is Hackworth's desire to protect the "grunt" from the Perfumed Princes, "to make sure our

soldiers on our battlefields are well trained, well equipped, well led—and not sent to hot spots on missions that don't make sense."

Hackworth is even-handed, one must give him that. He has equal regard for our political leaders—from the President on down the line, and probably to the lowest level GS employee in the Pentagon—and for defense industry executives—members of the "Military Industrial Commercial Complex."

For *Newsweek*, he covered the Gulf War; the Balkans, at two different times; Somalia, also at two different times; Haiti at the beginning and for several weeks thereafter; and Korea, in 1994 when it appeared a shooting war might break out. In between, Hackworth managed to get to Vietnam, where he visited several old battlefields and met some of his opponents. Along the way, he developed an intense dislike for many of today's journalists, and at one point during the Gulf War even threw a punch at one of the TV "Stars" who had cursed him. (The man's producer, fortunately, stepped in and took the brunt of the blow.)

In his last three chapters, Hackworth discusses his role (a minor one, to be sure) in the suicide of Admiral Boorda; Washington as he views it today; and ways to improve our defense structure. Here are only a few of his suggestions for improvement: "consolidate all our fighting forces into one unified service"; "merge the Army and Marine Corps"; "put the Navy in charge of all strategic missiles"; and "merge the National Guard and the Reserves into one streamlined organization."

He tells us he intends "to keep sniffing around like an old coyote, chewing on the Military Industrial Congressional Complex and "calling 'em as I see 'em." I have no doubt he will do just that.

Lots of folks won't like Hackworth's book, and I don't think he will be welcome at the White House or the Pentagon in the near future. But there will be other people, in and out of the military services, who will say to him, "Right On!"

***Decisive Force: The New American Way of War.* By F.G. Hoffman. Praeger, 1996. 160 Pages. \$52.95.** Reviewed by Colonel

George G. Eddy, U.S. Army, Retired.

In this concise book of 133 pages with many footnotes, the author attempts to analyze the concept of decisive force in relation to Vietnam, Beirut, Panama, and the Gulf War. In only the latter two of these engagements has the concept applied. While the military services were basically satisfied with their relative freedom of action to apply a preponderance of force, we must ask whether such conflicts will prevail in the future, or whether the military will find itself increasingly involved in operations other than war. The military must both recognize the likelihood of more such operations and adjust its doctrine and tactics accordingly. It must also learn how to deal appropriately with civilian authorities and the attitudes and concerns of the American public. Basic conflicts exist between decisive force and OOTW. Therefore, the military must heed the admonition of Robert Connor in *America's Armed Forces* that it must develop a pervading theory of war.

As author Hoffman notes: *The U.S. military shows a marked predisposition for strategic offensives supported by full national mobilization, employing the economic and technological assets of the nation, to bring to bear a preponderance of power in the most direct and decisive manner possible.* Aiming for a quick conquest is a prerequisite to this concept of going to war. In essence, this is the American Way of War perhaps first enunciated by Russell Weigley. In other words, decide, commit all necessary resources, get in, meet the objectives as rapidly and decisively as possible with minimum casualties, get out, and come home. By contrast, we have Beirut, Somalia, Haiti, and now Bosnia—operations that stray far afield from this Way of War.

Essentially this is the Powell Doctrine of decisive force, subsequently retained as a concept in revisions to the next iteration of the National Military Strategy. As the author observes, "The principle of Decisive Force is now firmly rooted in the U.S. military lexicon and culture." The critical goal is to overwhelm the enemy as rapidly as possible and, above all, strive to ensure that the conflict does not deteriorate into a long-drawn-out affair with increasing casualties and rising public dissatisfaction and criticism. Getting out

BOOK REVIEWS

quickly was always in General Powell's mind. He was the brakeman—quick to stop the ground war in the Gulf and remove our troops. As Hoffman relates, "Other reports have General Powell looking to end ground combat as early as the second day of the ground phase."

The relationship between the military and civilian authorities is complex enough, but since 1992 the military has been confronted with an administration faced with increasing domestic commitments. As a result, the military has been required to undertake missions and roles contrary to the traditional decisive approach to war. Today's deployed forces face greater constraints on the use of force than ever before, and will be challenged to train and execute missions with ever-diminishing resources.

The author observes: *The lack of clarity between military objectives or political objectives is also a criticism of the military's leaders. It does not speak well of the military if over 100 generals admit to having sent 500,000 men to combat (in Vietnam) in a sense of confusion. Nor does it say much for the leadership to have fought a conflict that claimed 58,000 lives, without any clear sense of purpose.*

When the use of military force is being contemplated by the President and his top civilian advisors, it is the duty of the military, as the author believes, to speak up forcefully about the most appropriate use of the military to achieve political objectives.

Read this book.

Imprisoned or Missing in Vietnam: Policies of the Vietnamese Government Concerning Captured and Unaccounted for United States Soldiers, 1969-1994. By Lewis M. Stern. McFarland & Company, Inc. (Box 611, Jefferson, NC 28640), 1995. 191 Pages. \$32.50. Reviewed by Dr. Joe P. Dunn, Converse College.

Much of the literature on the Vietnam MIA issue is inflammatory and ill-informed. This excellent book is dispassionate, comprehensive, and informed.

Lewis Stern was involved in Department of Defense policy-making on the POW/MIA issue from September 1989 to early 1994 as country director for Indochina in the Office of the Assistant Secretary of Defense for International Security Affairs. He made at least eight trips to Vietnam with delegations, participated in technical sessions with the Vietnamese, provided analysis and policy papers, and advised various officials. He has done research in the documents and literature on the subject, and he knows and has interviewed most of the major players in this field over

the years. The resulting book is an important contribution to our understanding of this complex and emotional issue.

Stern approaches the topic chronologically with chapters on the various time periods from Hanoi's negotiating position on the issue during the Paris peace talks in 1971-1973 through the U.S. decision to lift the trade embargo against Vietnam. He weaves a complex story of the various periods of Vietnamese response to U.S. probing of the POW/MIA issue—from their uncooperative and inflexible stance in the late 1970s, to limited breakthroughs in the 1980s, to the significant steps forward in the early 1990s. The U.S. and Vietnam had very different points of reference and perspectives on the issue and its relationship to the normalization of relations.

In addition, Stern demonstrates that the Vietnamese position was not monolithic. The various ministries—foreign affairs, national defense, and interior—had very different agendas and often subverted each other. The internal struggle between various personalities within the government played a large role. Moreover, technicians and mid- to low-level bureaucrats often worked at cross purposes with higher ministerial policies.

Beyond the specific topic it addresses, the book gives valuable insights into the workings of the Vietnamese political system, a typical example of a system in which reality is often far removed from organizational structures and policies.

An incredible amount of information is crammed into this slim volume. It provides the background needed to understand the difficulties and accomplishments in POW/MIA affairs over the years, and it vividly points up the simplicity of most of the inflammatory writings on the issue. Although this may not be the definitive source, it is a most valuable one.

White Tigers: My Secret War in North Korea. By Ben S. Malcolm with Ron Martz. Brassey's, 1996. 241 Pages. \$24.95. Reviewed by Michael F. Dilley, Davidsonville, Maryland.

Ben Malcolm was a lieutenant in January 1952, assigned to the 3d Infantry Division in Korea. During his in-processing in Japan, he was told to report for "an interview...for another assignment." He was selected and reassigned to the 8240th Army Unit as an advisor to a North Korean partisan organization. This book is the story of Malcolm's year in the Korean War and, briefly, his contact with guerrilla war and special operations after the war.

In early 1952 the U.S. Army had no policy or doctrine dealing with unconventional war.

Furthermore, most commanders didn't want anything to do with guerrilla activity, seeing it as not real combat and not in the larger strategic concept of how to fight a war. Following World War II, the few organizations that had any experience in unconventional fighting or working with partisans (such as the Office of Strategic Services, the Alamo Scouts of Sixth Army, GALAHAD, MacArthur's Allied Intelligence Bureau, and the 5217th Reconnaissance Battalion, to name a few) were all disbanded and any residual expertise the Army may have had almost disappeared in the winds. On the other hand, there were thousands of North Koreans who were not followers of Kim Il Sung (or Syngman Rhee, for that matter) and were willing to fight "to liberate their country and to free their families and homeland."

Malcolm worked with Donkey-4, a bold partisan unit that operated from two islands in the Yellow Sea—Paengnyong-do and Wollae-do—actively recruited new members from a western coastal province, Hwanghae, and regularly conducted operations in North Korea. Although he brought to his assignment no formal training in unconventional warfare, Malcolm had spent a year as a training officer in a basic training company at Fort Knox. He knew how to train and motivate troops.

The combination of his talents and Donkey-4's aggressive spirit made for an explosive mix. Malcolm was not afraid to accompany his partisans on operations. Despite a standing order he had only "heard about" that prohibited American advisors from going into North Korea, he regularly went on operations behind the lines with his "White Tigers." One of these operations turned out to be a trap set by the North Koreans.

Malcolm and Martz tell this story in a fast-paced, first-person narrative organized by theme rather than chronology. Although this may sound confusing, it actually works very well. In addition, they weave into the narrative the background facts that help clarify the maze of organizations, professional rivalries, and petty jealousies that made up the command and control of partisan operations during the Korean War. The highlights of the book are the two chapters, six and seven, that describe the preparations, training, and conduct of a Donkey-4 raid on a North Korean coastal gun.

I recommend this book highly, especially for all leaders. This is the story of a leader who understood his mission, cared for his troops, thoroughly prepared them for their operations, and then led them into combat. Malcolm's story should be a basic text for all who would do likewise.

***Lethal Glory: Dramatic Defeats of the Civil War.* By Philip Katcher. Arms and Armour Press, 1995. 224 Pages. \$24.95.**

***In Their Own Words: Civil War Commanders.* Collected and Edited by T.J. Stiles. The Berkley Group, 1995. 327 Pages. \$14.00.** Reviewed by Dr. Charles E. White, Infantry Branch Historian.

The U.S. Civil War continues to fascinate people. With the publication of *Lethal Glory* comes an interesting attempt to find some new and relevant contribution to the plethora of works on that war. Unfortunately, it adds little to our understanding of our nation's greatest tragedy.

This book recreates 15 so-called "Dramatic" defeats: the Surrender of Fort Sumter; the Battle of Ball's Bluff; the Defense of Fort Henry; the Loss of Fort Donelson; the Campaign in New Mexico; the Assault on Fredericksburg; Pickett's Charge; the Assaults on Battery Wagner; the Capture of the USS *Satellite* and USS *Reliance*; the Siege of Plymouth, North Carolina; the Defense of Fort Pillow; the Battle of the Crater; the Raid on Centralia, Missouri; the Battle of Cedar Creek; and the Battle of Fort Stedman. None of these were actually either "lethal" or "glorious"; in fact, the selection of these particular engagements demonstrates just how desperate the author and publisher were to produce yet another title on the U.S. Civil War.

Philip Katcher seeks to show that all 15 "defeats" were catastrophic in the eyes of the losers. Some, he contends, turned the tide of the war, while others had no impact on the outcome whatsoever. For the most part, Katcher argues, all 15 were hollow victories for the winners. None of the winners exploited their victories, although Grant certainly wanted to pursue the Confederates after capturing Fort Donelson.

What the reader finds is a series of poorly selected "defeats," about which the author then tries to write something glorious. But where is the glory in telling of a psychotic, homicidal maniac like "Bloody Bill" Anderson and his murderous raid on Centralia, Missouri? Additionally, there was no defense of Fort Henry. When the Confederate commander saw the Union gunboats approaching his position and realized the futility of any stand, he sent his troops to Fort Donelson. With a small rear guard, he then fired a few rounds before surrendering the fort to the U.S. Navy. Was this dramatic? Furthermore, Pickett's Charge should not be listed as a separate entity but as part of a larger battle called Gettysburg. There are better Civil War histories than this book.

On the surface, *In Their Own Words* appears to lie in the same category. But closer inspection reveals that it is an abbreviated ver-

sion of the four-volume *Battles and Leaders of the Civil War*, a beautiful collection of thought-provoking, first-person accounts of the decisive events of the Civil War. Originally published in 1886, *Battles and Leaders*, remains a classic of Civil War literature.

This book is intended to be the first in a series of books that "aim to bring the drama of first-person accounts of American history into the hands of today's readers." In this respect, it is certainly a fine compendium for readers unfamiliar with the Civil War. Author T.J. Stiles includes excerpts from the battle reports of Grant, Sherman, Sheridan, McClellan, Farragut, Porter, Longstreet, Mosby, Johnston, and many others.

This is no mere anthology; it reads like a narrative of the Civil War from the military point of view. For those looking for a short military history of that war, told through the eyes of the actual participants, *In Their Own Words* is a good starting point.

***A Rising Thunder: From Lincoln's Election to the Battle of Bull Run.* HarperCollins, 1994. 413 Pages. \$13.00, Softbound. \$30.00, Hardcover.** Reviewed by Major Don Rightmyer, U.S. Air Force, Retired.

This book, the eleventh in author Richard Wheeler's series of Civil War "eyewitness histories," follows the style of his earlier works on such campaigns as Vicksburg, Gettysburg, the Peninsula Campaign, the 1864 Virginia battles, and Sherman's march to the sea. In each, he combines a well-written historical narrative with extensive first-person accounts by those who actually participated in or observed the events of the war as they occurred. This provides an immediacy to the portrayal period, which is often missing from many normal historical works.

This book covers the period leading up to the war, opening with Lincoln's election in 1860 and closing with the battle of Bull Run in July 1861. One of the most interesting perspectives shown during this period is the way in which both the North and the South viewed the prospects of conflict and how they each thought the war would transpire. The views of some on both sides were highly idealistic and romantic, predicting a short war full of pomp and ceremony. The reality of the long four years of war, which a few wiser heads had forecast, was of course something altogether different from the expected.

Fort Sumter is a well-known part of this story, as were the lesser known actions at Rich Mountain, Big Bethel, and the guerrilla warfare in the border state of Missouri. Some military leaders such as Generals Robert

Anderson and Irwin McDowell make their appearances and then fade from the historical scene while other such noteworthies as George McClellan and Thomas J. Jackson play only the first of their more significant roles in the unfolding war.

This book will be an excellent place to begin in reading some of Wheeler's earlier volumes, which will give the reader a good comprehensive overview in preparation for studying more detailed, technical historical works on the specific battles and campaigns.

***Encyclopedia of the Vietnam War.* Edited by Stanley I. Kutler. Charles Scribner's Sons, 1996. 711 Pages. \$99.00.** Reviewed by Colonel Cole C. Kingseed, U.S. Army.

The Vietnam war was the United States' longest war, far eclipsing its participation in either of the world wars or the Korean conflict. Twenty years after the fall of Saigon, that war still fascinates us, and its principal architects remain as controversial as ever. Not surprisingly, it has taken two decades for this country to come to grips with the Vietnam experience. In this encyclopedia, editor Stanley I. Kutler has accumulated 564 original essays and sketches outlining myriad topics of the Vietnam war. In the process, he and his contributors have placed the conflict in the historical perspective.

What makes this particular anthology so informative is not the topical entries that address the people and events of the war, but the ten interpretive essays that provide in-depth analyses of leading experts of the conflict. Subjects include the media and the war, diplomacy, colonialism, art and literature, the antiwar movement, the prelude to U.S. combat intervention, and the strategy and tactics employed by the American and Vietnamese combatants. Annexes also provide the texts from the Gulf of Tonkin Resolution and the Paris Peace Accords. The names of all 237 Medal of Honor recipients, by rank and year, further enhance the text.

In addition to the most updated information available, this encyclopedia provides both the historian and the general reader with a superb reference that is likely to be the definitive research source for the next decade. To the editor's credit, he has been mindful of non-Western perspectives. The result is a fairly balanced assessment. In this regard, Ngo Vinh Long's essay on Vietnamese perspectives and the legacies of the war is particularly insightful. So is William J. Duiker's article on Vietnam and its history.

In the final analysis, this book is the most thorough compilation of essays and articles on the Vietnam war to date. There is virtu-

ally no important aspect of the conflict that this encyclopedia does not address. Though most readers will find the cost prohibitive, I highly recommend this book to any student of the Vietnam war.

***The Oxford Illustrated History of the British Army.* Edited by David Chandler and Ian Beckett. Oxford University Press, 1994. 493 Pages. \$39.95, Softbound.** Reviewed by Lieutenant Colonel Harold E. Raugh, Jr., U.S. Army.

Eminent British military historian David Chandler, assisted by Ian Beckett (both formerly of the Department of War Studies, Royal Military Academy Sandhurst), has edited this superb volume. It is truly "an examination of the development of the British Army as an institution."

This book consists of 20 chapters, arranged in general chronological order, beginning with "The English Medieval Army to 1485," by Michael Prestwich, and concluding with Michael Yardley's insightful "Towards the Future." The remaining chapters, all of which can be read as self-contained essays, were written by authorities in their respective fields. While many of the chapters naturally focus on the most significant war or operations of its respective era, others highlight special, related topics—notably Alex Danchev's "The Army and the Home Front, 1939-1945"; T.A. Heathcote's "The Army of British India"; and Beckett's "The Amateur Military Tradition."

One of the most significant themes of the British Army, as reflected in this book, is that of continuity. Other recurring themes, which further illuminate that army's roles and responsibilities, include the arguably ironic antimilitarist tradition of the British; the existence of friction between soldiers and civilians despite the British Army's small size and frequent overseas postings; an interdependence between the British Army and society; and the general apolitical nature of the British Army.

This study offers, in separate side-boxes, 42 special subjects including details of weap-

ony, key individuals, and specific battles. The volume is lavishly illustrated with more than three dozen color plates. Numerous other contemporary illustrations, photographs, and 15 well-drawn maps enhance the text. An excellent 12-page chronology of the British Army, listing key events from 1066 to 1993, adds immeasurably to the volume, as does the ten-page bibliography, arranged by chapters.

The chapters in this superb volume highlight the traditional military concerns of British Army battles and leaders, and the editors have attempted to place them within their proper political, economic, and social context. In doing so, they have endeavored to recount "the story of the British army in a fresh way that will both entertain and educate." Drs. Chandler and Beckett have definitely accomplished their mission.

RECENT AND RECOMMENDED

***Battlefield of the Future: 21st Century Warfare Issues.* Edited by Barry R. Schneider and Lawrence E. Grinter. Studies in National Security No. 3. Air War College, 1995. 279 Pages.**

***Future War: An Assessment of Aerospace Campaigns in 2010.* By Jeffery R. Barnett. Air University Press, 1996. 169 Pages.**

***Global Security Concerns: Anticipating the Twenty-first Century.* Edited by Dr. Karl P. Magyar. Air University Press, 1996. 327 Pages.**

***Cambridge Illustrated Atlas of Warfare: The Middle Ages, 768-1487.* Edited by Nicholas Hooper and Matthew Bennett. Cambridge University Press, 1996. 192 Pages. \$39.95.**

***Cambridge Illustrated Atlas of Warfare: Renaissance to Revolution 1492-1792.* By Jeremy Black. Cambridge University Press, 1996. 192 Pages. \$39.95.**

***Pacific Defense: Arms, Energy and America's Future in Asia.* By Kent E. Calder. William Morrow, 1996. 253 Pages. \$25.00.**

***Secret and Sanctioned: Covert Operations and the American Presidency.* By Stephen F. Knott. Oxford University Press, 1996. 258 Pages. \$27.50.**

***Listening In: Intercepting German Trench Communications in World War I.* By Ernest H. Hinrichs. Edited by Ernest H. Hinrichs, Jr. White Mane Publishing Co. (P.O. Box 152, Shippensburg, PA 17257), 1996. 148 Pages. \$19.95.**

Crisis in the Pacific: The Battles for the Phil-

***ippine Islands by the Men Who Fought Them—An Oral History.* By Gerald Astor. Donald I. Fine, 1996. 478 Pages. \$27.95.**

***Lapham's Raiders: Guerrillas in the Philippines, 1942-1945.* By Robert Lapham and Bernard Norling. University Press of Kentucky, 1996. 304 Pages. \$24.95.**

***Timelines of War: A Chronology of Warfare from 100,000 B.C. to the Present.* By David Brownstone and Irene Franck. Little, Brown, 1996. 576 Pages. \$1995, Softbound.**

***The Army Medical Department, 1865-1917.* By Mary C. Gillett. Center of Military History, 1995. (GPO S/N: 008-029-00326-1.) 517 Pages. \$34.00.**

***The Colonial Wars Source Book.* By Philip J. Haythornthwaite. Sterling, 1996. 384 Pages. \$39.95.**

***The United States Army and the Motor Truck: A Case Study in Standardization.* By Marc K. Blackburn. Greenwood, 1996. 136 Pages. \$49.95.**

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***Sky Battles—Sky Warriors: Stories of Exciting Air Combat.* By Alfred Price. Sterling, 1996. 384 Pages. \$19.95.**

***World War II Cavalcade: An Offer I Couldn't Refuse.* By John L. Munschauer. Sunflower University Press (1531 Ynma, Manhattan, KS 66502-4228), 1996. 200 Pages. \$18.95, Softbound.**

***Three Years in the Army of the Cumberland.* By James A. Connolly. Edited by Paul M. Angle. Originally published in 1959. Indiana University Press, 1996. 400 Pages. \$14.95, Softbound.**

***U.S. Army Cadet Command: The Ten Year History.* By Arthur T. Coumbe and Lee S. Harford. Office of the Command Historian. U.S. Army Cadet Command, 1996. 357 Pages.**

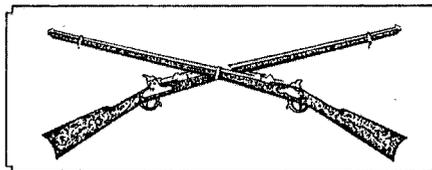
***Top Sergeant: The Life and Times of Sergeant Major William G. Bainbridge.* By SMA William G. Bainbridge (U.S. Army Retired) and Dan Cragg. Published in hardcover by Fawcett, 1995. Ivy Books, 1996. 322 Pages. \$5.95.**

***Masters of Battle: Selected Great Warrior Classes.* By John Wilcox. Sterling, 1996. 224 Pages. \$24.95, Hardcover.**

***Dien Bien Phu: The Epic Battle America Forgot.* By Howard R. Simpson. Published in hardcover in 1994. Brassey's, 1996. 224 Pages. \$17.95.**

***Foregone Conclusions: U.S. Weapons Acquisition in the Post-Cold War Transition.* By James H. Lebovic. Westview Press, 1996. 197 Pages. \$57.00.**

***The Devil's Adjutant: Jochen Peiper, Panzer Leader.* By Michael Reynolds. Sarpedon, 1995. 320 Pages. \$27.50, Hardcover.**



From The Editor

COALITION FORCE OPERATIONS

Stability and support operations—once known as operations other than war—will occupy our attention for some time to come, and this will demand the best effort that our technological, doctrinal, and training base can muster.

In the past, we structured and maintained our armed forces to meet a specific threat and some possible contingencies. Today, the monolithic threat once posed by the Soviet Union has given way to an array of lesser—but by no means insignificant—challenges to global stability. We must be prepared to respond to one or more of them at a time, and we must be ready to do it in concert with our allies. Tempting as it may be to go it alone, without placing our soldiers under operational control of a commander from another nation, we have neither the resources nor the will to pursue such a course of action for very long.

Coalition operations—as we saw in the Gulf War—permit allies to mass a sizeable force, display their common resolve, and amass considerable moral support, far beyond that which one nation could hope to achieve on its own. But what about letting a foreign commander direct our soldiers? This is nothing new, but—incredible as it may strike some of us—we do not have a monopoly on military expertise and tactical proficiency. Other nations' forces were out there in the backwaters of the world, facing the tough challenges long before we showed up on the scene, and we can learn from them.

When I read of a soldier refusing to serve under another flag, what I really see is a lack of confidence in his chain of command, and a mistaken belief that we're throwing him to the wolves. Nothing could be further from the truth than the latter, and we need to communicate this to our soldiers. To some extent, every major war of this century has been fought in conjunction with other nations, and our Army has emerged the better for it. This is an education issue, and a well-informed soldier will not fall prey to irrational fears.

As we set about teaching rules of engagement, crowd control, civil-military operations, and myriad other aspects of our new world missions to our soldiers, we need to include those equally important interoperability lessons that will build bridges instead of walls between our soldiers and those of other nations. During my interview this month with the Commander of Ukrainian Ground Forces, I was struck by how much the infantrymen of our two armies have in common, and by his description of how well U.S. and Ukrainian soldiers worked together when they met on their first joint exercise. There will be more such exercises, with an ever-widening circle of nations. The end result will be stronger alliances between nations sharing common goals, and less willingness on the part of potential aggressor states to go to war against a strong, unified coalition.

RAE

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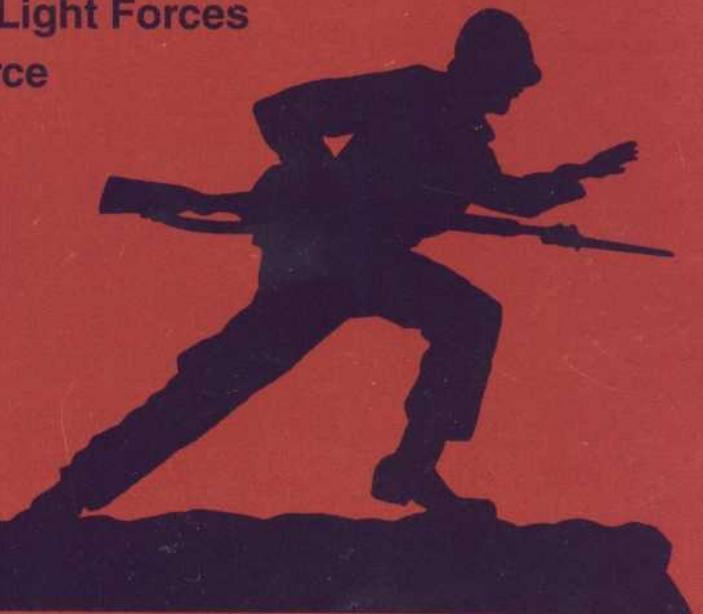
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