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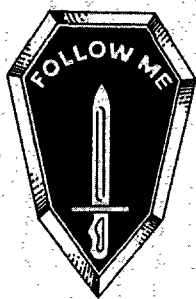
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COVER: Following the end of hostilities in Germany, U.S. occupation forces set about the task of rebuilding the infrastructure of that country. The issuance and checking of civilians' identification were part of that effort.

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Commandant's NOTE

MAJOR GENERAL JOHN W. HENDRIX Chief of Infantry

A PERSPECTIVE ON MILITARY OPERATIONS ON URBAN TERRAIN

As the United States Army prepares to execute a wide range of worldwide missions, our readiness to conduct military operations on urban terrain (MOUT) must remain a high priority. In this Note, I want to review the historical significance of MOUT, and then tell you how we will prepare the infantry force to win the future MOUT fight.

World War II holds numerous examples of the difficulty of clearing an urban area held by a determined defender; during the war, 40 percent of the battles in the European Theater took place in built-up areas. In France, in Italy, across Germany, and in the Soviet Union, towns and cities often had to be secured building by building, at high cost to defender and attacker alike. The mention of Aachen and Stalingrad evokes memories of bitter, protracted close-quarters combat. In the Pacific Theater, the liberation of Manila was accomplished at a staggering cost in American, Filipino, and Japanese lives and materiel, but six years later—during the Korean War—the U.S. Army was able to apply some of the lessons learned when it was called upon to recapture Korean towns and cities.

Our MOUT expertise grew apace with weapons technology, and when North Vietnamese Army (NVA) units seized South Vietnamese towns and cities during the 1968 Tet Offensive, units of the U.S. Army, U.S. Marine Corps, and Army of the Republic of Vietnam (ARVN) were able to regain control of those built-up areas in spite of determined enemy resistance. In the battle for Hue, for example, U.S. Army and Marine units, along with Vietnamese units such as the 1st ARVN Division drew upon the latest communications, mobility, and firepower technology to conduct successful amphibious, airmobile, and ground operations against the NVA. Then, as now, success in fighting in built-up areas was based upon a combination of powerful combined arms units, doctrinally sound small unit tactics, practical experience and the application of all available technology.

Due in large part to the intense urbanization that has taken place since the 1940's, MOUT operations have continued to play a key role up to the present: In Grenada and Panama, Marines and U.S. Army soldiers again found themselves committed to the MOUT battle, as did Coalition forces during Desert Storm, in the Saudi Arabian coastal town of Khafji, and later in the liberation of Kuwait City. Still more recently, in October 1993 infantrymen in Mogadishu,

Somalia, found themselves decisively engaged with a stubborn enemy on his own territory.

Recent MOUT experience is not limited to the U.S. Army, however. The article on page 21 of this issue describes the bitter lessons learned by Russian soldiers deployed in Grozny, the capitol of Chechnya, during January 1995. Their experience underlines the importance of thorough planning, preparation, and training for MOUT operations, as well as the consequences of unpreparedness. Today, the deployment of U.S. forces to the Balkans highlights the need for further MOUT training, given the historical instability of the region and the familiarity of indigenous forces with the cities and towns in the areas of operations.

The task of dislodging a determined enemy from a built-up area is one of the most resource-intensive challenges that a commander and his unit can face, and we must be prepared to meet it with minimal friendly casualties and as little collateral damage as possible to the host nation and its civilians. Given the diversity of potential threats to our Nation's interests, urban terrain such as we see in the Balkans will be the most likely battlefield of the 21st century, and our adversaries understand that in a MOUT battle the traditional American advantages of an extensive mechanized force, massive supporting ground and air firepower, and overwhelming logistical superiority are negated to varying degrees. It is only in the concrete canyons and maze of cul-de-sacs of the urban jungle that an adversary can have any hope of meeting American forces on anything resembling an even footing.

The MOUT concept is certainly not a new one, but today we are employing a new means of identifying and developing those technologies that can be rapidly put into the hands of the soldiers and Marines who may be called upon to execute MOUT missions. The vehicle for this effort will be an advanced concept technology demonstration (ACTD). This will be a significant effort calling for joint participation between the Army and Marine Corps that will allow the application of emerging technologies to a number of specific MOUT-related issues.

Our soldiers and Marines deserve the best training and equipment we can field as they prepare to execute an array of missions—including MOUT—in support of our Nation's foreign policy. In order to ensure that they receive that preparation, we are examining the entire array of operations that MOUT can entail. We are con-

sidering the application of both lethal and non-lethal technology. We will train using a postulated threat based upon the adversarial mix our force is most likely to encounter, and then update it based upon the most current intelligence. In support of the MOUT ACTD, we are developing a MOUT testing facility; a test and analysis network; and a modeling, simulation, and instrumentation test bed to provide an ongoing evaluation of our efforts. The virtual and live linkage envisioned for the MOUT site will make both virtual and constructive MOUT simulation possible for the first time, enabling trainers and units to experience situations and responses as near to reality as possible.

In a MOUT environment, the three most pressing concerns are finding the enemy, isolating and destroying him, and protecting the friendly force. At the same time, the commander must consider all the possible effects of U.S. operations on noncombatants and the city infrastructure. Finding the enemy can be difficult under any conditions, but this difficulty increases significantly in a built-up area. Underground corridors and concealed passages, sound and light distortion, the enemy's knowledge of the terrain, and poor visibility will all hamper efforts to locate him. Other limiting factors can be an unfriendly or non-aligned populace, inadequate maps and photographs of the area of operations, the unfamiliarity of U.S. forces with the local language, and the limitations of conventional communications systems.

The Land Warrior system is the first integrated fighting system for the combat soldier to have a specialized MOUT capability. The technological capabilities of Land Warrior will improve the soldier's individual and collective performance in MOUT environments. Its MOUT operation benefits will include: a computer for sending and receiving messages, still-frame video capture to send pictures, map data, and situation awareness information to higher, and a thermal weapons sight that will allow the soldier to scan an area to detect and engage targets more accurately through limited visibility and obscurants. Through the use of the thermal weapons sight or the daylight camera, the system allows the soldier to see and engage targets around vehicles, buildings, and obstructions without exposing himself to fire. The soldier-to-soldier communications capability will allow squad members to maintain stealth and to communicate effectively from covered and concealed positions.

Another important tool to be evaluated in the MOUT ACTD will be a language translator communicator that will facilitate communication with the local populace and prisoners, and that will facilitate the control of population movements and the collection of human intelligence. A voice-actuated digital communications system will free the soldier's hands for the operation of his weapons and other equipment for hands-on requirements such as countersniper operations, obstacle breaching, climbing, and other use of accessories in built-up areas.

An enemy must be located before he can be effectively engaged, and a number of programs that make that possible are also well under way. Current robotic technology offers a number of prototype vehicles that have MOUT application. Whether the vehicle is tele-operated or fully autonomous, most vehicles—with a few exceptions—offer a similar "payload" or suite of sensors. These include TV imaging sensors, image intensifying sensors, and laser designation. Another group of vehicles that offer significant promise in MOUT are tele-operated engineer vehicles that can provide

obstacle and minefield breaching and clearing capabilities. Robotic platforms can offer other capabilities as well, such as advanced acoustics for sniper detection and sensors for NBC-agent detection.

The Combat Identification Dismounted Soldier System (CIDSS) is the first-generation soldier identification system. Its purpose is to reduce fratricide. The system does not replace current visual identification techniques, but rather enhances them to further reduce the probability of fratricide. CIDSS also offers several other benefits in a MOUT environment. The laser interrogator can be used for precision night vision goggle (NVG) assisted aiming, benefiting both friendly snipers and infantrymen. CIDSS will also greatly increase the chance of identifying fleeting targets in and around buildings and alleyways.

CIDSS technology can be integrated into smart weapons and munitions to control delivery and detonation in fast-paced and rapidly changing conditions in which the potential for fratricide is high. If CIDSS is equipped with a global positioning system, leaders will be able to direct subordinate units and synchronize their actions even in an environment with a limited field of view.

These measures will go a long way toward dissipating the fog of battle that has hampered the past conduct of MOUT operations, but further technological advances such as through-wall sensors, state-of-the-art acoustic sensors, and advanced forward looking infrared will represent a leap even beyond our present capabilities. These capabilities I have described thus far will enhance force protection even while they enable us to find the enemy. A number of further initiatives currently under way will also continue to improve force protection while enabling us to more effectively engage and destroy the enemy.

Improved MOUT sensors, state-of-the-art obscurants, enhanced protective obstacles and entanglements, and a close-in man-portable mine detector will enable our soldiers to better monitor the enemy's activities, while degrading his ability to monitor our own actions. They will also restrict or channel enemy movement and reduce the effectiveness of his mines and booby traps. Advanced hearing protection for U.S. personnel will preserve their hearing acuity so that they can continue to soldier after the MOUT mission is accomplished.

While these programs further the force protection aspects of our profession, devices and systems such as the enhanced rifle sight, a multipurpose bunker and wall defeating munition, and improved entrance and breaching tools will better enable us to take the fight to the enemy. The latest in countersniper systems and training will reduce the effectiveness of an adversary's sniping, while increasing our own proficiency in this key aspect of MOUT. We must improve our countersniper capabilities, technologically and conceptually. Finally, an array of enhanced non-lethal devices will facilitate the accomplishment of the MOUT mission without the enormous collateral damage to personnel and property that characterized combat in cities earlier in this century.

This then is our goal, to prepare our infantry to deploy, fight and win, and return home with minimal losses in soldiers and materiel. The MOUT fight represents the greatest challenge to the success of this mission, but we are drawing upon the lessons of history, the technological potential of our Nation, and the superb training base of our Army and Marine Corps to increase the combat capabilities and survivability of our deploying forces.

INFANTRY LETTERS



HERE'S TO THOMAS ATKINS

As part of my duties in the Educational and Training Branch, Headquarters 2 Division, at Imphal Barracks in England, I have the privilege of reviewing *INFANTRY* magazine for our *MSLS Review*, which is edited at The Prince Consort's Library in Aldershot.

I was intrigued reading about the incredible bravery exhibited by Private First Class Thomas E. Atkins in the Pacific at the end of World War II, for which he was awarded the Medal of Honor. (See *"Fifty Years Ago in World War II, INFANTRY," March-April 1995, Page 21.*)

I am sure it has not escaped your attention that "Thomas Atkins" was the name chosen by the British War Office before World War I to represent all soldiers of the British Army. It became the nickname, in polite society, for the British soldier. Even the Germans used it.

One of Rudyard Kipling's more famous poems, "Tommy," contains the moving refrains:

*O it's "Tommy this and Tommy that,
an' Tommy go away."*

*But it's "Thank you Mr. Atkins"
when the band begins to play.*

And later:

*For it's "Tommy this and Tommy that"
an' "Chuck 'im out the brute"*

*But it's "Saviour of his country"
when the guns begin to shoot.*

If I have one regret, it is that when I retire soon after nearly 50 years with the Army, I shall no longer be in a position to review the next issue of *INFANTRY*.

J.H. JESSOP
Major General (Retired)
British Army

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REMEMBERING THE WORLD WAR II RIFLE COMPANY

At the request of several former members of Company I, 397th Infantry Regiment, 100th Division, I have begun trying to put together an intimate history of that company's service in World War II.

We have located about 40 surviving members—many of whom began their military service with basic training at Fort Benning as members of the Army Specialized Training Program (ASTP). That program was abruptly canceled in February 1944 because of manpower needs, and the trainees were shipped to the 100th Division, which at that time was stationed at Fort Bragg, North Carolina.

Almost all of these people had just turned 18 years old at the time. They expected to be sent to college after infantry basic but instead found themselves a part of General Alexander Patch's Seventh Army trying to cross the Vosges Mountains of Alsace in that bitter fall of 1944.

Many of those remaining have vivid memories of that (almost forgotten) campaign, but some have no memories, and others remember things that never happened. (We are, after all, old men. And rapidly getting older.)

Among the things on which we fail to agree is the exact size of a World War II infantry company. My memory says 186 men at full strength. Others say 184. Military historian John Keegan says 193.

My question is: Can you or one of your readers provide an authoritative count? What was the Table of Organization—how many cooks, clerks, Browning automatic rifle (BAR)-men?

Another question: We have found copies of the daily "morning reports" for the company, but they are signed by an officer we never heard of and contain such unvarying notations as "terrain rough, weather cold, morale excellent." Who wrote this fantasy? Certainly not our captain (now dead). You don't climb out of a muddy foxhole every morning and scribble out something that says "morale excellent."

Any help you can give would be appreciated.

LOWRY BOWMAN
21247 Rich Valley Road
Abingdon, VA 24210

EDITOR'S NOTE: Being more of a Vietnam-vintage soldier myself, I turned for help to the libraries in the Infantry School and the National Infantry Museum and then to former INFANTRY Editor Albert Garland, who served in World War II.

As a result, we were able to send Mr. Bowman a copy of the Infantry Rifle Company Table of Organization (T/O 7-17), dated March 1, 1943, along with the company organization from an Infantry School training bulletin based on War Department Tables of Organization and Equipment Nos. 7-11 to 7-19, inclusive, all dated 15 July 1943.

In addition, Mr. Garland wrote a detailed answer to Mr. Bowman's questions. Other World War II veterans, as well as today's rifle company commanders, may also find his comments interesting.

I commanded a rifle company (Company L, 3d Battalion, 334th Infantry

Regiment, 84th Infantry Division) in northwest Europe from mid-November 1944 to late March 1945. Please keep in mind that my response is based on what I remember (I am not exactly a young man, either) and how I ran my company. Other company commanders may have had different experiences, but I believe we did pretty much the same thing, with some exceptions resulting from division policies.

The 1943 Infantry Rifle Company Table of Organization, with one exception—the 17 basic riflemen shown in the company headquarters—looks like the company I commanded, although we were seldom ever at full strength. I simply do not recall such a group of soldiers in my headquarters, although I think I had more people in my communications section than shown. In addition to the communications sergeant, I had two radio operators and a group of wiremen. I suppose some (or most) of those 17 “basic riflemen” ended up in the communications section.

You will also notice that the company had three rocket launchers (“Bazookas”) but no gunners or assistant gunners for them. I normally attached one of the rocket launchers, which were in the weapons platoon, to each of my rifle platoons. Thus, I had to find two men to handle each of the launchers, because a gunner could not load the piece by himself and then fire it. (I suppose he could in an emergency, but it was not recommended. Besides, his assistant also carried extra rounds.) These two-man teams may have come out of those 17 basics mentioned earlier.

I also remember that, when we landed in England and before we went over to the continent, higher headquarters recommended that each rifle squad be equipped with three BARs instead of the one authorized by the T/O. This was intended to counter the firepower advantage the German infantry seemed to have over us, in light of their machine pistols and numerous machineguns.

But I don’t ever remember converting to this idea and don’t know where I would have found the manpower after our first week in combat. We had enough trouble keeping one BAR per squad operational.

Although our two jeeps and trailers belonged to the weapons platoon, I often used them for company business—bringing forward hot food, for example, and the mail. Frequently, I used one of the jeeps to travel to and from the company command post to battalion or regiment, and occasionally to division. For example, at the end of each month (or thereabouts), I had to go to the division finance office to pick up the company payroll and then return what money I had left to that same office. The company clerk, who was with the division adjutant general section at the division rear headquarters, would frequently use one of the jeeps; he kept up with the incoming and outgoing mail.

In brief, a standard 1943 rifle company consisted of six officers and 187 enlisted men, a total of 193. But remember that we always had three medical aid men attached to us from the battalion medical section, one for each rifle platoon. At full strength, then, with these attached medical personnel, a rifle company fielded 196 men. (For an excellent reference work on the World War II Army organization, see *U.S. Army Handbook, 1939-1945*, by George Forty, published by Charles Scribner’s Sons in 1980.)

My company mess detachment also had a 2 1/2-ton truck with a 1 1/2-ton trailer. These belonged to the regimental service company, and one driver was furnished for the truck. Many times, the mess sergeant kept his stoves mounted on the truck so he could move on short notice. Normally, he stayed in the service company area, and we sent our jeeps back to pick up the food when we could, which was more often than most people think. If the company expected to stay in one area for any length of time, he would come forward, take the

field ranges off the truck, and prepare the meals in the company area, usually in a building of some kind. The trailer, of course, was used for carrying fuel for the stoves and for carrying the rations and whatever other foodstuffs he could scrounge.

It was the company clerk in the division rear headquarters who also kept the morning report. On his trips forward, he and I would get together to talk about our casualties and who had been killed or wounded. I based my comments on reports I received from each of the platoon leaders and from the aid men. Since the clerk had access to medical reports from the battalion and regimental aid stations, he often had more accurate information about casualties than I had. When we were not certain of a soldier’s status, we would report him “missing in action” and carry him as such until we could get more accurate information.

When we knew for certain a soldier had been killed, the clerk would bring me the man’s personal mail and packages, if any. I had to note on the envelope of each letter—on the back flap, I believe—the words “Deceased, Return to Sender.” I made it a point to write to the man’s family as soon as I could, expressing my regret and explaining as much as I could about the action in which their soldier had received a fatal wound. We kept the packages; they usually contained food, and we had all agreed that our packages would be shared with the members of the company in the event something happened to us.

On the weapons platoon: Normally, I would attach the machineguns to the platoons and keep the mortars under my control, with the weapons platoon leader actually directing their fire.

I hope these thoughts will answer some of your questions and help you in writing your company history.

ALBERT N. GARLAND
LTC, U.S. Army, Retired
Columbus, Georgia

INFANTRY NEWS



THE INFANTRY SCHOOL task summary training information outline pertaining to night vision goggles (AN/PVS-5 and AN/PVS-7 series) will be revised to include the following:

WARNING: Targets cannot be effectively engaged using night vision goggles alone. The weapon being fired must be equipped with an aiming light (AN/PAQ-4B/C) that has been zeroed to the weapon, and the goggles must be adjusted for maximum visual acuity.

WARNING: Because of environmental conditions that degrade their capabilities, night vision goggles should not be used as a fire control measure. Sectors of fire and engagement areas must be assigned to each soldier. Firing aids such as limiting stakes, clearly marked terrain that is visible to the firer, and compass settings should be used to ensure that soldiers fire only within their assigned sectors of fire.

TRAINING CIRCULAR 7-9, *Infantry Live-Fire Training*, dated 30 September 1993, addresses fire and maneuver with emphasis on live fire exercises for dismounted infantry.

This publication is for use by all leaders of infantry units and should be used in conjunction with the ARTEPs. It provides guidance and examples to help leaders set up and execute realistic live-fire exercises using practical safety measures that reduce the risks associated with this training.

This circular also includes special considerations for night exercises, including rehearsals, markers, night vision devices, communications, light and weather data, and illumination.

THE U.S. ARMY RESERVE training divisions and reserve forces schools are undergoing a major reorganization.

Nine divisions (institutional training) will be restructured to seven and aligned with the U.S. Army Training and Doctrine Command's seven regional school systems. The command and control of U.S. Army Reserve Forces schools also will be shifted to the new divisions. At the same time, the Reserve force structure will be reorganized and missions redefined.

To protect soldiers and maintain a regional Army Reserve presence, one brigade from each of two divisions to be deactivated will be integrated into the seven remaining divisions.

The divisions to be deactivated are the 70th Division in Livonia, Michigan, and the 76th Division in West Hartford, Connecticut. The seven divisions to remain are the 80th in Richmond, Virginia; the 84th in Milwaukee, Wisconsin; the 95th in Oklahoma City, Oklahoma; the 98th in Rochester, New York; the 100th in Louisville, Kentucky; the 104th in Vancouver, Washington; and the 108th in Charlotte, North Carolina.

The reorganization is expected to be completed by October 1996.

TWO ITEMS OF EYE protection for soldiers were recently type classified. One, called SPECS, is for soldiers who do not wear glasses, while the other, ballistic laser protective spectacles (BLPS), accommodates prescription lenses.

Both are made of polycarbonate, a material that is strong, lightweight, and versatile. They are produced in four configurations that provide a full range of ballistic, ultraviolet (UV), and laser protection: a clear version for low light non-laser situations; a sunglass version for daylight non-laser threat situations; a night laser version for low-light laser threat environments; and a day laser

version for daylight laser threat environments.

The SPECS also have adjustable temple arms and even a choice of different temple arms to suit individual preferences. SPECS come with a retainer strap and carrying case and are specially designed to fit comfortably under the PASGT helmet.

The BLPS prescription inserts are the same design as those used in the M-40 chemical protective mask.

MUZZLE-LAUNCHED RUBBER ammunition for use in crowd control situations is being evaluated under a recent contract let by the U.S. Army Armament Research, Development, and Engineering Center.

This non-lethal ammunition, which consists of a cylindrical tube that serves as a container and launcher for 15 rubber projectiles, can be fitted to either a 5.56mm or a 7.62mm rifle equipped with a flash suppressor on its barrel. A ballistic cartridge ejects the rubber projectiles through built-up pressure. The ammunition will be available in regular and high-impact energy versions.

Because the tube slides easily over the muzzle of an M16 rifle, a soldier can use the same weapon in both riot control and combat situations.

THE SENSE AND DESTROY armor (SADARM) munition now in limited production, will give the Army a low-cost, high-performance smart munition delivered by 155mm howitzers. The munition is effective against self-propelled howitzers, multiple-rocket launchers, armored personnel carriers, and infantry fighting vehicles.

After deploying from the 155mm projectile, two SADARM submunitions

descend by parachute, allowing multiple sensors to search an area roughly the size of four football fields. When a target is detected, an explosively formed penetrator is propelled toward the top of the target.

Smart munitions such as SADARM are one example of the Army's efforts to use electronics technology to make the most of its available personnel and equipment.

A DIGITAL COMPASS and navigation system called TACNAV promises to help commanders and soldiers determine where they are and where they should be, whether they are operating wheeled or tracked armored vehicles. After extensive trials in 1992 and 1993, the Army selected the system for use on the Bradley fighting vehicle.

Many armored vehicles are not equipped with compasses, because the types of compasses that work have been too expensive. TACNAV costs about one-third the price of inertial navigation systems that use gyroscopes to determine direction.

Because of compass anomalies aboard armored vehicles, land forces often rely solely on the satellite-driven global positioning system (GPS) to determine their latitude and longitude. But information on position alone is not enough; vehicles also need directional information while they are stationary, a feature GPS does not have.

TACNAV integrates with the vehicle's GPS to tell drivers their current position and direction. It tells them the direction to turn to advance to the next GPS checkpoint and the calculated distance to that point.

Armored vehicle crews can pinpoint their positions even when GPS is being jammed or the terrain is blocking satellite signals. Using odometer inputs,

TACNAV automatically calculates an accurate dead reckoning position and continues to display position, regardless of satellite circumstances. U.S. Army field tests have shown that TACNAV provides essential directional information along with vital target angle, far-target location, and steering information. It fully integrates with the vehicle's GPS, the odometer, the turret angle encoder, and the laser rangefinder, adding a continuous stream of directional data to each of these components.

One of the most striking features of the device is its ability to measure and display accurate turret and hull direction at the same time. When it integrates with the vehicle's angle encoder, TACNAV provides a direct measurement of the turret angle.

By providing continuous information on heading and angular distance, TACNAV enables armored vehicle crews to execute synchronized, high-speed maneuvers.

The system consists of five subsystems: the sensor antenna, processor electronics, turret angle encoder box, commander's display, and driver's display.

HELICOPTER LOAD certification is a vital part of getting equipment from one place to another on the battlefield.

The primary application of both external and internal air transport (EAT/IAT) is short range, tactical transport missions. The deployment of equipment by helicopter offers many advantages, including the ability to reach areas that are inaccessible by ground transportation; independence from ground conditions (congestion, terrain, battle damage); and unrestricted flight routes that allow the use of diversionary tactics to improve

security for the ground unit.

As with all forms of transportation, EAT and IAT have inherent limitations that include cargo weight based on the helicopter's capabilities and load geometry. The U.S. Army Natick Research, Development, and Engineering Center is the Department of Defense certification agency for EAT and the Department of the Army certification agency for IAT.

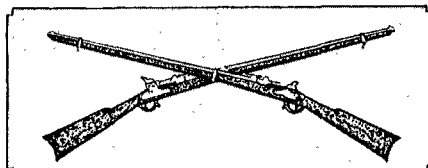
The EAT certification process assures that the equipment being transported can withstand the stresses of the flight environment outside the aircraft. That process is as follows:

- Engineering evaluation to determine lift provision proof loads based on weight to projected area ratio.
- Analysis of lift provisions.
- Proof load testing to MIL-STD-913.
- Static lift testing to verify rigging procedures.
- Helicopter flight testing to determine maximum stable airspeed and limitations to the flight envelope.

The IAT certification process includes the following:

- Engineering evaluation.
- Determination of restraint requirements based on the aircraft.
- Determination of tie-down proof loads.
- Evaluation of item clearances within the aircraft structure.
- Proof load testing of tie-down provisions to MIL-STD-209H.
- Test loading to verify loading and tie-down procedures.

The success or failure of an infantry mission can depend upon whether or not its air transported equipment operates properly once it reaches the field, and helicopter load certification can help ensure safe, timely delivery.



PROFESSIONAL FORUM



Machineguns in the Infantry

MAJOR JAMES B. BALDWIN

What is happening with the machineguns in the Army? This seems to be the question of the year and with good reason, since so much has happened in the past two years with regard to these weapons. The rumors that abound are as varied as the men who make up the infantry. I hope this article will shed some light on the direction the infantry and the Army are taking with machineguns.

For some background, it is necessary to return to 1989 when the Chief of Staff of the Army decided the M249 squad automatic weapon (SAW) would replace the venerable M60 machinegun. This decision was based on a side-by-side evaluation of the two weapons, as well as a number of economic factors. To begin, M60 production had stopped, and the M60s in service were almost 30 Years old. The M249, however, was in production, and fielding in the automatic rifle role was under way. Additionally, the cost of an M60 was two and one-half times that of an M249. The M249 also used the same 5.56mm ammunition as the M16, which was also lighter per round than the M60's 7.62mm ammunition.

On the basis of this decision, tables of organization and equipment (TOEs) were changed to reflect the M249 as a replacement for the M60. But the

fielding of the M249 in the machinegun role was not scheduled to begin until 1994, because fielding in its automatic rifle role took priority. The fielding of the M249 SAW began right away, and this seemed to be somewhat confusing. Some units assumed the M249s they were receiving were replacements for their M60s and proceeded to turn in the M60s. To date, no M249s in the machinegun role have been issued to the field, only those for the automatic rifle role.

What is the difference? Physically, there is none. The only distinction is in the weapon's employment. For clarification, however, the M249 in the machinegun role should be referred to as "the M249 light machinegun (LMG)," and in the automatic rifle role as "the M249 light machinegun in the automatic rifle role."

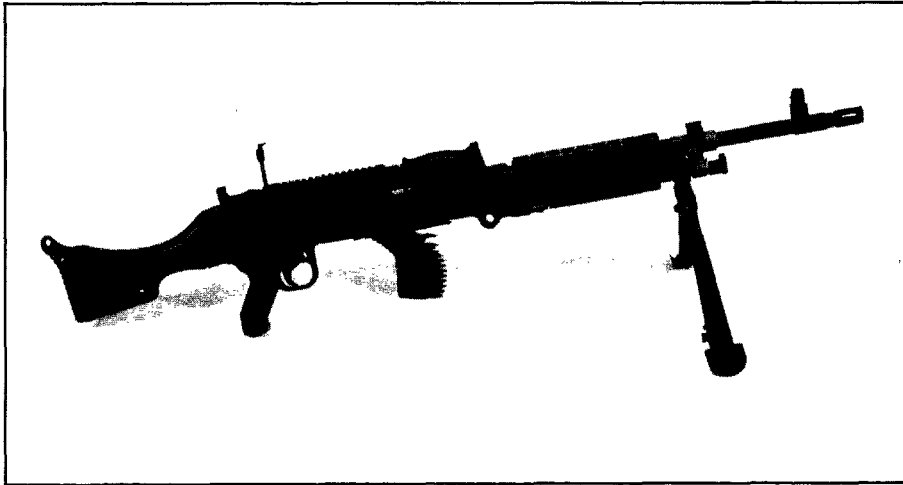
Throughout the early 1990s, the TOEs reflected M249s in both roles, but units kept their M60s, again confusing the issue. On the basis of the units' concerns, the former commanding general of the U.S. Army Training and Doctrine Command (TRADOC) directed that "a holistic review of machineguns in infantry units" be conducted. This review would include weapon system adequacy and training on its employment.

A task force established at the U.S.

Army Infantry School in late 1993 found no reason to recommend against replacing the M60 with the M249. It did, however, recommend that machinegun training be increased at all levels of non-commissioned officer training—the Primary Leadership Development Course, the Basic and Advanced NCO Courses, and other appropriate areas. This recommendation has been implemented.

On the basis of the task force's recommendation, the commandant of the Infantry School continued to support the M249 LMG as the M60 replacement. He did, however, direct that the M249 not be issued in the machinegun role except as a complete system. The M249 LMG system would consist of a tripod, a traversing and elevation mechanism, and the training manuals. Meanwhile, infantry division commanders—still concerned about the ability of the M249 light machinegun to meet their operational needs—continued to press for the retention of a 7.62mm machinegun.

In January and February 1994, after the final report of the task force, reports from units returning from Somalia indicated that the M249 did not have all of the capabilities expected of a machinegun. Both the M249 and the M60 received high praise from soldiers, but for different reasons. The M249 was



The M240E4, showing feed-tray cover with integral rail and a heat shield and hand guard around the barrel.

easier to carry in the urban environment but could not match the penetrating power or the psychological value of a 7.62mm weapon system.

The fielding of the M249 machinegun was being delayed to accommodate the infantry commandant's requirements to field it as a total system and to correct deficiencies noted during production testing. This delay meant that some units would not receive their M60 replacements for several more years. The Infantry School felt that infantry units had to have a reliable machinegun while they waited for the M249 replacement. In March 1994, the School received approval and began a program that would develop a medium machinegun upgrade kit for either the M60 or the M240 (the coaxial machinegun used on the M-1 Abrams tank and the Bradley fighting vehicle) and provide it to active infantry units.

In May 1994 the Infantry School commandant met with several division commanders and agreed to look again at the M249/M60 issue. As a result, a proposal for the selective retention of the 7.62mm machinegun was sent to TRADOC and Headquarters, Department of the Army, for approval. It was agreed that active infantry platoons would keep the M60, which would then be replaced by the weapon selected for the medium machinegun upgrade kit program. This program was considered a priority, and testing was completed in mid-August 1995.

The M240E4 won the competition, and active infantry companies can expect a weapon similar to the European MAG 58. The M240E4 differs from the MAG 58 in several areas, but the most noticeable differences will be a feed-tray cover with integral rail, and a heat shield and hand guard around the barrel. Additionally, the M240E4 will be fielded with a new concept—the flex mount.

Active infantry units can expect a significantly improved 7.62mm machinegun, which will be fielded to the first units in Fiscal Year 1997. Both the commandant of the Infantry School and the commander of TRADOC were adamant in stating that the upgrade kits would be placed on new weapons, not on used or rebuilt weapons. Reliability was the main emphasis of the program.

The 1994 approval for active infantry units to retain a 7.62mm capability was not intended as a complete reversal of the 1989 decision by the Army Chief of Staff, only as a selective exception. This decision meant that the Army would, in fact, have two machineguns—a 5.56mm light machinegun and a 7.62mm medium machinegun.

As the concern grew that the loss of their M60 machinegun would diminish operational capability, commanders continued to support the retention of the M60. The problem was due largely to a misconception of the M249's capability to meet all operational needs. In October 1994, TRADOC tasked the

Infantry School to conduct a complete review to determine the Army's total requirement for medium machineguns. The Infantry School contacted all the proponent schools and received input as to the current and recommended machinegun mixes within their respective organizations. Based on the need for commonality of equipment and ammunition within units, weapon costs, and training requirements the Infantry School recommended that the M249 light machinegun be retained as the machinegun in all units except infantry, armor, and selected combat engineer units. These units would retain a 7.62mm medium machinegun.

As a final note, the M249 light machinegun is an outstanding weapon and more than adequate for all but the most demanding general support missions. Units issued the M249 LMG will see no degradation in their warfighting ability. However, it is recognized that the infantry, armor, and selected combat engineers have a unique requirement for a 7.62mm machinegun. This mixture of light and medium machineguns will significantly enhance the firepower and lethality of the force. The foregoing plan for distribution of the M249 and M60 machine guns will apply equally to the reserve components, and will be executed according to the Department of the Army Master Priority List (DAMPL) sequence.

Questions or comments on this issue may be addressed to the U.S. Army Infantry Center, Directorate of Combat Developments, Fort Benning, GA 31905. Points of contact are Major Baldwin, Mr. Medeiros, or Captain Hodge. Phone DSN 835-3181, commercial (706) 544-3181, or E-mail to BALDWIN@BENNING-EMH2.ARMY.MIL.

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Thoughts on the Medium Machinegun For the Light Infantry Company

CAPTAIN MATTHEW M. CANFIELD

EDITOR'S NOTE: This article, a companion piece to Major Baldwin's article (page 7), offers a useful perspective on the employment of machineguns and the training of their crews. I realize that the subject of machineguns is one that infantrymen take very seriously, and I would like to get your comments on what these authors have to say, as well as your thoughts on the role of this weapon in the future.

The commander of today's light infantry company must have the firepower of a medium machinegun. And he must be able to use it to gain the offensive punch he needs to win decisive victories on the modern battlefield.

In World War I, the style of warfare dictated the way machineguns were used. That war, characterized primarily by trench fighting, involved the concept of massing fires. Artillery fires were massed to support soldiers, who were also massed to form great frontal assaults from the trenches. Machineguns were easy to mass because they were organized into platoons, companies, and battalions, which were then used as separate support units.

In the offense, they were used to support the assault troops and were occasionally used in the actual assault as well. The tactics and techniques of machinegunning reached full maturation in this war. Especially the proper use of sighting and laying instruments and employing fires to gain the greatest tactical advantage.

In World War II, machineguns were used in much the same way, even though new tactics, weapons, and technologies

resulted in deeper battles at a faster tempo. Large-scale armor warfare, better weapons, the emergence of close air support, long-range aerial bombing, and a general avoidance of massed frontal assaults were all significant departures from the way World War I was fought. Machineguns were still organized into separate elements to support attacking infantry. Medium and

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heavy machineguns proved their worth time and again in city fighting, rugged mountainous terrain, and tropical jungles.

During the 1960s, the country was in the middle of a very real cold war, and the rules were different. Threat forces were arrayed into numerous armored, mechanized, and motorized divisions. There were nuclear weapons. Close air support was increasingly effective as great leaps in technology allowed the rifle company commander to call for missions of destruction.

This was an "out with the old, in with the new" era. We had a great desire to modernize and improve the Army. Thus, when we reevaluated our doctrine and tactics, a decision was made to put the medium machinegun directly in the hands of the rifle company commander

as an organic company asset and to eliminate separate machinegun support units. Unfortunately, when the machinegun battalions were phased out, machinegunning as a science was no longer emphasized.

The M60 7.62mm machinegun replaced the Browning .30 caliber as the medium machinegun. It was intended for use as a direct-fire infantry support weapon, but no doctrine, tactics, or manuals provided instruction for its use as an indirect fire weapon. The machinegun field manual (FM 23-67, 1962) did, however, discuss the employment of the weapon from position defilade. When the gun and its crew are hidden from enemy ground observation by an obstacle such as the crest of a hill, the fires are adjusted by an observer positioned at or near the gun who can see the target. Since the machinegun is still laid in using the direct-lay technique, however, this is not considered indirect firing.

At the same time, the automatic assault rifle went through its own changes. In World War II and the Korean War, the Browning automatic rifle (BAR) gave the infantry platoon instantaneous automatic weapon fire. In Vietnam, the designated automatic rifleman carried an M14 (with extra ammunition) set up for full automatic fire. Later, the M16 was fielded and served the same purpose.

For the past 30 years, the rifle company has had fire teams with automatic riflemen, supplemented by organic medium machineguns. This system is in the process of being changed. The automatic rifleman has traded in his M16 for the M249 light machinegun,

and the need for a medium machinegun in the rifle company is being questioned.

To keep the machinegun from being confused with an automatic assault weapon, it is important that we define "machinegun" and explain its concept. A machinegun, for purposes of this article, is defined as a crew-served system intended to support the infantry. I will discuss the machinegun only as it applies to the offense and will not deal with the best way to organize the guns into the infantry company and battalion tables of organization and equipment. That is the subject of an entirely separate effort. Let the need for a medium machinegun in the rifle company be firmly established as the first priority. Once this is done, organizing it within the battalion will not be difficult.

In recent years, the Army has been trying to field the M249 in place of the venerable M60 machinegun. This is potentially a disastrous mistake if we are substituting an automatic assault weapon for a crew-served machinegun system at company level. The essential role of the infantry company has not changed substantially in more than 100 years: to seek out, close with, and destroy the enemy by fire and maneuver or to repel the enemy assault by fire and close combat. Therefore, the role of machineguns in support of the infantry remains the same: to assist the advance of the infantry by firepower throughout the fight. Therefore, there can be no good argument for eliminating the crew-served machinegun from the infantry company.

If the intent is to substitute the M249 as a light crew-served machinegun for the medium machinegun, then a study must be initiated to examine the efficacy of a light machinegun in support of the infantry attack. Ballistic studies have determined that the improved ammunition for the M249 now has penetration capability comparable with that of the M60 ammunition. For purposes of this article, therefore, we will assume that the reliability, ammunition requirements, and barrel life are, again, comparable.

What, then, can be used to determine that a light machinegun is not enough and that a medium machinegun is needed in the rifle company? The answer is: the psychological effect on the enemy of a medium or heavy machinegun, and the boost in morale that it provides to friendly troops in the attack—an effect a light machinegun can never provide. The problem is how to measure this effect. It should be enough to listen to the experiences of men who have served in combat and who will testify to the positive influence the big guns had on their morale and the negative effect suffered when they were on the receiving end of enemy machinegun fire.

Unfortunately, the drama of human emotion is difficult to quantify, and it is

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impossible to establish through scientific empirical data. Therefore, it tends to be dismissed as mere opinion and insupportable through research. This is a tremendous mistake. The psychological effect of a medium or heavy machinegun should be all the justification needed to keep a medium machinegun in the rifle company arsenal.

Another argument currently in vogue is that before we can establish a need for a medium machinegun we must identify a legitimate threat that requires it and for which a light machinegun will not be sufficient. It has been successfully argued that there is no current threat that cannot be met more than adequately with a light machinegun. Remembering, of course, that ballistic improvements to M249 ammunition support this assertion, the remaining questions are: What threat? Where? and When?

I hope the authors of this opinion have not used our experience in the

Persian Gulf War to support their argument. That was primarily an armor war of maneuver and therefore cannot possibly support a study of the medium machinegun in the rifle company offense. U.S. involvement in Somalia is another poor case study. This was a peacekeeping mission. It was not a war, not an offensive, and the experience of light infantry companies in the attack was limited. We must remember how the M249 was employed. It was primarily an automatic weapon that performed as part of a squad—a "street sweeper" if you will. It was not used as a crew-served weapon that supported the infantry in the attack. Therefore, performance data on the M249 in peacekeeping operations cannot be used to support an argument for its suitability to replace the medium machinegun in the rifle company.

The solution to the problem of justifying the need for a medium machinegun in the light infantry is actually quite simple: We must modify our employment tactics and rewrite our doctrine to support them. Specifically, we need to make machinegunning both an art and a science. And we must relearn the technique of employing the guns effectively in the indirect fire mode. This will prove to be a major issue in the near future.

New and exotic weapons that are now being developed will make it critical that we be able to mask our troops and weapon systems. For example, there will be weapons that will emit a flash of energy that will temporarily blind soldiers on the battlefield. Fighting positions designed to protect soldiers from artillery, shrapnel, and direct enemy fire will not protect the eyes of the soldier who still needs to see the enemy to shoot him. We need to reconsider our fighting tactics in the face of this new threat. One way to do this will be to develop ways to engage the enemy from protected positions that will enable us to fight him without actually seeing him. Indirect machinegun fire is an ideal way to accomplish this task.

Indirect fire with machineguns is the practice of firing at a target while using a sight setting and aiming point that dif-

fer from those offered by the objective itself. The target may or may not be visible to the gunner. Various methods of employing indirect fire are firing over friendly troops, firing at night, and using auxiliary aiming points. Indirect fire may be carried out by guns controlled one at a time—in which the line of fire of each is laid out separately without reference to the line of fire of another gun—or together (by sections, for example), in which case the lines of fire of the guns constituting the section are laid out in parallel directions and form a basis from which the controlling officer can issue an order producing distribution of fire along any line and concentration of fire on any locality.

Indirect fire offers several advantages:

- The guns are screened from hostile fire.
 - Firing indirectly gives the crew a feeling of security and confidence.
 - Fire is mechanical.
 - The guns may be put into action unobserved and under cover.
 - Ammunition resupply is simplified.
 - The position of the guns may be changed without the enemy being aware of the change. Once a gun is located, it is lost.
 - The muzzle flash of guns (especially at night) is masked from the enemy.
 - There is a good line of retirement in withdrawal actions.
 - It allows the guns to be used as long-range weapons.
 - Gun positions may be held for a longer period of time.
- At the same time, however, indirect fire has some disadvantages:
- It takes time to adjust fire, both in laying in the guns and in bringing fire to bear on a target.
 - It requires skills that must be developed and trained.
 - The ground in the immediate front of the mask is not covered by the guns firing over the mask, thus creating a dead space that other weapons must cover.
 - Moving targets may not be covered readily by indirect fire.
 - Unlike artillery and mortars, the

machinegun sheaf is difficult to adjust in relation to the target because the impact of the round is difficult to see, especially at long range, where the tracers tend to burn out before reaching the target.

The science of indirect fires is virtually identical to that of artillery fires. Machineguns are laid in with respect to deflection (direction), elevation, and clearance of mask or friendly troops—or simply orienting the guns toward a target using the correct elevation and deflection. When the correct data are applied and no mask interferes, the target will be hit.

The guns may be laid for deflection by using a magnetic azimuth or an initial aiming point (IAP). The theory of laying a gun for deflection is based on

The solution to the problem of justifying the need for a medium machinegun in the light infantry is to modify our employment tactics and rewrite our doctrine to support them.

the fact that, although the target is unobserved by the gunner, the direction of the target from a constant—such as magnetic north—can be determined by using a compass (aiming circle). If an object such as a tower or a hilltop can be observed as an IAP, then the direction of the target can be determined using the IAP as the constant. Elevation is determined by using a measuring device to get the angle of the barrel. A map, or visual estimation, may be used to determine range. Tables can be provided that determine the elevation required for specific distances. Ammunition requirements for various targets can be established; for example, the number of rounds per gun to engage a platoon of troops in the open to achieve a minimum level of destruction.

Indirect fires in the attack should be planned, as with artillery, and they should supplement artillery support, not replace it. These fires can be used to cover flanks, interdict routes of likely enemy advances, neutralize enemy posi-

tions, and harass the enemy's communications. The guns can be organized into "batteries" to deliver machinegun "barrages" and—limited only by their range—can support the infantry in many of the instances where artillery is used.

Direct fire should be used, of course, when the situation permits and when the potential for results is greater than it is with indirect fire. The greatest advantage of direct fire is the speed with which it can be employed. It allows direct observation of the impact of the rounds, which makes it easier to use close to troops. And it is highly effective against moving mounted or mechanized troops, vehicles, and hostile aircraft.

A medium machinegun will provide an operational capability for indirect fire that a light machinegun cannot. By trying to incorporate the techniques of indirect machinegun fire into the tactics of the light infantry company, we are seeking a way to condense infantry fire on a designated target to support the maneuver company.

The M240 7.62mm machinegun is the ideal one for the light infantry, and it should be used to replace the M60. It has a maximum effective range of 1,800 meters and, with its sustained fire (SF) kit, can be used for an approximation of indirect fire called "map-predicted" fire. This is where the guns engage targets indirectly but without the use of dedicated laying and sighting instruments like those used for the .30 caliber machinegun. Instead, a single instrument mounted on the gun (the "C2" sight, which is almost identical to a mortar sight) performs the function of setting deflection and elevation. The azimuth to the target in degrees is converted to mils and dialed directly onto the sight. Elevation is set the same way. Aiming stakes are used as they are for mortars—to maintain a constant point of sight reference. The map-predicted firing technique, like artillery, is most effective when the guns register their fires. Distances can be estimated from a map or from such specialized instruments as a laser range finder. Forward observers use the same method in calling for and adjusting the

machinegun round that is used when calling for artillery and mortars.

The U.S. Army Rangers were first issued the M240 two years ago but without the SF kit. When the SF kits were subsequently issued, Ranger units received training on the technique of map-predicted fires from the British, who were already using the M240 with SF kit. But this was only familiarization training because the U.S. Army had not yet purchased these kits. Therefore, the Rangers were unable to use the M240 in the map-predicted fire mode.

The M240 with the SF kit increases the maximum effective range of the gun to 2,700 meters. Tracer burnout occurs at 2,000 meters, which can make it harder to see the rounds and adjust them at greater distances. Experience has shown that the effect of the rounds on the target, such as flying sparks or kicked-up dust, can be visible enough to allow for adjustment of the sheaf. The tripod that comes with the SF kit allows for three firing positions—sitting, kneeling, and prone. Naturally, the gun barrel can be elevated to an angle sharp enough to allow for high-angle fires.

Initial feedback indicates that map-predicted fires can be ideal under the appropriate circumstances, but there are some drawbacks: Employing map-predicted fires is time-consuming. The highly perishable skills of the forward observer and the gunner require a great

deal of sustainment training. The SF kit weighs about 40 pounds, and transporting it can be difficult, especially on long foot movements and airborne operations. The accuracy of the sheaf is entirely dependent upon the skills of the machinegun section. Nonetheless, map-predicted fires can be effective and accurate when performed by well-trained and highly skilled soldiers.

If the Army is willing to buy and field the M240 machinegun with SF kit, some basic changes will need to be made in training. For example:

- Establish a military occupational specialty or a special skill identifier for machinegunners, including medium and heavy (.50 caliber and MK 19 40mm grenade machinegun). Or, at the very least, assign the gunner duties to sergeants.

- Establish minimum qualification criteria, minimum sustainment training, and familiarization standards for gunners using all firing techniques.

- Establish doctrine and tactics for machineguns, stressing their inherent potential as combat multipliers.

- Train junior officers and NCOs on gunnery tactics and techniques.

- Rewrite the machinegun manuals and include tables, technical data, tactical employment techniques, and maintenance.

- Incorporate all the techniques for direct fires or map-predicted fires into

the tactical employment of all our medium and heavy machineguns—especially the MK 19.

- Build adequate machinegun ranges that require gunners to fire directly, indirectly, singly, and in sections.

- Allocate enough ammunition for this type of training.

- Teach all infantry soldiers, as a common task, the forward observer skills of adjusting machinegun rounds.

We must also think ahead about how to use the company medium machineguns on tomorrow's battlefield. We must plan for indirect machinegun fires in an environment of directed energy weapons. We can easily develop machinegun tactics that will make them an integral part of our combined arms doctrine. The point is that the machinegun will be needed just as much in the future as it is today. And instead of thinking of how to replace it, we should be thinking of how we can enhance the effectiveness of new technologies with weapons and tactics that have stood the test of time.

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Load-Bearing System For the 21st Century Land Warrior

COLONEL MORRIS E. PRICE, JR.
MAJOR ALLEN L. BORGARDS

Carrying loads efficiently has challenged infantrymen since the beginning of organized warfare, and they have always found a way to "make do" with

whatever equipment was provided. Two programs now seek to break this pattern: The 21st Century Land Warrior Integrated Technology Program and the

Generation II (GEN II) Soldier System Advanced Technology Demonstration (ATD).

On the digitized battlefield of the 21st

Century, the dismounted infantry soldier will need a totally integrated load-bearing system, and such a system is currently being developed at the U.S. Army Soldier Systems Command's Natick Research, Development, and Engineering Center. The load-bearing component of the protective subsystem of the GEN II Soldier ATD provides a lightweight, integrated, modular solution that addresses the challenges of the next century.

The Natick Center completed a front-end analysis on load-bearing equipment in January 1995. This analysis included the history of load-bearing, an extensive field survey, and an on-site working group. The results of this comprehensive study verified what infantrymen have said for many years: Their load-bearing equipment was incompatible with other equipment, was not modular, and needed a better padding and fit system. The results of the analysis now drive Natick's future research and development efforts.

The analysis showed that dismounted soldiers now operate with two basic configurations of load-bearing equipment (Figure 1). The all-purpose lightweight individual carrying equipment (ALICE) consists of a medium or large pack and an equipment belt with suspenders that attaches magazine cases and other pieces of equipment.

The ALICE system, which is 20 years old, has both positive and negative aspects. On the positive side, it is durable, fairly stable with heavy loads, and more comfortable than an internal frame system in hot or temperate climates. On the negative side, the load cannot be tailored efficiently, and soldiers often use a butt pack or patrol pack to compensate. In addition, the system does not accommodate cold weather items well and cannot be adjusted.

The integrated individual fighting system (IIFS) consists of a large field pack with internal frame/combat patrol pack, a 40mm grenade vest, and an individual tactical load-bearing vest. The system is designed for supporting the additional weight of cold weather operations and for Special Operations

forces (SOF). The patrol pack has been used with the ALICE system as an interim solution.

Due to quality problems with the initial issue of the IIFS, there were many failures and most units went back to the old ALICE. The IIFS was adopted by light forces and SOF for use in temperate regions, but it was found to be too hot in these environments and it was too large for airborne use. Heavy loads (in excess of 80 pounds) proved unstable and often broke the internal frame.

The ALICE and IIFS systems were designed separately, and problems occurred in the field when components were combined. Extensive field surveys indicated that neither the ALICE nor the IIFS field pack met the needs of the dismounted soldier.

In 1992 the Natick Center successfully demonstrated that the dismounted infantrymen could best be supported as a "soldier system." The soldier integrated protective ensemble (SIPE) ATD showed the capabilities that a systems approach—and the integration of state-of-the-art technologies—can provide for the individual dismounted infantry soldier.

The objective of the SIPE ATD was to demonstrate a modular, integrated head-to-toe individual fighting system that improved the soldier's combat effectiveness while providing balanced protection against multiple battlefield threats. The load-bearing portion of the program demonstrated a modular approach and a flexible design that could be tailored to missions.

The SIPE demonstration was not a test of prototype hardware intended for immediate fielding. The components were bulky, heavy, and unacceptable for long-term field use. The demonstration was the genesis of both the Land Warrior Program and the 21st Century Land Warrior/GEN II Soldier ATD, both of which are managed by the Soldier Systems Command. These programs will revolutionize load-bearing for the 21st Century soldier.

Land Warrior

The Land Warrior Program will field approximately 4,800 systems in the years 2000-2003. These items include an integrated load-bearing and body-armor system with the functional integration of all mechanical, optical, and electrical components. The load-

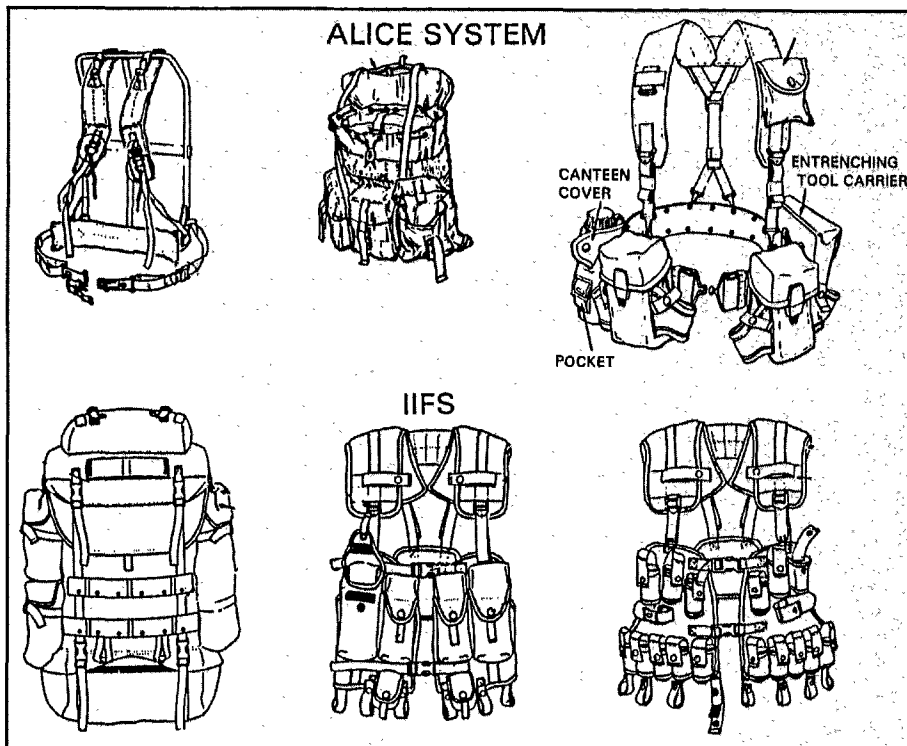


Figure 1

bearing component (LBC) consists of fighting load, patrol pack, frame, approach-march pack, and sustainment pack, and has a capacity between 4,500 and 5,500 cubic inches.

The fighting load module includes a vest with removable ammunition pouches to carry the soldier radio, computer, global positioning system (GPS), and the required antennas. The waist belt uses removable pouches and carriers. The straps have increased padding and can adjust the load from the shoulders to the hips (a single point of release is required). The patrol pack has a volume of 800 to 1,200 cubic inches. The approach march pack, or "rucksack" module, attaches to an independent pack frame, carries heavy and bulky items, and has external side pockets with additional points of attachment. The sustainment pack allows a soldier to carry additional loads or outsized items; its volume has not been determined.

The Land Warrior Program fields proven technological advances in the near term and will accept technology from the GEN II Soldier ATD.

21st Century Land Warrior and GEN II Soldier ATD

The purpose of the 21st Century Land Warrior and the GEN II Soldier ATD is to "push the technology envelope" in areas that require further maturation. This challenge requires the Protective Subsystem (PS) Integrated Product Team to envision the Force XXI soldier on the battlefield equipped with a totally integrated, modular fighting system that makes the most of technological advances. This translates into an LBC that has increased mission flexibility and an ability to integrate all the components of the 21st Century Land Warrior into a comfortable, acceptable soldier system.

The LBC is critical to the success of both the PS and the system as a whole. The SIPE demonstration showed that increases in individual capabilities through technology are limited to the successful design of the load-bearing component. Lightweight, integrated

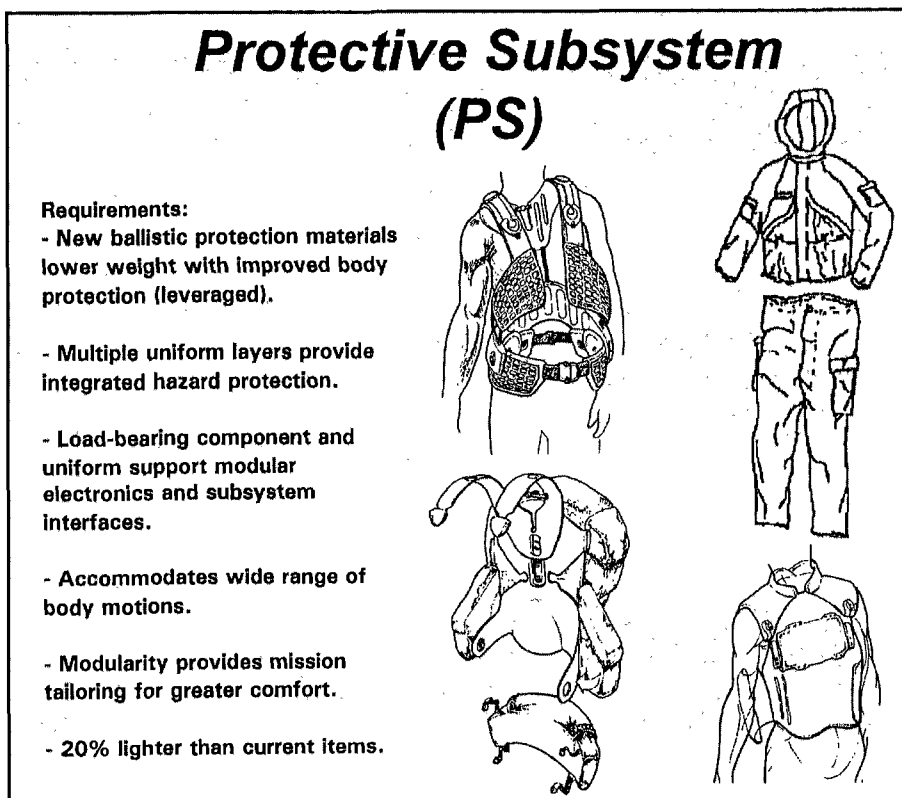


Figure 2

modularity is required to support the dismounted soldier system on the digitized battlefield. The GEN II Soldier ATD is poised to make this vision a reality.

The Natick Center is currently designing the LBC and other PS components to meet the requirements and goals stated in Figure 2. The LBC optimizes load transfer between the shoulders and the hips and uses materials that are lighter and offer more protection. The LBC supports and integrates all of the 21st Century Land Warrior components. The weight of the complete system (all components) is projected at 20 percent less than that of today's equipment. GEN II Soldier fielding is set for 2003-2004, and early successes can be inserted into the Land Warrior system at any time. Several design considerations differentiate these two programs: The GEN II Soldier LBC includes the full integration of all 21st Century Land Warrior components, body armor, and interconnections of subsystems, as opposed to the functional integration in Land Warrior.

The LBC harness (Figure 3) includes an integrated individual soldier computer/radio (ISC/R) and a weapon interface subsystem processor (WISP). These are in a structural housing that conforms to the body's contours and aligns with its center of gravity. The LBC harness is designed to carry the complete fighting load and is worn at all times. A grid attachment on the chest and waist belt allows maximum load tailoring. The waist belt also provides ballistic protection.

The butt pack (Figure 2), which attaches to the bottom of the rucksack or to the fighting harness, has a capacity of approximately 1,200 cubic inches. The approach-march pack fits into the shoulder straps of the harness and uses the harness waist belt, eliminating the duplication of straps as well as discomfort. The pack's "rabbit ear" design allows the soldier to easily don the pack, using only one arm.

All of the subsystem wiring is embedded in the harness itself so that there are no loose wires. The GPS receiver is also built into the LBC. Figure 4 shows a better view of the

LBC Harness with Integrated ISC/R and WISP (Front)

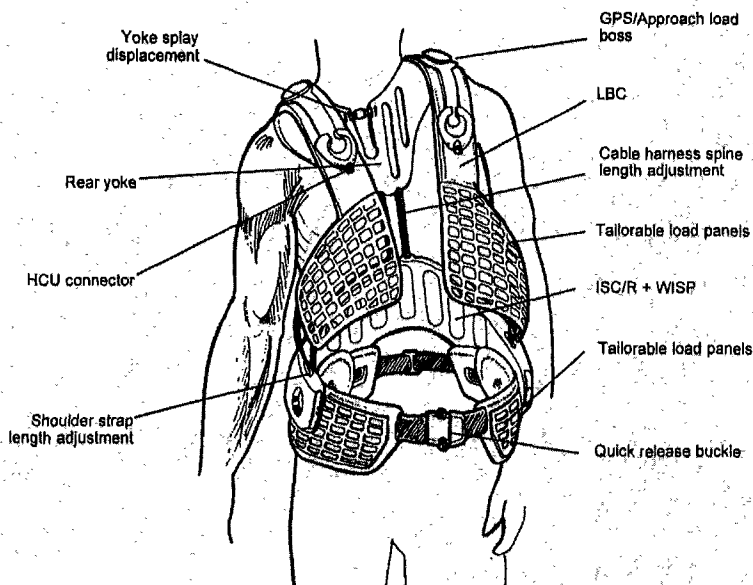


Figure 3

LBC Harness with Integrated ISC/R and WISP (Rear)

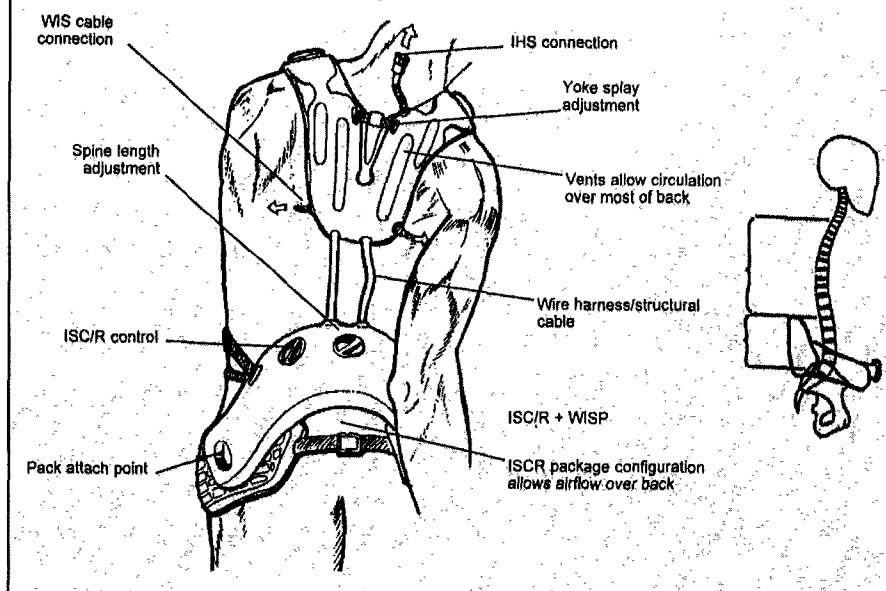


Figure 4

embedded ISC/R and WISP. The GEN II Soldier has complete access to all critical controls. The integrated

headgear subsystem plugs directly into the LBC through one connection at the rear of the harness. The LBC is fully

compatible and integrated with the uniform and body armor, allowing for the addition of a small-arms protection upgrade plate.

The LBC also accommodates all the other 21st Century Land Warrior components such as a personal status monitor, chemical agent detector, XM-45 protective mask, modular weapon system, and Javelin antiarmor weapon. The design phase is also considering such issues as weapon capability and a forward observer forward air control version for the Marine Corps.

Both the LBC harness and the approach-march pack can be put on and taken off quickly. The rucksack can be dropped, while the fighting load stays with the soldier. Heat stress is projected to be less than with current systems. The GEN II Soldier system is fully compatible with airborne operations. A unique "whale tail" flap allows for the attachment of oversized or bulky items to the back of the rucksack.

The PS product team is working closely with the users and contractors to develop a totally integrated load-bearing system. A platoon in the 82d Airborne Division will be the experimental platoon for the ATD to be held in 1998. The platoon's input will drive design changes as breadboards and prototypes are developed. The Dismounted Battlespace Battle Lab at Fort Benning and the U.S. Marine Corps are also heavily involved in the design process. The contractor developed an early LBC mockup that gave users and designers an opportunity for early feedback and input into the initial design concept.

The GEN II Soldier program is heavily immersed in integrated product and process development. All contractors and Government personnel are trained on methods that ensure proper design, early coordination for the best use of resources, and most important, continuous user involvement. This approach has led to the development of a user system engineering requirements panel consisting of both Army and Marine Corps representatives. The structure ensures continuous user input

throughout the development process. The panel gives developers and contractors valuable field information so that the needs of the GEN II Soldier load-bearing development are not lost to the system's higher-profile electronics. This effort includes a training program that exposes the contractors to the needs of the dismounted infantryman so they can better understand and respond to comments from users in the field.

The Force XXI battlefield will require full integration of the dismounted land warrior in the digitized net. To accomplish this, the Army's load-bearing capabilities must also advance. The SIPE ATD was an excellent beginning

in the development of a head-to-toe soldier system. Land Warrior capitalizes on proven technologies while the GEN II Soldier ATD continues to evaluate new and maturing technologies.

The success of the 21st Century Land Warrior and the GEN II Soldier System ATD programs depends on an effective, systemic approach to load-bearing design. The Soldier Systems Command and its Natick Research and Development Center are working to ensure that the digitized, dismounted land warrior of the 21st Century will have a totally integrated and comfortable load-bearing system.

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Major Allen L. Borgardts recently completed a tour as the Special Operations research and development project officer and deputy manager of the Generation II Soldier ATD at Natick. He previously commanded a motorized infantry company in the 9th Infantry Division and assignments in the 82d Infantry Division. He is a 1983 ROTC graduate of Methodist College and holds a master's degree from Babson College.

The Company Air Assault Raid

LIEUTENANT COLONEL ROBERT L. CASLEN, JR.

An air assault force achieves versatility and strength in offensive operations by combining the capabilities of rotary aircraft with those of the infantry and other combat arms to form a tactically tailored air assault task force. Offensive air assault operations are not merely the movement of soldiers to an attack position; they are deliberate, precisely planned, and vigorously executed combined arms combat operations, designed to strike over extended distances and terrain barriers to attack the enemy at points when and where he is most vulnerable.

Most air assault operations are characterized by deliberate and detailed planning, coordination, and preparation, and the success of these operations depends upon detailed intelligence. For these reasons, the most basic and suitable offensive operation for an air assault unit is a deliberate attack.

The advantage of an air assault raid is that it can project a combined arms

capability to any depth on the tactical battlefield, where it can quickly mass firepower in key locations and at critical times to destroy enemy forces and equipment. Achieving depth quickly on the battlefield gives the tactical commander a distinct advantage. When an air assault company task force goes deep as a combined arms team, it brings massed combat forces and combined arms firepower to bear upon the enemy, destroys the enemy and his equipment, and may be quickly extracted for follow-on operations. The key difference between the air assault deep raid and the air assault deep attack is that the raid does not intend to hold terrain. An air assault task force performing a raid will achieve maximum destruction on the target and withdraw from the objective area once the mission is complete.

The planning, preparation, and coordination required to accomplish this mission are more complex than for any

other attack a company commander can expect to make. For this reason, this article will discuss this operation in detail in each of the battlefield operating systems and through the five-phase reverse planning sequence associated with planning air assault operations.

An air assault company raid may have any or all of the following objectives:

- Destroy enemy forces.
- Disrupt enemy command and control.
- Disrupt lines of communication by destroying bridges and dams or blocking tunnels.
- Deprive the enemy of resources.

Before proceeding with the details of the reverse planning sequence, it is important to identify the command and control relationships for the operation. Normally, air assault combined arms operations have an air assault task force commander (AATFC), an air mission

commander (AMC), an air battle captain (ABC), and a ground tactical commander (GTC).

For an air assault company raid, the GTC is the infantry company commander. He must focus his analysis and efforts on the landing and ground tactical plans and must be generally free of the burden of planning and executing the staging and air movement plans (although he contributes to both). When the company commander is the GTC, the battalion commander, in most cases, assumes the responsibilities of the AATFC. The battalion is the lowest staff level suited to planning, coordinating, and executing air assault operations, particularly the staging, loading, and air movement plans. Even if a raid has a platoon as the ground tactical force, the battalion commander still assumes the responsibilities of the AATFC, because a company staff does not have the resources to plan, coordinate, and command and control an air assault operation.

METT-T will drive the decision on who assumes AATFC responsibilities. Together with armor and infantry, combat aviation forms the nucleus of the Army's maneuver forces and is therefore also capable of planning, coordinating, and executing a combat air assault from the perspective of the air assault task force commander. For example, the division aviation brigade may be assigned a sector of operations or a series of engagement areas to cover in the deep operations area. At times, the division commander may task organize the aviation brigade with ground maneuver forces to control a zone of action at or near the front line of troops, or on a critically exposed flank. When in the defense, the aviation brigade commander may control the covering force, using one or more ground maneuver battalions to physically control terrain. Thus, in these situations and with this task organization, when a combat air assault is required, the aviation brigade will most likely fill the role of the AATFC.

The AMC is the aviation commander of the unit inserting the ground tactical force. For an infantry company air

assault raid, an assault company has the lift capability for the dismounted infantry, and the assault helicopter company commander normally assumes AMC responsibilities. If attack aviation is used for air assault security of this size task force, an attack helicopter platoon is the size most likely to be used. The ABC is therefore the platoon leader of the team responsible for the air assault security tasks.

METT-T certainly has a role in deciding who will man these key command and control positions and what aviation and attack resources are used to insert the ground force. Because of the extraordinarily small margin of error during air assault raids, the role of

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AMC or ABC may be elevated to the assault or attack aviation battalion commander himself. Nonetheless, the general rule is that the AMC and ABC are the commanders of the aviation elements employed in the operation.

The most critical plan for coordination and execution is the ground tactical plan, and this is really the company commander's (GTC's) actions on the objective. Since the intent of the raid is to mass firepower with surprise on any target on the tactical battlefield, it is to the GTC's advantage to land as close to the objective as possible. Although this advantage is a significant combat multiplier, the results can be disastrous if the insertion of the infantry is not properly executed.

The choice of the landing location demands careful consideration. Furthermore, a definition of "landing on or near the objective" is in order since it is not found in most manuals.

Landing on or near the objective occurs if the ground maneuver force is in a direct-fire small-arms engagement

with the enemy as soon as it gets off the assault aircraft. Under these conditions, therefore, landing close to the objective requires continued suppression of all enemy direct-fire weapons and observation of the landing force. (How this continued suppression is achieved is discussed later in the fires paragraph.) The disadvantage of landing close, however, is that one unsuppressed enemy automatic weapon may destroy an assault aircraft along with all 12 to 20 soldiers on board. Therefore, the AATFC must ensure that he has properly prepared the conditions for the GTC's insertion.

If, on the other hand, these conditions cannot be established, the AATFC should consider having the GTC land at least one terrain feature away from the objective, out of range of enemy direct-fire weapons, observation, and sound. The disadvantage associated with this is conducting an attack without the distinct element of surprise that is inherent in air assault operations. Furthermore, if direct-fire systems cannot be sufficiently suppressed, the AATFC may consider landing far enough away where the insertion is not detected and surprise is achieved only through an infiltration assault.

In an ideal situation, the air assault company raid has both indirect and attack aviation fires. In simple terms, a scheme of maneuver integrated with fires would begin with a time-on-target (TOT) of the objective and landing zone (LZ). Once the fires lift, attack aviation covers the infantry insertion. Door gunners help sustain the suppression as needed. Infantry land, usually establish a support-by-fire element, and finally assault the objective. The enemy is destroyed and the infantry withdraw, occupy the extraction pickup zone (PZ), and are air-lifted back to their assembly area.

In not-so-simple terms, the integration of fires in this scheme of maneuver is absolutely critical to its success. On the basis of the enemy situation, fires should be planned on known and suspected targets, first on the LZ and then on the objective. If enough indirect fire assets are available, both target

areas should be hit at the same time. Indirect fire effects increase significantly during the first massed TOT impact, particularly if the defeat of enemy force is the desired effect. Otherwise, fires should be placed in priority to support the landing and then shift to the objective.

If the mission is outside indirect fire range of their current location, the AATFC may choose to air assault the artillery to a firing position closer to the objective. Good artillery units routinely practice air assault artillery raids, and their ability to execute this task is critical for deep raid attacks. Part of the fire plan must include no-fire areas, as scout, long-range surveillance, or special operations force elements must occupy them before the preparation is initiated.

The key to an effective fire plan is the suppression of all enemy direct fires and observation while landing. Artillery should shift off the LZ no earlier than 30 seconds before the first aircraft is down, and they do this by notifying the first serial of the first lift of their last round by marking it with a white phosphorous or ground burst illumination round. Indirect fires then shift to the objective to cover the infantry movement off the LZ into assault and support positions.

Before the artillery shifts, attack aviation assumes responsibility for sustaining the suppression during the critically vulnerable landing. On the basis of intelligence reports, they will cover the LZ and, if necessary, service known and identified targets on the objective. Door gunners in the first serial provide cover during the final seconds before landing, but they are marginally effective at best, judging from lessons learned in Vietnam. In subsequent serials, door gunners are seldom used in the LZ because of the threat of fratricide.

Typical employment guidance for attack aviation elements is to provide air assault security. Normally, this means they will conduct route reconnaissance, provide route security, assist in suppression of enemy air defense (SEAD) missions by calling in artillery or

servicing the target themselves, and overwatch the insertion. Other considerations are to have them conduct a deliberate attack on known targets on the LZ or the objective in conjunction with the preparatory TOT. After the insertion, they can seal the objective, continue to provide close-in attack fires for the GTC, screen a suspected enemy avenue of approach, or begin search and attack operations.

The AATFC's fire support officer is responsible for integrating attack aviation fires into the overall fires plan. Additionally, he must carefully work with the AMC, the ABC, and the AATFC's S-2 to balance whether attack aviation should mass during the initial surge or risk fewer assets during the insertion to sustain security in case the GTC's projected time on the ground is longer than expected.

Always a point of confusion is the command and control relationship between the ABC, the AMC, and the

In today's Army, an air assault company raid is one of the most potent and deadly operations available to the tactical commander.

AATFC for both movement and target servicing. Field Manual 90-4, *Air Assault Operations*, assigns the AMC the responsibility for getting all aviation assets to the objective in accordance with the execution checklist, and for providing command and control for their fight.

From our experience, it works best to have the AMC responsible for the air movement of the attack aviation, which is inherent in his responsibility to command and control all aviation assets. When employed to service targets, however, attack aviation becomes a maneuver element and should be commanded and controlled by the AATFC. Since the AATFC is controlling all fires and maneuver units, he must also integrate attack aviation.

When the GTC or one of his platoon

leaders needs the assistance of attack aviation, the AATFC assigns the asset to the company commander or the on-scene platoon leader. Communication is on the GTC's command net, and the link is directly between the ABC and the on-scene leader. Once the target is serviced, the ABC assumes his position under the AATFC.

The GTC's initial actions on landing, a plan designed to support the ground tactical plan, is critical to sustaining suppression on enemy weapon systems. Aircraft must land as close to cover as possible. Infantrymen exit through the side of the aircraft nearest the woodline and immediately run to cover. Since the landing heading is known, the soldiers will know which door to use. The old exiting technique of running to the outside of the rotor blades, getting down until the aircraft departs, and then moving to cover is fraught with error. Arriving aircraft on an LZ at night signal your arrival and presence on the most critical danger area. Sustaining your presence in the openness of this danger area any longer than necessary keeps your soldiers exposed for too long. Soldiers must exit, sprint to cover, regroup, get oriented, and then move out to their support and assault positions. That's why aircraft need to land near the woodline, to further reduce the exposure of infantrymen while in the open danger area.

An exception to the single-door exit may be in a hot LZ. While exposed to direct or indirect fire, aircraft may "bounce" on the LZ or hover just long enough to allow the infantry to conduct a mass exit from all sides of the aircraft. But the principle is still the same—to have the infantry immediately sprint to cover once on the ground.

Since the landing plan is built upon the ground tactical plan, the GTC should carefully plan the arrival of his serials in the order he wants to insert them into the fight. For example, if it is important to achieve immediate direct fire suppression on enemy weapons, a support element should be included in the first serial. Members of this element immediately exit the aircraft, run to cover, get oriented, then move to the

position where they can provide suppressive fire.

Some landing plans allow the support element to land directly on the support position. When this occurs, the positioning of key weapons in the aircraft greatly contributes to quick suppression. For example, two M60 machinegunners may be assigned to the door seats so that they exit immediately upon landing and, on command of the support element leader, put their guns into action and begin their support fires. Well-drilled units can have effective rounds down range within 20 seconds of the first wheels-down aircraft. The support element leader works the seat assignments for the rest of the support element in the same way, thus facilitating the quick exit, then movement to and establishment of the support-by-fire position.

Although the AATFC and his staff base the air movement plan on the GTC's landing and ground tactical plan, the GTC has a few important points to consider. Again, the ability to mass forces at a decisive point on the ground and to put the correct combat ratio in the sequence and location needed is unique to air assault operations.

This concept is a significant force multiplier for a deep air assault raid, and the AATFC must make sure enough aircraft are available to insure the GTC's success. Piecemealing forces into the fight compromises the principles of mass and surprise and forces the GTC to focus his effort in two directions, one on the fight toward the objective and the other behind him, trying to link up his arriving units in the support or assault positions.

A second important consideration in the air movement plan is to be able to communicate during flight. The GTC and his key leaders must know how to operate the aircraft ICS system. During air mission coordination, key leaders' locations and communication nets are identified; then the AMC ensures that they are correctly installed before arriving on the PZ. The GTC must not only be able to communicate with the aircraft crew, but he should be equally

adept at talking to the AATFC and his sub-unit leaders on other aircraft during flight. If there is a change in H-Hour, or an intelligence update the scouts have passed on to the ABC (who may have arrived in an uncompromised observation position of the objective area 10 to 20 minutes early), the AATFC must be able to pass this on to the GTC, and the GTC must be able to pass it to his key leaders all during flight. Acquiring and sharing this information before touchdown is a significant combat multiplier, and good units can disseminate the information and also adjust their plan as necessary, given rehearsed branches and sequels, while in flight.

The AATFC is responsible for establishing the PZ, along with receiving and staging the ground tactical unit. He and his staff command and control the PZ. Although they may task the GTC to provide guides and perhaps security, the GTC presents himself ready to execute his mission at the PZ to the AATFC. He then stages in accordance with the staging plan, loads, and executes.

Depending upon METT-T, there are advantages to having aircraft arrive on the PZ early and to have a cold start. One reason for doing this is to give the soldiers an opportunity to rehearse their actions on loading and landing, and to allow the leaders to confirm the communication arrangements. It is also good to ensure that all procedures and elements are correctly in place at the start. When aircraft do arrive early, planners must consider the crew window to make sure the time on the ground does not interfere with the time needed for the operation itself. On the other hand, the AATFC may not want aircraft sitting in a PZ for any extra time that would expose them to enemy fire or compromise the mission.

Any discussion of an air assault company raid must include communications, because only with a reliable system can the many moving parts be synchronized. The key radio net in the entire operation is the command aviation net (CAN), which is an FM net used by both aviators and ground

forces. Other nets used are the air battle net (ABN), the air assault task force (AATF) net, and the fire support (FS) net.

The ABN is a VHF/UHF net used by the AMC primarily to command and control the movement of aircraft from the PZ to the objective. The FS net is used by the FSO to control indirect fires while enroute (SEAD) or to initiate or shift preparatory fires on the LZ and the objective. The AATF commander's net (in this case, the battalion command net) must be monitored but will probably not have any users until well after the AATFC goes to ground. And since this operation is a quick in and out, that will not occur in most cases.

So the CAN becomes the net of choice for most elements. All aviators monitor it. The AATFC commands and controls with it. The GTC and his sub-element leaders monitor it during flight (using the aircraft radios), and the GTC uses it as his higher headquarters' net once on the ground. Scouts call their intelligence reports in for all to monitor, and attack aviation monitors the development of the ground tactical plan in the event he must support the GTC.

In today's technological Army, an air assault company raid is one of the most potent and deadly operations available to the tactical battlefield commander. It brings a combined arms capability, using the principles of mass and surprise, to a decisive point on the battlefield, regardless of depth and terrain. But synchronizing the many assets used in this operation requires the detailed planning of a knowledgeable air assault task force staff and company task force commander. It is only through the tough and realistic training of the leader and staff tasks that we can insure the conditions necessary for success. And when that occurs, no enemy can stand against this brutally effective combat air assault.

Lieutenant Colonel Robert L. Caslen, Jr., commanded the 1st Battalion, 14th Infantry, 25th Infantry Division, and served on battalion, brigade, and division staffs in the 101st Airborne Division. During Operations DESERT SHIELD and DESERT STORM, he was a battalion executive officer. He is now attending the Army War College.

THE POSTWAR PERIOD: FIFTY YEARS AGO

November-December 1945

The end of World War II saw an almost immediate resurgence of tension, as Communist forces in China and Korea sought to assert dominance over their respective countries. Backed by arms both provided by the Allies and captured from defeated Japanese units, Chinese Communists forced confrontations with U.S. and Nationalist Chinese units, while Korean Communists protested the division of the peninsula. The closing weeks of 1945 reflected the irony of the death of General George S. Patton, who had survived the risks of combat only to die of injuries sustained in an automobile accident.

*These and other highlights of the postwar years are drawn from Bud Hanning's monumental chronology, *A Portrait of the Stars and Stripes, Volume II*, still available for \$50.00 from Seniram Publishing, Inc., P.O. Box 432, Glenside, PA 19038.*

- 14-15 November** *Chinese communist troops clash with U.S. Marines assigned to guard a train carrying the 1st Marine Division commander, Major General DeWitt Peck. The confrontation occurs near Kuyeh.*
- 18 November** *General A. V. Arnold, Military Governor of the United States in Korea, announces the creation of a personnel review board for Korea. The seven-member board will investigate the loyalty of Korean office holders and job holders within the military government.*
- 28 November** *President Harry Truman accepts the resignation of General Patrick J. Hurley as ambassador to China and appoints General George C. Marshall, retiring Army Chief of Staff, as his special envoy to mediate the developing crisis between the Chinese Nationalists and the Communists.*
- 30 November** *Chinese Communists capture Nationalist Chinese officers in a raid behind Chinese national lines.*
- 5 December** *Congressional hearings begin, looking into General Hurley's accusations that U.S. diplomats are sabotaging U.S. policy regarding China, whose government the U.S. supports at this time.*
- 9 December** *General George S. Patton, Jr., is seriously injured when his sedan collides with an Army 2½-ton truck near Mannheim, Germany.*
- 21 December** *General Patton dies in his sleep and is buried on 24 December in Hamm, one of the largest American cemeteries in Europe, a few miles from Luxembourg.*
- 23 December** *General George C. Marshall begins peace negotiations in Chungking, China, between the Nationalist and the Communist Chinese.*
- 23 December** *The Big Three Accord—the United States, Great Britain, Russia—divides Korea between U.S. and Russian forces in a five-year trusteeship. A truce between Communist and Nationalist Chinese forces takes effect and lasts one day.*
- 29 December** *Lieutenant General Albert C. Wedemeyer, commander of U.S. Forces in China, says that American forces in China need to be increased by 4,000 to help Chinese Nationalists move into Manchuria.*
- 31 December** *The Koreans denounce the "trusteeship" between U.S. and Russian forces.*



LESSONS IN URBAN COMBAT

Grozny, New Year's Eve, 1994

ADAM GEIBEL

The Russian Army's invasion of Chechnya in late 1994 was characterized by total confusion from the outset. That army was not the Soviet juggernaut of the Cold War, nor did it consist of units hardened on the battlefields of Afghanistan. Tens of thousands of combat veterans had been put out of the Army, and many units were critically undermanned.

As a result, the units sent into Chechnya were ad hoc, thrown together in early December. Their ranks were filled with young draftees, most of them poorly motivated and undertrained. In addition, the command structure was burdened by too many layers, the supply system did not function, and intelligence on the opposing forces was weak.

Yet the Kremlin was confident that the army's three columns would brush aside the Chechnyan rebels, seize their capital, and restore order. Any remaining "bandits" would fade into the mountains. From there, it would become an Interior Ministry problem.

Two of the three invasion columns were attacked before they even crossed their start lines. Some units took fire the minute they left their secure assembly areas, and others were subject to constant sniper harassment at night and bold guerrilla RPG (rocket propelled grenade) attacks during the day.

In Northern Chechnya, the rebels launched several company and battalion-sized counterattacks. Some had armor support; all drew Russian blood. For the first three weeks of December, the Russians were exposed to the very real danger of cold weather injury. Morale was low, and drunkenness was common. (When Chechen grandmothers blocked one road and asked the soldiers why they were there, they could not honestly answer.)

The rebels, on the other hand, were on familiar home ground, operating among a mostly friendly population, and well supplied with food, weapons, and ammunition.

orders were to allow the Russians to break through, then to attack them from the rear. He noted that Russian response was panic and disorientation, as tank after tank exploded.

The commander of one of the Malikop Brigade's ZSU-23-4s, self-propelled antiaircraft vehicles tasked to provide flank suppression, notes that the brigade took fire immediately after crossing the Sunzha River. The two lead tanks were knocked out, but the men pressed on. The brigade never linked up with the battalion they were to reinforce and, as night fell, the commander's own ZSU was knocked out.

Some Russian armor even made it to the Palace area, but the tanks were not accompanied by infantry. They fired at Dudayev's building, more in frustration than from tactical necessity.

Motorized rifle battalion BMP-2s took the brunt of the slaughter at the railway station; 30 survivors spent the next ten days barricaded in two nearby apartment buildings. One tank unit of the Kantimir Division was surrounded near the same railway station, and all its survivors were taken prisoners. A few blocks away, a group of cut-off paratroopers dug in and waited for help.

One of the airborne reconnaissance platoons discovered a rebel ambush in the Sunzha Heights region. This was part of a larger rebel force gathering nearby. The unit engaged an estimated 100 rebels for six hours. In the end, the paratroopers counted 80 Chechen killed, plus four rebel KAMAZ trucks, two tanks, and two BMPs destroyed.

Civilians wandered throughout the fighting; an old man and some boys huddled around a fire built in an old barrel, within sight of Russian troops. It was unclear whether they were innocent bystanders or rebel lookouts.

At some point during the day, the paratroop command realized that they were not coordinated into the assault. Columns of paratroopers headed into the city to help their mechanized and armored comrades.

The rebels were active even outside the city, attacking the Russians' second echelons and artillery positions. They

Considering that most of the rebels had been in the Soviet Army at one time or another, they would have had the same training.

attacked airborne company soldiers in the Andreyev Valley, as well as an artillery battalion. The commander of the artillery battalion, his men subjected to an artillery ambush, deployed his unit for a counterbattery mission, then beat off the attack by a platoon of rebels.

The Chechens used ancient tactics worthy of the Afghans—disabling a vehicle with an RPG or Molotov cocktail, then shooting the panicked occupants as they bailed out. One driver fired back with his Kalashnikov as Chechen guerrillas closed in and finished him off with a grenade.

By late afternoon, Chechen RPG gunners, fueled by religious fervor, eagerly roamed about, still searching for targets.

Chechen television continued to broadcast live throughout the fighting, the tape running uncut and the commentator silent.

The day ended with rebels looting the Russian dead and crippled vehicles, taking weapons, ammunition, and anything else that was useful. Scattered Russian units were

The Soviets planned to use armor in their city fighting as part of the assault force or in close support of infantry.

pinned down. Confused and low on ammunition, all they could do was wait for daybreak and the arrival of close air support.

Chechen fighters boasted of 50 tanks destroyed. Film footage later showed a massacre: a square full of smoking BMP-2s, an isolated and shattered BTR, rebels firing from the cover of a pair of disabled reactive armor-fitted T-80 tanks, a street full of burned-out T-72 and BMP-2 hulks. Russian and western press counted nine AFVs knocked out in the Central Square alone.

An *Izvestia* report claimed that the 131st Brigade's losses for the day totaled 20 of its 26 tanks, 100 of its 120 APCs, and half of its 1,000 men either killed, wounded, or missing in action.

The Russian artillery barrages finally ended around 0230 on 1 January 1995.

What the Russians Did Wrong

Training exercises conducted in the early 1980s pointed out the following chronic mistakes in urban fighting among Soviet troops:

- Poor target observation and shooting at the wrong target.
- Poor individual marksmanship, both dismounted and mounted.
- The inability of small units to react without orders.
- Poor personal concealment and camouflage, from a failure to appreciate its need and from incompetent attempts.
- Inability to throw grenades from cover. Throwing grenades on the run and firing while pinned down in hollows, the direct opposite of the correct procedure.
- Slow individual reaction to surprise.
- A massive lack of technical knowledge and leadership by junior noncommissioned officers.
- Poor individual performance underground and in very enclosed spaces—tunnels and sewers, room-clearing at hand-to-hand ranges.

It appears, from network footage of the fighting, that the Russian attackers—both soldiers and commanders—made

these same mistakes. In addition, the commanders also made the following mistakes:

- Underestimated the enemy's skill and willpower.
- Failed to train the infantrymen at the most basic levels.
- Failed to ensure good communications, coordination, and intelligence.
- Failed to form assault teams tailored to the environment.
- Failed to coordinate with other branches (paratrooper air assault).

It appeared as if someone in the higher echelons had just broken out the textbook on city fighting and followed the template on "attacking a city," without factoring in the reality that fast assaults work only when the attackers are well trained and supplied with good intelligence on the objective.

Evaluation

In analyzing both sides in this operation, only one comment applies to the rebel plan: They had rigged command-detonated mines in sections of the city, using the city's telephone system for control, but never activated them. A Spetsnaz team eventually dismantled the system in the second week of January.

On the Russian side, there are numerous things they could have done differently:

A "fast assault" was never possible. The rebels knew the attack was coming and, having sat through the same classes as the attackers, had taken the time to prepare a response by the book.

Given that the objective was the rapid assault and seizure of the Presidential Palace, and that the city's three main avenues were also the most likely avenues of approach, it should have been obvious to the Russians that the rebels would have built their defense around these avenues.

The Russians should have taken the time to build up supplies and refine their intelligence estimates, tailor specialized assault teams, and then train their men.

When the infantry assault groups were ready to go in, the artillery barrage and air strikes should have been saved until the hours just before the assault. The stockpiled rounds could have been fired at the highest allowable rate, with the assault units following just behind this curtain. Such a "time on target" would have been short and violent, dazing the defenders and reducing their ability to take advantage of the ensuing rubble.

The type of round called for should have been a mix of airbursts (clearing snipers from roofs) and concrete-piercing rounds (which penetrate a floor or so and take out snipers who are not on the roof).

The Russians also could easily have taken their armored advantage into the city with them. In addition to its obvious

firepower, the tank's physical bulk could have provided cover where there was otherwise none. Both BMPs and ZSUs have enough main-gun elevation (+74 degrees and +85 degrees, respectively) to suppress fire from many stories up.

Those 2S1 and 2S3 self-propelled guns that were not providing fire missions could have been attached to assault groups for direct fire support.

Combat engineers could have broken through the rebels' street barricades. No combat engineer vehicles (either blade-

A "fast assault" was never possible. The rebels knew the attack was coming and had taken the time to prepare a response by the book.

equipped BREMs or IMRs) were seen with these units until mid-January.

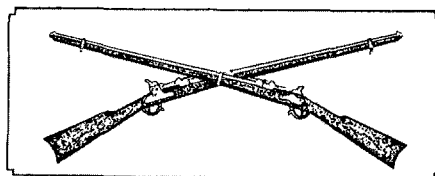
The Russians did, however, learn from some of their mistakes, but it took the Federal troops until 26 January to capture the Presidential Palace, and serious street-fighting was still going on at the end of February. By then, however, most of Grozny had been reduced to rubble, with only 100,000 of the city's original 400,000 residents remaining. The rest had become refugees.

The Russians took most of February and March to regroup while they laid siege to the remaining rebel strongholds of Shali, Argun, Gudermes, and Shamaski. When they did move, the Chechen positions fell quickly.

Finally, the last major fortified rebel town fell to an air-mobile assault on 8 June when the Russians surprised the defenders of the mountain village of Vedano, which they claimed to have taken without losing a single man.

As the United States Army faces its array of possible missions for the next century, we need to include military operations in urban terrain among our training priorities and to learn from lessons such as the Russian experience in Chechnya. Only then will we be able to meet the most demanding challenge facing the infantryman: dislodging a determined enemy in an urban environment.

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COUNTERSNIPER MISSIONS

IN OPERATIONS OTHER THAN WAR

LIEUTENANT COLONEL MICHAEL R. HARRIS, U.S. ARMY, RETIRED
ARTHUR A. DURANTE, JR.

Operations other than war (OOTW) put U.S. soldiers at risk, and in sometimes ambiguous tactical situations. The success of peacekeeping and humanitarian assistance operations can be threatened by gunmen who ambush, raid, emplace mines and booby traps, or launch sporadic attacks by mortar, rocket, and sniper fire against U.S. and coalition forces. Because these dissidents often mingle with a desperate civilian population in OOTW situations, responding to their attacks with massed firepower is counterproductive.

U.S. snipers, however, have proved themselves useful in such situations and have become essential to force protection. They offer a unique capability that can be used to identify and eliminate specific enemy while causing minimal collateral damage. Countering the efforts of enemy snipers has also assumed a larger role as OOTW situations require more restrictive rules of engagement (ROEs).

U.S. snipers are unparalleled as a means of applying limited but effective combat power. The kill rates achieved by U.S. small arms fire have ranged from 60,000 to 80,000

rounds per casualty in World War II and the Korea War to more than 200,000 per casualty in Vietnam. Although the recent ground combat in Somalia would undoubtedly show a lower ratio, snipers have consistently maintained a rate of less than two rounds per kill over this entire period.

U.S. Sniper Operations

Snipers can actually decrease the level of violence in an OOTW situation by enforcing prohibitions against the deployment of heavy weapons such as machineguns, mortars, antitank and antiaircraft weapons, or armed vehicles. Snipers can enhance security and provide force protection by overwatching diplomatic meetings, patrols, guard posts, checkpoints, convoys, food and water distribution points, and port or airfield operations. They can provide both surveillance and immediate precision counterfire. They can occupy key positions to deny roving bands of gunmen the use of staging areas and avenues of approach. Snipers also provide an effective means of neutralizing enemy sniper operations as part of a coordinated countersniper program.

In countersniper operations, a sniper team is best employed in a secure hide site so it can detect and eliminate enemy snipers as they approach or withdraw. Special operations force (SOF) sniper teams can also provide training, advice, and assistance to countersniper efforts.

A successful countersniper program is more than just the dramatic, life-and-death duel between two skilled shooters. To be effective over the long term, in fact, overmatching is often more effective than mere technological advantages; it is more a result of outthinking the enemy than outshooting him. Although the existing family of U.S. sniper weapons and the associated surveillance equipment draw upon state-of-the-art technology, gaining a truly decisive tactical advantage also requires superior training, planning, and weapon employment.

U.S. Sniper Equipment and Employment

The standard, school-trained sniper team, equipped with current weapons, is an overmatch for most enemy snipers, at both the civilian irregular and dedicated marksman levels. The M24 sniper rifle, firing the 7.62mm NATO round, has the range, accuracy, and fire control to be effective at 600 to 800 meters. The 20-power M49 spotting scope and the AN/GVS-5 and AN/PVS-6 range finders provide an adequate day capability to acquire and hit targets. Problems with re-zeroing, limited range of vision, and bullet-drop compensation usually make the AN/PVS-4 night sight more effective when used on the M16A2 rifle. The thermal weapons sight to be fielded soon will add a night capability that is close to current capabilities.

Enemy snipers are more difficult to engage than the usual targets. A sniper will fire from cover with only part of his head exposed while trying to pick off a fully exposed and unsuspecting target. An overmatching capability therefore requires a weapon and a shooter capable of making head shots at greater ranges than those at which the enemy can make body shots. The level of training given infantry snipers

and the accuracy of the M24's Special Ball ammunition limit it to about 400 meters in a duel of sniper against sniper. The 7.62mm match ammunition is more accurate at short to medium ranges while the Special Ball ammunition is more accurate at longer range. Only commercial match-grade ammunition will fully exploit the accuracy of the M24.

Special operations forces have a family of sniper weapons that were specifically developed to overmatch enemy capabilities and to conduct stand-off attack. The primary SOF sniper weapon is the 7.62 NATO M24 or the Navy SEALs' equivalent version, the M86. Some of these weapons have been chambered to fire the .300 Winchester Magnum (WMG) round, thereby providing a heavier bullet, a flatter trajectory, and longer range (1,000 to 1,200 meters). (There has been some question in the past as to the legality, under the Geneva Accords, of using this commercial ammunition against enemy forces, but the SOF community has obtained a ruling under international law approving the use of match ammunition in countersniper operations.)

A problem that arises with the 7.62mm round fired at long range is that, because of the steep angle-of-fall, a bullet may be deflected by striking the overhanging cover of the enemy's firing port, even with what appears to be a clean shot into the position. The lower maximum ordinate of the .300 WMG is critical in urban environments when shooting through windows, loopholes, and arches. The flatter shooting magnum will reach targets that the 7.62mm cannot. The .300 WMG's heavier bullet (190 grains), higher velocity (approximately 3,000 feet per second), and higher ballistic coefficient result in a shorter time of flight and a flatter trajectory that reduce the effect of wind, ranging errors, and target movement.

In the hands of an exceptionally skilled sniper, the M24 in .300 Winchester Magnum is a superb countersniper weapon with a much greater area coverage than that provided by the 7.62mm round. It is less affected by wind and range errors and offers a higher hit probability than the original M24. It fires Navy .300 WMG match-grade ammunition or commercial match ammunition with minute-of-angle (MOA) accuracy; that is, the system can place five-shot bullet groups within a one-inch circle at 100 yards. The .300 Winchester Magnums are normally employed by exceptional snipers shooting at extreme ranges. Even taking the additional recoil into account, this version makes it much easier for even average snipers to make hits at ranges of 600 to 800 meters.

The SOF community has also obtained a limited number of semiautomatic 7.62mm SR-25s as part of a program to procure a special sniper security rifle. The SR-25 provides a high rate of precision fire (.8 to 1.5 seconds per aimed shot at .5 to 1 MOA) and is equipped with a flash and noise suppressor, a variable-power sniper scope for day use, and the latest night vision sights. A sniper normally carries the weapon with the scope on the low power setting in case of unexpected contact with the enemy at close range. Once the sniper is in position, he uses the high power setting on the scope.

This weapon is extremely accurate. With it, a skilled sniper can eliminate an enemy sniper team of two or three men

before they can effectively react to the sound of the first shot. The combination of an SR-25 and a heavy sniper rifle in a concealed sniper-observer post can overwatch vehicle or foot patrols, guard posts, checkpoints, and roadblocks with absolute authority.

The SR-25 and its scope are built to accept an adapter, which attaches to the day scope and gives it a night vision capability. But a separate SR-25 equipped with a night sight and a suppressor that reduces sound and flash, provides the optimum mix of weapons for night-time engagements.

Additional enhancements include the use of commercial match ammunition, variable (15-power to 45-power) observation scopes, night observation devices, laser range finders, and hand-held thermal viewers for better target acquisition. Together, these will overmatch any opponent. For special

The first step in establishing an effective countersniper program during OOTW is to make a detailed intelligence assessment of the sniper threat.

situations, the SR-25 has a rail on the barrel where an infrared laser aiming device can be securely mounted. This combination can be used to provide excellent heliborne night suppression capability.

The SOF heavy sniper rifles include bolt-action (M87/M88) and semiautomatic (M82A1) .50 caliber sniper rifles that were originally developed as antimateriel weapons. Their effective range during daylight or under artificial illumination is approximately 1,000 to 1,500 meters with a 2-3 MOA accuracy, good enough for use as an antipersonnel sniper weapon. As stand-off antimateriel weapons, they can be used out to 2,000 meters.

The semiautomatic weapons can fire an aimed shot every 2.5 seconds while the bolt-action versions require 8 to 12 seconds per shot. Either weapon can be used to knock out light vehicles, neutralize heavy weapon positions, or conduct countersniper operations. Their range, lethality, and penetration provide an exceptional combat-proven countersniper capability.

For example, in a typical incident during an OOTW situation, an irregular civilian sniper fires several rounds at U.S. personnel and then ducks behind a wall as a hail of return fire from our machineguns and rifles covers the area. Although this fire probably won't hit the gunman behind his cover, it may wound bystanders, much to the delight of the enemy who has thereby created an incident that may undermine the U.S. efforts at restoring peace.

If the U.S. commander has SOF snipers supporting him, however, the result may be dramatically different. The range and "shoot through" capabilities of the heavy sniper rifles make them excellent countersniper weapons. SOF snipers, using heavy sniper rifles firing .50 caliber armor-piercing, or armor-piercing explosive incendiary ammunition would

engage the sniper by actually shooting through the wall or by having the HE round burst at the base of the firing port and spray fragments inside. The gunman himself is now the only casualty. He is shown to be ineffectual against U.S. forces, his companions are discouraged from similar attacks, and there are no non-combatant casualties to exploit.

The use of heavy sniper rifles does, however, require careful consideration of the hazards caused by excessive penetration, misses, and ricochets. Match-grade penetrating and frangible .50 caliber ammunition can significantly improve the effectiveness of these weapons.

The future holds even more advances for U.S. snipers. The SOF is developing an integrated day-night sight and, in partnership with the Federal Bureau of Investigation and the Department of Energy, is working on a sniper scope that automatically compensates for range and wind drift. This program uses technology to address the major factor that contributes to a miss and those areas that require the most training resources to master. The planned development of match-grade .50 caliber and improved 7.62mm sniper ammunition will dramatically increase the effective sniping range of both current and future weapons.

Countersniper Intelligence Assessment

The first step in establishing an effective countersniper program during OOTW is to make a detailed intelligence assessment of the sniper threat. A sniper trained in the U.S. Army Sniper School or, better yet, the leader of a Special Operations countersniper team (CST), should be used to conduct a vulnerability assessment. Either can do this by mentally putting himself in the place of the enemy sniper. This helps to determine likely targets, hide positions, fields of fire, and routes for infiltration and exfiltration. The CST must be allowed to consult with the unit's intelligence staff and to collect and analyze the essential elements of information on enemy sniper activities.

The U.S. countersniper team identifies the military, political, and psychological objectives that the enemy intends to support with his sniper operations. This will help determine likely targets, target locations, and even times of attack. The team members will then determine the level of sniper likely to be countered—professional, trained marksman, or civilian irregular. They will need to analyze the type of weapons, ammunition, tactics, and night vision equipment available to the enemy and all accounts of recent sniper incidents. Hand-held panoramic photographs from potential targets or low oblique photos from helicopters can be used to identify clear lines of sight and likely sniper positions. This analysis will give the sniper teams an assessment of the expected range and lethality of the opponent and identify patterns to aid in targeting. This information can also be used to assess such passive protective measures as the likely effectiveness of body-armor, light vehicle armor kits, and screens.

The sniper team can assist the intelligence section during the intelligence preparation of the battlefield (IPB) by combining all of this information into a sniper operational

template. The commander can then use the IPB products and the assistance of the sniper team to develop both active and passive countersniper measures.

Countersniper Tactics and Techniques

The typical range for an attack by a trained enemy sniper is around 300 to 600 meters for 7.62mm weapons. Shots from 800 to 1,000 meters are the exception. But heavy sniper rifles (.50 caliber, 12.7mm, 14.5mm, or greater) with ranges of 1,200 to 1,500 meters are now proliferating in armies around the world. Most of these were originally intended as antimateriel weapons for stand-off attack against radar or communication vans, missiles, parked aircraft, or bulk fuel and ammunition storage sites. Although they are only marginally accurate against personnel targets, their ability to shoot through most passive countermeasures and their devastating effects on human beings increase their psychological effectiveness.

The concept behind sniping for harassment or political effect is not limited to the use of rifles. Stand-off attacks with antitank weapons—such as rocket-propelled grenades and direct-lay mortar fire—can be conducted against the same U.S. targets and with the same objectives as traditional sniping attacks. In many OOTW situations, it may be better to respond first with countersniper tactics and techniques instead of counterbattery fires.

Countersniper tactics and techniques are generally classified as either passive or active. Passive countermeasures, while useful, are not the total solution to the problems presented by urban snipers. They may be both politically and psychologically effective at first in terms of reducing casualties and the level of violence, but they are self-defeating in the long run.

Ultimately, passive measures interfere with mission accomplishment, isolate U.S. forces when their visible presence is required, foster a siege mentality, and yield the initiative to the enemy, all of which are the very objectives of the enemy's sniping effort. Along with seizing the initiative comes the certainty of an occasional success to cast doubt on the legitimacy and competency of the U.S. effort.

Ultimately, active countermeasures that exploit the enemy snipers' military and psychological vulnerabilities will have the greatest overall effect. The sniper teams are almost always small. They depend on stealth to approach their target along covered and concealed routes. They move carefully into hide or shooting positions. The positions they seek must provide good but not obvious fields of fire; concealment for both the sniper and the firing signature; cover from direct and indirect counterfire; and easy access to concealed escape routes.

The countersniper teams must analyze past shooting incidents, using their knowledge of sniper tactics and trajectories to identify likely enemy hide positions. The path of the bullet will indicate the direction, and the angle-of-fall can be used to estimate the range. For most conventional snipers, engagements are usually from 300 to 600 meters. At ranges closer than 300 meters, the sniper's movement and firing signature are too easy to detect, and he is vulnerable to

counterfire from conventional small arms.

The Russian-manufactured SVD sniper rifle and similar conventional military sniper weapons commonly found in Third World countries are capable of grouping shots into a two-to-three-inch circle at 100 yards. This limits their effective range to 600 meters. If effective shots are being made from beyond that range, the enemy is either lucky or he is specially trained and equipped. The use of suppressed weapons, extreme stealth, and night vision sights for closer shots is another indication.

An experienced sniper will often shoot past a structure or terrain feature that reflects the sonic shock wave from his bullet. The resulting crack is often mistaken for the sound of the shot and deceives observers as to the source of the fire. Tracing the path of the incoming round back 300 to 600 meters past sound-reflecting features to good firing positions with access to concealed withdrawal routes is difficult, but it will point to likely enemy sniper positions on which to focus active countermeasures.

Enemy snipers must avoid close combat with U.S. infantry while they are moving into or out of position. The sniper team is small, usually no more than three men, and a bolt-action sniper rifle is cumbersome and slow in close quarters combat, and they are very vulnerable to attack by units with overwhelming direct fire.

Their worst fear, however, may be that a better sniper is hunting them. They fear the countersniper who is better trained and who is equipped with a more accurate rifle that has a flatter trajectory and longer range. They are terrified of an observer who is equipped with more powerful, higher-resolution day, night, and thermal surveillance systems. They dread an opponent with better planning, support, coordination, and integration of mutually supporting countersniper teams and patrols. They simply have no defense in such a situation. They must either stop sniping or eventually be killed.

The concept of defeating the enemy sniper by overmatching his capabilities also includes the surveillance and fire control optics (day, night, and thermal sights) and other sensors. These include the sophisticated REMBASS (remotely monitored battlefield sensor system) sensors placed on likely routes or firing positions; airborne infrared scopes on helicopters, remotely piloted vehicles, or AC-130 gunships; or some of the emerging technologies that are capable of detecting and tracing the sniper bullet's trajectory back to the source. Periscopes or night-vision and thermal sights with connecting cable to a video monitor allow continued surveillance with less eye strain and, more important, without exposing the observer to sniper fire. Thermal systems remove the cover of night, along with the concealment offered by camouflage measures and vegetation.

If U.S. forces can see better than the enemy can, or better than the enemy *thinks* they can, he becomes vulnerable to detection and engagement while moving into position. Overmatching weapons include those that have greater range and accuracy than the sniper's and that are capable of shooting through the sniper's cover. The Abrams tank, Bradley

fighting vehicle, Apache helicopter, and AC-130 gunship are, in varying degrees, immune to the sniper's weapons but are themselves able to acquire and hit targets from extreme range. These systems, too, can provide immediate, devastating countersniper fire. The armored vehicles can operate from exposed positions while their long-range sensors and weapons can cover a large area, see through concealment, and shoot through cover. A problem with these powerful weapons in OOTW situations is that even single aimed shots are likely to cause significant collateral damage and possible casualties.

By conducting a vulnerability assessment of likely targets and combining that with the sniper IPB, the countersniper team determines known, likely, and suspected enemy shooting positions and routes, the best locations for ambushes, and the areas to cover with countersniper teams. The countersniper teams overwatch and support ambush patrols. Air and artillery support, along with an armored ground reaction team, should be on stand-by to help patrols or countersniper teams that get into trouble. Checkerboarding the suspected area with ambush and security patrols will maintain contact with the enemy snipers until they are killed or captured.

Any units that come under accurate sniper fire should take cover and use smoke and indirect fire (if authorized). The enemy is prepared for attempts of the unit under fire to maneuver toward him or his flanks. He may have supporting snipers covering his flanks and can inflict serious casualties before withdrawing. If he has fired and the targets are under cover, however, the longer he stays in position the more vulnerable he becomes. Some of the hidden ambush patrols can maneuver to cut off his withdrawal.

Helicopters can provide aerial observation and fire or insert additional patrols or countersniper teams. Snipers can fire effectively from helicopters using low-power or reflex

The enemy sniper fears the countersniper who is better trained and who is equipped with a more accurate rifle that has a flatter trajectory and longer range.

optical sights or infrared laser aiming devices and night vision goggles. When the target is detected, the helicopter goes into a pylon turn, orbiting the target. The sniper firing out of the left side of the aircraft can easily acquire and hit the target while offering the enemy a difficult deflection shot.

Flushed and pursued from the ground and air, the enemy sniper will attempt to avoid a close quarters engagement and can be driven into the crosshairs of an overwatching countersniper team.

Countersniper teams provide counterfire on likely enemy sniper positions. These teams are sited in overwatching positions where they are unlikely to be spotted or engaged. Other positions cover routes snipers or raiding parties are likely to take in approaching U.S. targets. Teams employed in hostile or unsecured locations must be either accompanied by

security elements to protect against attack during movement or in position and backed up with supporting fires and reaction forces.

In normal sniper operations, a small sniper team has the initiative and can infiltrate the target area, make the shot, and escape with relative ease. In countersniper operations, however, the team has to cover an area for extended periods of time. The number of positions will be limited and, after a while, will become known to the enemy. Supporting security elements and operational security are essential to prevent the compromise of team positions. Countersniper teams employed with conventional observation post (OP) or security positions will be less effective and more likely to become targets themselves. The enemy expects someone to be in the OP looking for him, and he will maneuver to avoid detection. Dummy sniper positions with decoys that simulate personnel, movement, or firing signatures can be used to draw sniper fire and set up a shot for the countersniper team.

The sniper and the observer must switch roles often to avoid carelessness from eye strain as they check potential target areas over and over. The same teams should work the same area to get a feel for its terrain, people, and rhythms of life. They will be alerted immediately when there is even a subtle change; a hint of movement, the glint of sunlight off optics, a flash, or a wisp of gunsmoke is all they will have.

The observer uses pre-designated reference points to direct the sniper to the target. The target must be verified against the rules of engagement before the shot. Snipers should coordinate fires and engage targets in pairs whenever possible. The security man guards the flank and rear while providing the communications link to notify headquarters and coordinate supporting countersniper teams, ambush patrols, and supporting fires. If the countersniper team's hide position is compromised, it must be abandoned or used as a decoy position.

The intelligence provided by the sniper-observer teams often becomes more important than the counterfire. As fewer of the gunmen who thought it would be good sport to go take a few pot shots at the U.S. forces return, and as their most skilled professionals are eliminated, incidents will decline along with the morale, prestige, and power of the gunmen.

Incidents, both real and manufactured, will be taken to the international press in an effort to embarrass the U.S. forces, psychologically and politically. Training, discipline, and strict adherence to the rules of engagement are essential to ensure the legitimacy of the countersniper program. The enemy can be expected to resort to other forms of attack against U.S. military, civilian aid personnel, or even indigenous civilians to restore their prestige.

The rules of engagement should recognize the control and precision of sniper fire. These rules are intended to limit the level of violence and the number of noncombatant casualties. Countersniper team operations serve the same intent, while also preventing criminal elements from spreading anarchy under the cover of the ROEs.

Close coordination between sniper teams and the supporting or supported units is essential for effective operations and the prevention of fratricide. Infantry snipers will often operate with Special Forces, Rangers, SEALs, U.S. Marine Corps, and even Air Force Special Operations Security Team snipers. The countersniper team's communications must provide immediate access to the command net to clear targets, call for fire support, provide intelligence information, and call for emergency relief or extraction. Additionally, the sniper teams must be linked to hand off targets, coordinate mutual support, overwatch, and protect against enemy counteraction. This is a significant challenge since communication security equipment may not be compatible even in joint U.S. operations, let alone those involving several coalition partners.

SOFs can provide training, advice, and assistance to enhance the employment of infantry snipers as well as to field state-of-the-art countersniper teams. Infantry commanders should forward requests for SOF support to the Corps Special Operations Coordination cell or to the Joint Special Operations Task Force or Theater Special Operations Command.

Some Army infantry units give in to the temptation to request just the SOF sniper equipment, thinking they can do the job themselves. But this equipment is not effective without the associated doctrine, training, and support. While approved for SOF use under the U.S. Special Operations Command acquisition authority, most of the equipment has not been tested, safety certified, or type classified by the Army. SOF support will provide state-of-the-art battlefield capability and assistance in exploiting the full capability of the unit's own snipers.

The Human Dimension

The ambiguity, danger, and frustrations of OOTW pose many leadership challenges. Countersniper operations place additional heavy demands on unit leaders as well as the sniper.

Leaders must fully trust their snipers; they should not second-guess the team's decisions to shoot or not to shoot. There will be incidents, real or manufactured, that the enemy will exploit to undermine the U.S. efforts. He may try to portray the U.S. snipers as out-of-control, sadistic killers of innocent civilians. Any large-scale effort to create a news-media bias against U.S. snipers is an indication that the countersniper team's efforts are succeeding. To continue to be successful, the teams must be given the full support of the chain of command. To do otherwise will damage the morale and confidence of the snipers and make them reluctant to shoot, and this will eliminate the U.S. sniper as effectively as if he were shot by the enemy.

Soldiers in combat for the first time may have difficulty with the stress of a long countersniper mission. Good soldiers, even those who are aggressive and effective in a conventional fire fight, may be unable to adjust to the stress associated with sniping. It is a difficult thing for the average person to look at another human being through a telescope

that clearly shows his facial expressions and then shoot him.

Although most snipers can cope with the stress of combat, severe stress reactions are not uncommon after extended sniper operations. Some snipers may become increasingly reluctant to fire on targets, creating fictitious reasons for not doing so. In rare cases, some may overstep the rules of engagement and take inappropriate shots. The commander must stay alert for such indications and take immediate action. If the case calls for it, the commander can ask for assistance from combat stress management teams.

After a while, some snipers begin to feel the stress of combat. Commanders, chaplains, and other snipers should talk with these soldiers and help them reconcile their feelings. If

Leaders must fully trust their snipers; they should not second-guess a team's decisions to shoot or not to shoot.

necessary, soldiers who cannot adapt to sniping should be reassigned, without prejudice, to other duties.

The Infantry School and the Special Warfare School have produced an unmatched sniper capability with state-of-the-art equipment and world-class shooters. It falls to unit leaders to master their snipers' capabilities, limitations, employment considerations, support, and training requirements, and to exploit them as an active force protection measure. When you begin taking casualties from enemy snipers, it is too late to ask if there are any school-trained snipers in your unit or to start thinking about their sustainment training.

Sniper sustainment training—as well as training in firing from awkward positions, firing from steep angles, firing from helicopters, and the training of additional observers—are mission essential tasks for units facing possible deployment to OOTW. The effect of properly trained, equipped, and employed sniper teams in OOTW is phenomenal. Snipers will enhance force protection, enforce the ROEs, create a buffer around selected posts and installations, and deny the enemy chances to attack with line-of-sight weapons. Sniper operations will build coalition morale and confidence, create fear and uncertainty among the enemy, and ensure U.S. influence to the maximum range of their weapons and optics.

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Lieutenant Colonel William C. David

EDITOR'S NOTE: This article is the last in a four-part series. The author commanded the 2d Battalion, 14th Infantry, 10th Mountain Division (Light Infantry), in Somalia in late-1993, and wrote the series at the request of the division commander.

The first article in the series, on physical fitness and mental toughness, appeared in the May-June 1995 issue of INFANTRY; the second, on marksmanship, in the July-August issue; and the third, on maneuver live-fire exercises, in the September-October issue.

A battalion and its companies make up the Army's basic family unit. Although soldiers may identify with their division or brigade, they *bond* with their company and battalion; ask a soldier what unit he's in, and the odds are that he'll respond with the company and battalion designation first. It therefore falls to the battalion commander to be the Army's caretaker of this family unit. Because of this extremely close-knit unit organization, a battalion commander is able to directly influence the lives of hundreds of soldiers.

The position demands intimacy. His personal influence on

everyone and everything in the unit affects all facets of battalion life. There is little that escapes his personal attention. Indeed, it could be argued convincingly that the personal influence a battalion commander has on his unit is without equal at any other level in the Army. As a consequence, a battalion reflects the standards, the commitment, and the priorities of its commander.

Because of his position as the foremost leader in the organization, a battalion commander is the unit's primary behavioral role model. What he does or fails to do is always in plain view of his subordinates and becomes the subject of much discussion. The responsibility of battalion command therefore carries enormous weight and underlines the importance of doing the right thing.

The combined effects of position and organization force a battalion commander to focus not only on accomplishing the mission but also on *how* it is accomplished. The long-term health and well-being of his unit depend on his ability to balance this dual focus.

These everyday factors are, of course, every bit as relevant—and probably more so—when a battalion is deployed to a theater of operation. Once a battalion is

deployed, soldiers and units live together 24 hours a day, seven days a week. Anything that was working well before deployment requires constant maintenance to sustain, and things that were not working so well get worse.

In an operational theater, the mission can be all-consuming, and the commander must make a concerted effort to maintain his focus on all the other areas that are important to the battalion. But every operational deployment has an end date, and once that date arrives the battalion immediately begins preparing for the next mission. The leadership challenge of battalion command is to finish the first race on a horse that is ready to run the next one.

For these reasons, when the 2d Battalion, 14th Infantry, was alerted for deployment to Somalia, I felt it was important not to limit our focus to the operational domain. When it came to the mission, I was confident that everything we had done in training would serve us well, but our leaders also had to focus on the human dimension.

This article focuses on what I refer to as combat leadership lessons learned from our experience in Somalia—before the battle, during the battle, and after the battle. I will highlight the elements that, in hindsight, I consider the most relevant. Taken together, these are intended to provide a picture of the way we tried to sustain the long-term well-being of the battalion.

Before the Battle

Before our deployment, I gave all the task force officers a handout, which was used in conjunction with an officer professional development class. The text of the handout is reprinted in the accompanying box.

My intent was to reinforce in the minds of the battalion's officers the idea that they had to take a long-term view of the operation. On the basis of the training we had conducted and our past performance, I had no doubt that the battalion would accomplish its mission to a high standard. For the health and well-being of the unit, however, the manner in which we accomplished that mission was also extremely important, and the officers' role in the process was critical.

I thought that, as the mission wore on, it might be easy for officers to lose their long-term focus or become complacent in their duties. I therefore felt it was important to establish a common reference point of expectations up front. Although my discussion was focused at the platoon leader level, this before-the-battle effort was equally applicable to all the other task force officers.

During the Battle

The major lessons that follow were derived from personal experience in the many combat operations the task force conducted during its tour in Somalia. While most of them are not new, they are nonetheless still valid:

- Deploy well forward with your tactical command post. You are not indispensable. If you become a casualty, someone else will step in to take your place. The Army has many qualified people who can do the job.
- Your personal leadership counts. Your behavior in

tough situations helps shape and guide the actions of others.

- Listen to the battle around you. What you do not hear is sometimes as important as what you do. Do not rely solely on radio reports. Your experience in training exercises gives you the best feeling for what's going on on the ground when reports tell you differently.

- Think. If you're not doing it, neither is anyone else. Think action, reaction, counteraction. Any decision made in haste will cause needless losses in men and materiel.

- All leaders must stay cool and clear-headed under fire. This takes concentrated effort, and it starts with you.

- Your subordinate leaders need reassurance. Sometimes this takes a gentle form, sometimes not. Everyone knows

The principles outlined in the Army's doctrine and training system work.

that accomplishing the mission is the way home. These leaders truly want to do the right thing, but fear and confusion sometimes get in the way.

- Allow no knee-jerk reactions when soldiers are killed or wounded. This is the unfortunate nature of our business; it will happen despite your every effort. Accepting this fact and living with it is difficult.

- Give subordinates the time and space to develop the situation. They have a difficult job to do. Don't badger them with unnecessary reporting requirements. Waiting is the hardest part, particularly when you know your men are dying.

- Remember the Regiment. Many have stood in your shoes before. Don't allow your actions to stain the Colors. After we are gone, the Regiment lives on.

After the Battle

The following lessons learned after the battle are designed to help a battalion commander take stock of himself and his unit as they prepare for the next battle.

- Learn from what you and the unit did, and continue seeking organizational improvement. Do this even if it means changing your personal ways. Actively enforce the after-action review (AAR) process so that good ideas are not stifled at lower levels.

- Keep routine decision making decentralized, and save the important decisions for yourself. Your staff and subordinate leaders need room to take the initiative and work out problems on their own. The better they can do this, the better they can serve you.

- Be tolerant of honest mistakes. Everyone is under stress and trying to do his best. So long as mistakes don't cause casualties or impede mission accomplishment, they probably aren't that important.

- Pace yourself for the long haul. Your battalion needs a commander who is physically and mentally fresh. This includes regular sleep, physical training, hygiene, and relax-

GOING TO WAR PERSONAL NOTES FOR OFFICERS

As officers, you are the standard-bearers of the Army's institutional values. Soldiers and non-commissioned officers will take their cues from what you do or say, and from what you do not do or say. Seek excellence in all things, and never let a fault or error pass by you uncorrected.

Have trust and confidence in your chain of command. Once a decision is made, vigorously support it 100 percent. If you hear grumbling in the ranks, put a stop to it immediately. Never do anything to foster the notion that "higher" is screwed up. Remember, you are somebody's "higher" too.

Performance counseling does not stop once the unit arrives in theater. On the contrary, it is more frequent. Performance counseling remains our best available tool for modifying individual behavior that affects unit performance. This task is not delegated below squad leader level. Platoon leaders review every counseling in their platoons. Your notebook becomes your bible.

Training does not stop in theater. You must always have a series of mission-related training scenarios ready to go. Most training will be "opportunity" training. Accept the fact that you will not be popular when you force your unit to do this.

Pre-combat and post-combat checks are standing operating procedure (SOP) in every mission. This task is never delegated below squad leader level.

AARs are conducted upon completion of every mission. Lessons learned are incorporated into SOPs immediately.

The ultimate form of troop welfare is bringing everyone back home alive with all equipment operative.

Establish personal goals for self-improvement, both mental and physical, on this deployment. Encourage your subordinates to do the same.

Pray regularly and get to know your God. Encourage your subordinates to do the same. There are no atheists in foxholes.

Keep a diary. It is a good aid to your professional growth. Encourage your subordinates to do the same.

Maintain your balance and sense of humor. Do not get "stressed out." If you do, you will lose the trust and confidence of your soldiers. Understand the difference between losing your temper and showing your temper.

Allow no deviations from the prescribed uniform, ever. Deviations must be conscious decisions by the chain of command based on an analysis of METT-T, not personal whims.

All soldiers perform personal hygiene daily, shaving and brushing teeth as the very least. Squad leaders check; the platoon leader and platoon sergeant verify. No exceptions.

Physical training is conducted daily in accordance with METT-T. Develop a program of standard isometric and manual resistance exercises.

Do not let good performance go unrewarded or poor performance go uncorrected.

Encourage constructive feedback from subordinates on ways to do things better, then send recommendations up through the chain of command. The best solutions often come from the bottom up.

See that weapons and ammunition are cleaned at every opportunity.

Take charge of all Government property in sight. There is always something that needs to be checked or verified.

Stop rumors immediately and ruthlessly. Do not allow the morale of your unit to rise and fall on the basis of the latest rumor. If you don't hear it from the chain of command, it's not true.

We are a combat organization, expert in the controlled application of violence. Follow your instincts; they are probably right. The chain of command will support you. Maintain patient aggressiveness in your platoon. Be decisive, and execute with unrelenting fury.

ation. If you don't maintain your balance, neither will your battalion.

- Don't let the operational tempo make you lose sight of everything else. Lots of other things still demand your attention—awards, punishments, promotions, rear detachment, family support group, maintenance, mess hall.

- Stay visible and approachable to soldiers. Do routine management by walking around to keep your finger on the pulse.

- Make every effort to keep rumors in check, both at home and in theater. Write a monthly newsletter to dependents. Send videos to the family support group. Routinely meet with companies to dispel groundless rumors.

- Maintain your perspective and sense of humor. Not everything is serious. If you don't laugh very often, chances are no one else does either. And units that don't laugh, even at themselves, have big problems.

It is almost impossible to overstate the effect a battalion

commander has on his unit. While accomplishing the mission will always be his paramount consideration, it cannot be his only one. Fulfilling his role as caretaker of the Army's basic family unit demands a balanced approach to command. For sustained operations, the battalion must maintain its health over the long term. It is therefore important to keep an eye on how the battalion accomplishes the mission.

The items listed here reflect the approach to this challenge that the 2d Battalion, 14th Infantry, used during its tour in Somalia. They are not all-inclusive lists. And there are plenty of areas in which we probably could have done better. But these points and suggestions worked for us.

Conclusion

Any battalion in the Army can be truly great, whether it's a combat, combat support, or combat service support unit. By focusing on high performance in several fundamental areas that are critical for success in combat, a battalion commander can significantly increase the overall capability of his unit.

The principles outlined in the Army's doctrine and training system work. They have shaped an Army that is the world's best. The levels of individual and unit performance throughout the Army are solid. Consequently, most battalions are pretty good by any measure, but there is always room for improvement.

Every unit has several fundamental areas of individual and collective endeavor that are critical to anything the unit will ever be called upon to do in combat, regardless of the conditions. These areas are the essential characteristics that define the unit. I call them unit core performance areas.

Commanders can achieve high performance in their core areas with only a small increase in effort, about ten percent. But getting this ten percent requires commanders to maintain a long-term focus on their core performance areas that does not change in the face of competing demands. Core performance areas must constantly be integrated as sub-tasks or conditions in everything the unit does. They must then be reinforced at every opportunity by all the institutional weight the chain of command can bring to bear.

My professional experience convinced me that there were three fundamental areas that defined the essence of a light

infantry battalion, and these became the core performance areas for the 2d Battalion, 14th Infantry: Physical fitness and mental toughness, marksmanship, and realistic maneuver live-fire exercises.

We maintained a constant focus in these areas, both at home station and in theater. Our aim was to find the extra ten percent that would make us high performers in each of them. Getting the extra ten percent did not require a major

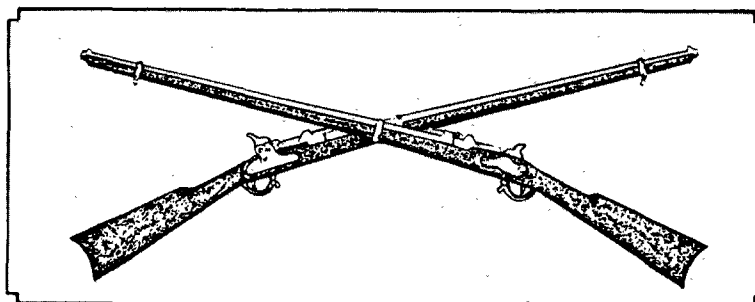
Actively enforce the after-action review (AAR) process so that good ideas are not stifled at lower levels.

overhaul of the unit. The key was thoughtful, fine-tune adjustments in what the unit trained on and in the way training was conducted.

When a unit achieves high performance in its core areas, it gets an additional payoff of tremendous proportions. Because the core performance areas are at the heart and soul of the unit, their combined action powers performance in other important areas as well. The result is a supercharged unit with far greater capabilities.

Adopting this philosophy in training paved the way for the 2d Battalion's performance in all of its combat operations in Somalia. The battalion got more than its extra ten percent in each of its core performance areas. As a result, it was a high-energy, high-performance outfit across the board.

Lieutenant Colonel William C. David served as deputy chief of staff of the 10th Mountain Division after completing his assignment as commander of 2d Battalion, 14th Infantry, and is now assigned to the U.S. Southern Command. He previously served in the 82d Airborne Division and the 9th Infantry Division and served as a battalion executive officer in the 101st Airborne Division during Operations DESERT SHIELD and DESERT STORM. He is a 1975 graduate of the United States Military Academy and holds master's degrees from the University of Southern California and the University of South Carolina.



TRAINING NOTES



Light Battalion Operations At the National Training Center

LIEUTENANT COLONEL FRANK J. STONE

As the senior light task force trainer at the National Training Center (NTC), I have witnessed first-hand some of the challenges that confront a light battalion when it trains here with a heavy brigade. I'm convinced that light battalions add important capabilities to the NTC battlefield and that most are up to the challenges.

I would like to review some of these capabilities and outline some employment concepts that I believe will help you, as a light battalion commander, and your staff prepare for your heavy-light rotation at the NTC. Finally, I will suggest some areas of training that you may want to consider.

What unique capabilities does your battalion add to the heavy brigade at the NTC? As the following examples will explain, the effective employment of a light battalion can increase the heavy brigade's operational tempo (OPTEMPO) in the offense, and allow the brigade to mass its heavy systems more effectively in the defense. Additionally, your light battalion can assume infantry roles that Bradley units would normally perform but typically cannot because of reduced manning levels. Finally, your battalion can perform several missions—such as air assault, dismounted infiltration over long

distances, and trench clearing—that are not trained in many heavy units.

Increasing the Brigade's OPTEMPO

Securing Restrictive Terrain. Your battalion's ability to infiltrate before a brigade attack can allow the brigade to move faster through restrictive terrain along its attack axis. In the example shown in Figure 1, the brigade conducted a deliberate attack along Axis Blue to seize Objective Dog 20 kilometers to the south. Line of departure (LD) time for the heavy force was 0530.

The brigade staff's analysis indicated the brigade would be hindered in its movement along the axis at Red Pass, where the opposing force (OPFOR) had positioned security forces in restrictive terrain. To ensure that the brigade could pass rapidly through this area, the brigade commander directed the battalion to infiltrate the night before to the heavy force LD to secure routes through Red Pass, and to pass the brigade through at first light.

To accomplish this mission, the light battalion crossed the LD at 1900 and conducted a dismounted infiltration by company. By 0300 the battalion had completed company infiltration and

linkup. By 0500 OPFOR security forces were destroyed and routes through the pass secured. Passage lanes were established, and at first light the brigade moved through the restrictive terrain unimpeded, passed through the light battalion, and continued its attack.

In this case, the light battalion was able to infiltrate 12 kilometers at night, defeat the enemy security forces holding the pass, clear and hold the restrictive terrain, and pass the brigade through. As a result, the brigade was able to attack more rapidly toward its objective.

Protecting a Flank. The battalion's ability to conduct a battalion air assault can also contribute to the brigade's success. In the example in Figure 2, the brigade conducted a deliberate attack at 0700 along Axis White to defeat an OPFOR battalion at Objective Rat. Along the attack axis, the brigade was subject to attack by OPFOR security zone forces that could use the cross-mobility corridor at Granite Pass to attack into the brigade's flank. The light battalion was directed to conduct a night air assault to seize the pass.

The battalion air assaulted at 0001—seven hours before the brigade would cross the LD. Before the air assault, battalion scouts infiltrated to observe landing zones (LZs) and the

objective area. The battalion used three LZs in the vicinity of planned company battle positions on the most likely avenues into the brigade's flank. The battle positions were supplemented with squad-size antiarmor ambush patrols. TOW systems and 81mm mortars were loaded into UH-60 helicopters and manpacked to the battle positions. Additional TOW, Dragon, and mortar ammunition was sling-loaded on the helicopters, along with 10 modular packed mine systems to follow the initial air assault. By 0600, the pass was secure and the brigade's flank protected.

Enabling the Brigade to Mass

How can your battalion contribute to the brigade defense-in-sector fight? In this example, the brigade, consisting of one heavy battalion task force (two mechanized infantry companies and one armor company), and a light battalion, defended against an attacking regiment. The brigade sector was 12 kilometers wide and included several battalion-size avenues of approach (AAs). To achieve the desired force ratio on what he considered the most probable AA, the brigade commander directed the development of a brigade engagement area (EA). Then he directed the light battalion—augmented by a tank platoon and reinforced with a series of brigade-directed obstacles—to defend a sector that included the secondary AA (Figure 3). The brigade commander's intent was to deny this avenue to the OPFOR.

The task given to the light battalion was to defend in sector to defeat an OPFOR battalion and to turn the regiment south into the brigade's primary EA. The careful placement of the light battalion denied this avenue to the OPFOR—effectively reducing the brigade frontage from 12 to 6 kilometers—and turned the regiment into the massed fires of the brigade's primary EA.

Infantry-Intensive Roles

Some of the infantry-intensive tasks that Bradley units would normally perform are conducting dismounted

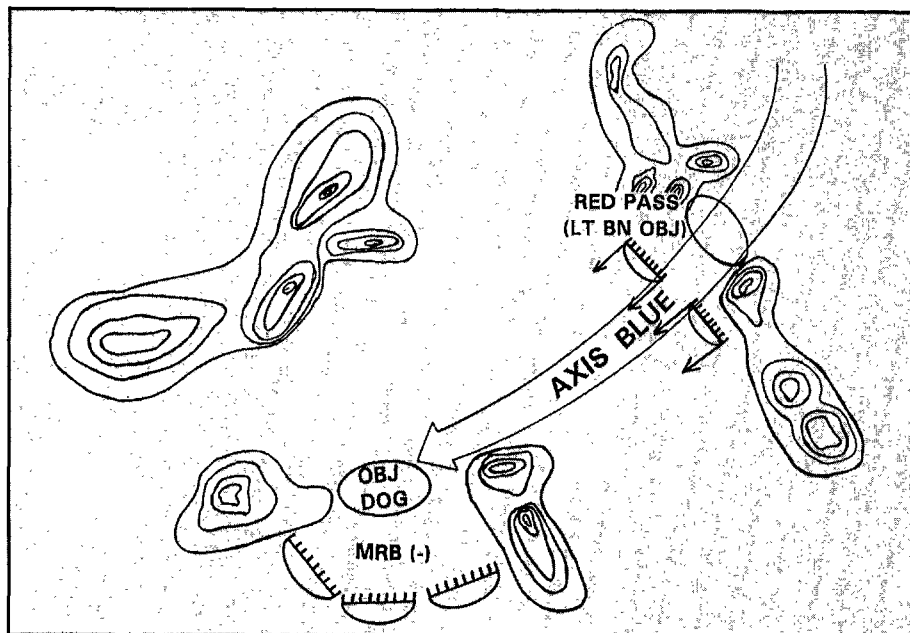


Figure 1

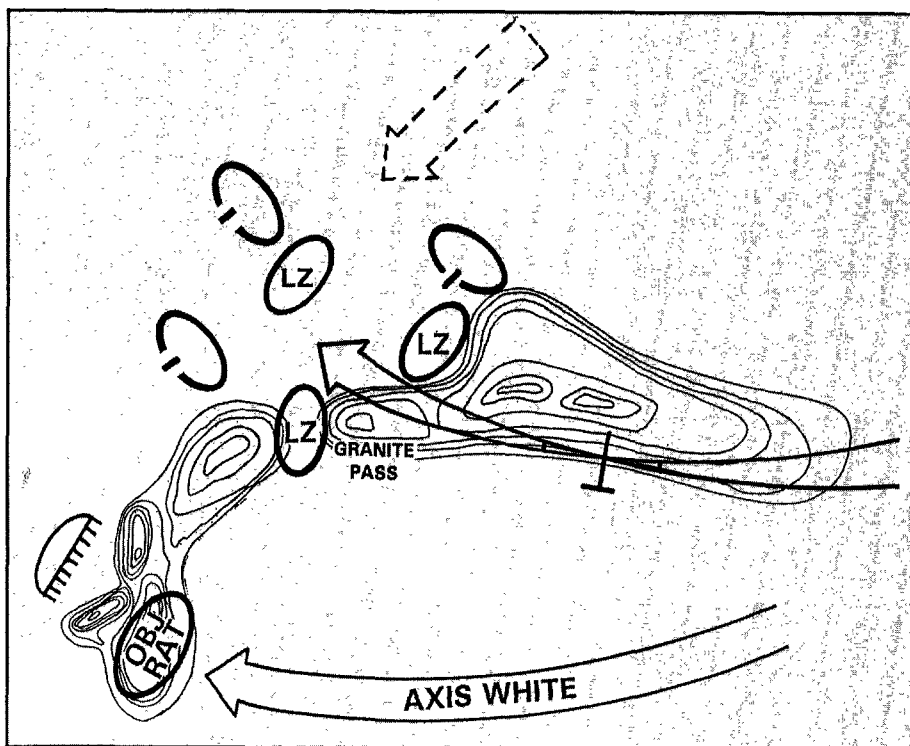


Figure 2

operations to clear restrictive terrain and clearing a trench line, for example.

In the example in Figure 4, the brigade, organized with a balanced heavy task force and a light battalion, attacked along axis Green to seize Objective Horse. As the brigade staff members analyzed the terrain along the attack axis, they identified several areas

of restricted terrain through which the brigade would have to pass on its way to the objective. Additionally, intelligence indicated the OPFOR had established a combat security outpost consisting of a reinforced platoon (one tank, three BMPs, and dismounted infantry) in a trench line at point Y astride the attack axis.

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Because of the restrictive terrain around this position, the brigade commander assigned this intermediate objective (Objective Cow) to the light battalion. Further, because there were no suitable flanking routes into the objective area, he augmented them with a company team consisting of the two Bradley platoons and a tank platoon. The task given the light battalion was to clear the restrictive terrain leading to Objective Cow, seize the objective, and then pass the rest of the brigade through.

The light battalion led with dismounted infantry to clear the restrictive terrain along the axis leading to its objective and followed with light infantry soldiers mounted on the Bradleys. As the artillery preparation began, the tanks and Bradleys moved forward to an attack-by-fire position and began to suppress. As the artillery shifted to the rear of the objective, tanks and Bradleys engaged and destroyed the BMPs and the tank. The Bradleys continued to suppress as engineers moved forward under smoke and breached the obstacle; they continued to suppress while moving forward to dismount light infantry into the trench. Following the destruction of the OPFOR platoon and seizure of the trench, the rest of the brigade passed through and continued to the final objective. As the brigade passed through, the Bradley company team that had been under the light battalion's operational control returned to the heavy task force for the next phase of the attack.

Although mounting the light infantry in Bradleys presented its own challenges, it also offered several advantages over moving dismounted. Primarily, it gave the infantrymen more protection and allowed them to close with the trench more rapidly. Most important, the ability to perform the tasks of clearing restrictive terrain and seizing a trench was one the brigade otherwise would not have had without the light battalion.

Preparing Before a Rotation

For all the capabilities your battalion can add to the heavy brigade, there are

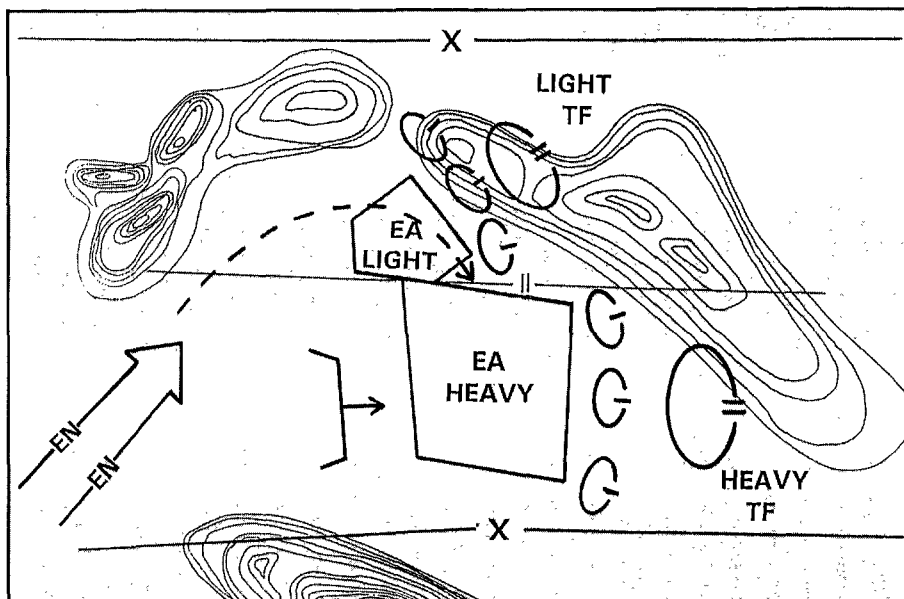


Figure 3

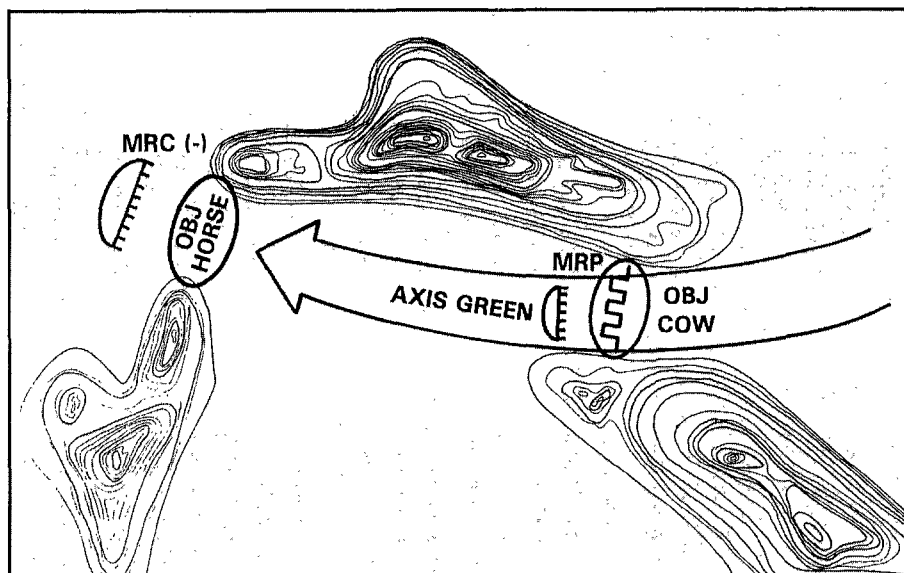


Figure 4

some things that may warrant further training emphasis before your rotation. Ensuring your battalion is proficient in these tasks will enhance your training experience at the NTC and allow you to make a greater contribution during the brigade fight. The following are a few of these areas:

Managing the Soldier's Load. Left to their own devices, your soldiers will often carry too much equipment into battle. Field Manual 7-10, *The Infantry Rifle Company*, recommends that the individual fighting load not exceed 30 percent of the soldier's body weight, and that the approach load not exceed

45 percent. Given that the average soldier weighs 160 pounds, this means the fighting load should not exceed 48 pounds and the approach load (which includes the fighting load) should not exceed 72 pounds. On recent rotations, however, fighting loads usually exceeded 100 pounds, and loads of 130 pounds were not uncommon. In one case, a soldier went into battle carrying 160 pounds. Needless to say, overloaded soldiers do not fare well under fire at the NTC or anywhere else.

How can you better manage the soldier's load? During the planning phase for each mission—after a

thorough analysis of METTT (mission, enemy, terrain, troops, and time)—your leaders must determine precisely what equipment will be required. Then they must determine what the soldiers will carry (the combat load) and what can be transported on trucks (the sustainment load).

The combat load should be further divided into the approach load, which will be dropped at the assault position or on contact, and the fighting load, which will remain with the soldier. Although mission requirements may dictate that loads be heavier than recommended on some operations, this should be a conscious decision, made by informed leaders on the basis of the tactical situation and with consideration of the training and fitness levels of the soldiers involved.

During mission preparation, leaders at all levels must supervise relentlessly. Soldiers cannot be allowed to determine their own loads. And during execution, leaders must know who is carrying the heaviest loads and where these soldiers are traveling in the formation. Finally, leaders must manage the task force trucks. Soldiers who are confident that the trucks will show up on time with their sustainment load won't try to carry extra items.

Planning and Executing Truck Moves. To improve tactical mobility, light battalions are typically augmented by a light truck platoon for the rotation. The effective use of this platoon can allow your battalion to get to the objective more quickly and to be better able to accomplish the mission when they get there.

Moving a battalion by truck is challenging at the NTC. Truck moves are frequently done the night before the heavy force LD time. A typical mission could have your battalion moving forward by truck from an assembly area some time after EENT (early evening nautical twilight). The trucks will move the battalion to the platoon or company detrucking point, then the battalion will infiltrate dismounted the rest of the way to the objective. Although this may sound easy, units that have not trained to move by truck usually have problems.

The following tips may help you make better use of the truck platoon and move more effectively:

- Select, reconnoiter, and secure the truck route early. Conduct a thorough map reconnaissance, and identify tentative routes. Then infiltrate scouts to confirm and observe. This will help avoid lost truck serials on unsuitable terrain, which often costs valuable time.

- Plan truck loads and load plans. Maintain platoon integrity on trucks. Carefully plan where mission critical equipment will travel. This will help you keep track of both the critical equipment and key personnel.

- Develop a plan for radio communication during movement. Key leaders should ride in the cab with their radios on. This will facilitate command and control and allow you to make adjustments on the move in response to scout reports.

- Train truck drivers to drive off-road, at night, with and without night vision devices. The augmenting truck platoon frequently comes from corps transportation units in which off-road driving at night may not be a training priority.

Given some forethought, your battalion's ability to move by truck can improve your tactical mobility and have a corresponding effect on the battlefield. If you do not meet the truck platoon leader until after your arrival at the NTC, you will be in for a long rotation.

Finally, in coordination with the supporting truck platoon, develop a standing operating procedure (SOP), train your staff to write a detailed truck movement annex, and include the truck platoon in your train-up.

Planning and Executing Air Assaults. Light units at the NTC often have opportunities to execute battalion air assaults. These, like truck moves, can significantly improve the battalion's tactical mobility if training has been conducted and SOPs are in place before the rotation. The following tips are based on experiences in recent rotations:

- Coordinate the movement and landing plans to see that they support the ground tactical plan. To succeed,

these plans must be synchronized. If they are not, the proper mix of men and equipment won't arrive at the right time and place to accomplish the ground tactical mission.

- Develop a detailed pickup zone (PZ) plan, and designate a PZ control officer to mark, organize, and control operations on the PZ. This officer should be a captain from the S-3 section who knows the details of both the movement plan and the ground tactical plan.

- Make and execute a bump plan that supports the ground tactical plan. Key leaders and mission essential equipment must have priority.

- Be prepared, at the air mission briefing (AMB), to brief the ground tactical plan, coordinate with the air mission commander, and adjust the plan as needed.

Training and preparation before you arrive at the NTC will pay big dividends. As a minimum, your planners should meet with planners from the supporting lift element to review and synchronize SOPs. Field Manual (FM) 90-4, *Air Assault Operations*, is a good place to start, and Appendix F of the manual provides a good outline for a training plan. The task of training soldiers to load and unload the aircraft is fairly easy and can be trained and rehearsed at the NTC before the first mission. Unfortunately, coordinating planners from the brigade, the lift company, and your battalion may not be accomplished as easily.

Constructing Fighting Positions. Recent rotations at the NTC have indicated that this is not one of our strong points in training. Many units that come to the NTC have not spent enough time training soldiers and leaders to construct fighting positions to standard. The following tips may be helpful:

- Leaders and soldiers must be trained on position construction. Many are not. This means many leaders are unable to supervise properly. As a result, some soldiers think "individual fighting position" means that each designs his own without regard to requirements for positioning, overhead

cover, aiming and limiting stakes, and parapet width and height.

- Study FM 21-75, *Combat Skills of the Soldier*, and FM 7-8, *Infantry Platoon and Squad*. Both are good training references, as is Graphic Training Aid (GTA) 7-6-1, "Fighting Position Construction Infantry Leader's Reference Guide." Time spent teaching soldiers and junior leaders the requirements before a rotation will save a lot of defensive preparation time at the NTC and contribute to the effectiveness of your defense.

- Ensure that you have a solid plan to forecast construction material requirements. Build platoon survivability packages, and have them delivered to the platoons. GTA 7-6-1 can help you forecast requirements.

Finally, video tapes are available that show soldiers the effects of artillery fire on dug-in soldiers and equipment. Viewed in training, these will help put the importance of properly constructing positions into perspective.

Constructing an Engagement Area. The brigade defense against an attacking regiment will present the brigade commander with one of his greatest challenges. Often the brigade will defend with two battalions, one a light battalion and one organized as a balanced heavy task force. Brigade frontage may be 12 kilometers wide. Given this frontage, the terrain at the NTC, and the forces available to the brigade, the ability of your battalion to deny an avenue of approach to the OPFOR will be vital to the brigade's success.

When the brigade defends, your battalion will normally be assigned to conduct a defense in sector. Your ability to defend your sector and defeat a motorized rifle battalion may depend largely upon your ability to construct an effective EA. The EA must mass all available direct and indirect fires and optimize their effects at the point where the terrain and emplaced obstacles make the OPFOR most vulnerable.

The following are some of the basic tasks that must be accomplished if the EA is to be effective. While this list is not intended to include everything, it

does include most of the common problems light units have faced on recent rotations:

- Understand how the EA fits into the brigade concept for the defense; this will help ensure that you meet the brigade commander's intent. The EA is a technique for concentrating fires into the particular place where you intend to kill the OPFOR. It does not free the unit from responsibility for the assigned sector.

- Analyze the avenues of approach into the brigade sector. This analysis will provide a starting point for developing the EA by highlighting where the OPFOR is likely to go. From that, you can determine where best to place obstacles to impede his progress and where to place weapons to mass fires.

- On the basis of the S-2's depiction of OPFOR formations and number and type of systems, determine the type and number of weapon systems required to defeat each element at the point where you have decided to engage it. This will help you determine whether you have enough systems to kill the OPFOR you expect to face or should ask the brigade for more.

- Determine how you want to engage the OPFOR. Generally, there are two techniques for engaging: Either have each system engage at its maximum range or allow the OPFOR to enter the EA and engage it with all systems at the same time. Each technique has advantages, and you must decide which to use before positioning your antiarmor systems.

- Incorporate enough direct and indirect fire control measures into the plan. Establish trigger lines on recognizable terrain, or emplace target reference points (TRPs) to control when weapons will engage. Control of fires is imperative if you expect to achieve mass.

- Assign sectors of fire within the EA to ensure interlocking fires, and use TRPs to facilitate concentration of fires on the OPFOR.

- Develop the indirect fire plan at the same time as the direct fire and obstacle plans. Then refine it as positions are constructed and obstacles are com-

pleted. Direct fires, indirect fires, and obstacles must all work together.

- Rehearse the defensive battle, including direct and indirect fires and repositioning. And don't leave out combat service support; casualty evacuation rehearsals are absolutely necessary.

- Plan the time when preparations must be completed, and have a system in place in the tactical operations center to track their progress. Once construction of the EA has begun, changes and adjustments are constant. Your battalion must have a system that will tell you the status of preparations at any time so you can adjust resource priorities.

Building an effective EA is difficult. To be effective, it requires detailed planning and tireless effort by soldiers and leaders. For the most complete coverage on EA development, review chapter 4 of FM 71-123, *Tactics and Techniques for Combined Arms Heavy Forces: Armored Brigade, Battalion/Task Force, and Company Team*.

Operating in an NBC Environment. The OPFOR uses chemical munitions in both the offense and the defense. In the offense, chemical agents will be used against you in the forward area—nonpersistent agents in front of an OPFOR attack and persistent agents to protect its flank. In the defense, persistent agents will be used to deny you the use of selected terrain and to channel your forces. Chemical agents may also be used to hinder your command and control and to break your momentum as you attack by forcing you to adopt protective measures that further hinder your performance.

The use of chemical agents can achieve the OPFOR's desired effects if you are not prepared to operate in this environment. The following are some keys to success:

- Your battalion must have specific SOPs that address under what conditions the battalion will go into mission oriented protective posture (MOPP) and when the MOPP level will be reduced. For each operation, specify the MOPP level and maintain MOPP discipline. And make sure individual soldiers and leaders are able to perform

all routine tasks in MOPP IV.

- Plan for decontamination and MOPP-gear exchange. Decontamination is a challenge for a light battalion. Since you will often need help from the heavy brigade, make sure the brigade is aware of your requirements before the battle.

- Make sure all soldiers in the battalion are trained to detect and determine types of potential agents using the M-256 chemical detector kit.

- SOPs for the defense must specifically address when and by whom M-8 chemical alarms will be emplaced.

You will increase your effectiveness at the NTC if you focus your training on avoiding contaminated areas, detecting the presence of chemical agents and

determining the type of agent, and being prepared to operate in an NBC environment when necessary.

The NTC is the only training environment in which a light battalion and a heavy brigade work closely together in a realistic scenario against a world-class opposing force and under difficult terrain and weather conditions. You will be guaranteed an opportunity to train yourself, your leaders, and your soldiers under the most stressful conditions available in training. And you'll return home more proficient in your job and with a better trained battalion. What's more, with proper preparation and training, your battalion can significantly affect the NTC battlefield.

One last piece of advice: Remember

that you bring unique light battalion capabilities to the NTC battlefield that the heavy brigade may not fully appreciate without your help. Work hard before the rotation to become part of the brigade team. Sell your battalion and its capabilities to the brigade commander and his staff. Then arrive ready to fight and win as part of the brigade team.

Lieutenant Colonel Frank J. Stone is the senior light force trainer at the NTC. He previously commanded the 1st Battalion, 16th Infantry, 1st Infantry Division, and served as the division's assistant G-3 during Operation DESERT STORM. He is a 1973 ROTC graduate of North Georgia College and holds a master's degree from the National War College.

Coordinating Conventional And Special Operations Forces

CAPTAIN DANIEL W. SMITH
MASTER SERGEANT HOWARD W. BLECHA

As the Army becomes more involved in regional conflicts and operations other than war (OOTW), deployed units and Special Operations Forces (SOFs) will be required to work together more closely than they may have done in the past.

During Operations GOLDEN PHEASANT, DESERT SHIELD, and DESERT STORM, along with various rotations to the Joint Readiness Training Center (JRTC), infantry brigades were augmented by Special Operations Command and Control Elements (SOCCEs). It may be helpful to infantrymen to know the roles, organization, and functions of the SOCCE, and how it can help conventional units and, in turn, be helped by them.

A SOCCE is attached to a conventional headquarters when the conventional unit's area of operations overlaps that of an SOF. The SOCCE com-

mander advises the supported commander on the capabilities and limitations of the Special Forces (SF) teams and provides command and control links between the SOCCE and the unit.

The SOCCE's primary role is to ensure unity of effort by synchronizing SF and conventional force operations and intelligence requirements. The SOCCE accomplishes this by coordinating operational planning and intelligence with the supported commander's staff. It forwards target acquisition, intelligence, and weather reports from deployed SF teams. In particular, when SF is in the vicinity of a unit's objective, or when link-up becomes imminent, the SOCCE helps the conventional unit staff plan the link-up.

A SOCCE is usually based on a Special Forces Operational Detachment-B (SFOD-B) or B Team. The B Team is headquarters for an SF com-

pany composed of six A Teams. At full strength, each A Team is composed of 12 soldiers. A SOCCE may control from one to six teams. (B Team and A Team personnel are shown in Figures 7-9 and 7-10 of Field Manual 100-25, *Doctrine for Army Special Operations Forces*.)

A SOCCE is usually task organized into a command cell, an operations cell, a communications cell, and a support cell.

The command cell is made up of the detachment commander (a major) and the sergeant major. It provides command and control for the deployed A Teams and advises the conventional force commander concerning the capabilities and limitations of deployed elements.

The operations cell is composed of the executive officer and S-2 (captains), two detachment technicians (chief war-

rant officer-2), two operations sergeants (master sergeants), two intelligence sergeants, an air operations sergeant, and an NBC (nuclear, biological, chemical) sergeant.

This cell plans or helps plan all joint or unilateral missions involving SF assets as follows:

- Provides liaison inside the tactical operations center.
- Coordinates all ongoing or future joint operations.
- Monitors all calls for fire and close air support to protect A Teams from fratricide.
- Provides detailed link-up plans between A Teams and conventional forces.
- Provides situation reports every 12 hours and periodic intelligence reports every 8 hours or as needed.
- Develops and adjusts priority information requirements (PIRs) and collection plans to support the conventional force commander.
- Provides a direct line to G-2 or S-2 with all intelligence and combat information from deployed A Teams.

Because of its small size, the SOCCE operations cell fuses the S-3 and S-2 operations. A series of situation maps displays both friendly and enemy units. Maps of 1:100,000 scale and image maps depict the operational context of the corps, division, SF, and enemy general-purpose units, SOF, and insurgent or terrorist elements. Maps of 1:50,000 scale depict the specific tactical situation of the A Teams and the unit the SOCCE is supporting. There is constant interaction between operations (which records the friendly situation and operational graphics), intelligence (which provides enemy situation and intelligence preparation of the battlefield products), and the liaison personnel (who focus on recording pertinent information concerning the A Teams).

The communications cell, made up of a communications supervisor and two radio operators, provides 24-hour communication between the deployed SF elements, the conventional force, and higher SF headquarters. It must perform limited maintenance for organic and assigned communications

equipment and must ensure that the SOCCE is integrated into the conventional force's communications plan.

The cell uses UHF tactical satellite, HF burst, HF voice and data, local FM, local telephone, theater communications system (voice, data, FAX), and nontechnical communications.

The support cell consists of supply sergeant, medic, and general mechanic, and may be augmented as required. It provides logistical support for the SOCCE: Class II, V, VII, VIII, and limited IX. It develops plans for sustaining all the SOCCE's organic needs, provides maintenance support on organic equipment, establishes agreements with the supported units' HHCs and G-4/S-4 to provide support beyond organic capabilities. The support cell conducts sick call and limited medical support activities as well as assistance in preparing, packing, and rigging all SOCCE equipment for insertion with the supported conventional unit.

Usually, the SOCCE has a liaison officer (LNO) assigned for each A Team to provide a critical human link between the A Team, the SOCCE, and the conventional force. The LNO has a 1:50,000 map and supporting imagery products and is familiar with all aspects of the A Team's mission. He must be able to plot the team's actual and probable courses of action on the situation map and in his situation report daily, even if the team is not communicating.

The LNO usually has a sequence of overlays for coordination and information purposes that include the following:

- Operational boundaries.
- A Team Situation.
 - Infiltration location and status.
 - Planned strategic reconnaissance location, changed to actual once established.
 - Mission support base location.
- Infiltration, exfiltration, and emergency resupply.
 - Drop zones, landing zones, pickup zones (primary and alternate).
 - Escape and evasion routes, planned.
- Fire support.

- Target reference points and no-fire areas for friendly artillery (Army, Joint, Coalition).

- Close air support (Army, Joint, Coalition).

• A Team intelligence reports (using numeral/notation list beside map).

- Numeral on map designates location of event and sequence.

- Notation list explains date-time group and SALUTE (size, activity, location, unit, time, and equipment) details of event.

- BDA results should be noted next to original notation.

• Friendly forces.

- Unit locations and boundaries.

- Headquarters.

- Tactical units.

- Artillery.

- Aviation.

- Logistics.

- Medical.

- SOCCE.

A SOCCE offers the conventional unit commander several advantages—more observers in his areas of interest and influence who can report on PIRs, named and targeted areas of interest, battle damage assessment for long-range fires and air interdiction, weather, and terrain. Because of their area orientation, Special Forces can advise on cultural issues as well as on how U.S. equipment holds up in a particular region. The SF can provide assessments on friendly coalition units and insight into host-nation support and liaison. In addition, the SF medic usually has information on how the climate will affect soldiers and the area's endemic medical problems.

The actual situation will dictate the command relationship. When a joint special operations area (JSOA) is encompassed by a conventional force area of interest, their operations must be coordinated. The commander of the conventional force can request that the SF perform tasks to support his mission if those tasks do not adversely affect the SF element's primary mission. Operational control remains within SOF channels. In situations where special and conventional operations directly affect each other, the commander in

chief may direct that operational control be passed to the conventional unit commander who will exercise it through the established SOF chain of command. Some sample situations would be when a conventional force commander requests SOF support for a specific mission, when the commander in chief commits a conventional force to JSOA, or when the area of operations of a conventional force encompasses a JSOA and link-up is imminent. The SOCCE facilitates the command relationships by making sure they are understood by all units involved during various phases of an operation.

SF may request and receive operational control of conventional units to support a specific combined counterinsurgency operation, as a reaction or reinforcing element for a special operation, or for logistical support during combat operations after link-up, or during contingency operations when the senior Army headquarters in an operational area is an Army Special Operations Task Force.

Since all of this sounds very formal, and perhaps awkward, a practical example may be in order:

During one JRTC rotation, an A

Team reporting on enemy movements along an avenue of approach (AA) to a drop zone could not be exfiltrated due to extended bad weather. Eventually, the A Team ran out of batteries to operate its radios and lost communications. The SOCCE coordinated a contingency exfiltration plan with the brigade S-3 Air.

During the early evening, the exfiltration was done and the A Team was debriefed by the brigade commander, S-3, and S-2. The detachment was able to lay out exactly where prepared enemy fighting positions were at choke points along the AA leading from the drop zone to the conventional force's objectives. They provided a summary of enemy activities during their time in the operational area and what they thought the enemy might do. This helped the commander assess probable enemy courses of action during his attack.

The SOCCE is the key to coordinating conventional and special operations. To do their jobs, the members of the element must know the conventional force's tactical SOP and have detailed primary, alternate, and contingency communications plans. They must ensure that the conventional

force commander understands how SF capabilities strengthen his own operations and how he can help overcome SF weaknesses.

The SOCCE must be proactive in coordinating operations and sharing intelligence. It must function as an integrated part of the conventional commander's staff; only then can it ensure that operations involving conventional and special operations forces are executed successfully the first time, every time.

Captain Daniel W. Smith, Special Forces, is S-2 of the 2d Brigade, 29th Infantry Division, Virginia Army National Guard. He has served in numerous SF assignments, and his civilian occupation is intelligence operations specialist on the Army staff. He was commissioned in 1980 from the North Carolina National Guard's Officer Candidate School.

Master Sergeant Howard W. Blecha is assigned to the U.S. Army Special Operations Command as advisor to the 20th Special Forces Group at Fort A.P. Hill, Virginia. He has served in numerous assignments with the 5th Special Forces Group, the 11th Special Forces Group (Airborne), and the 9th Engineer Battalion. He is a graduate of the Advanced Non-commissioned Officer Course, the Operations and Intelligence Course, and the Special Forces Qualification Course.

Training

For Battle Staff Competency

LIEUTENANT COLONEL ROLAND J. TISO, JR.

Battle staff competency is a critical element of unit readiness, but one that is difficult to achieve without a carefully planned training program. A battle staff training program should teach subordinate leaders and staff officers the skills and teamwork they need to plan and execute combat operations. This is a challenge for a battalion commander, considering the many mission requirements that units have today, along with the effects of those re-

quirements on the available time, personnel, and material resources.

I want to share an approach to battle staff training that gives a battalion commander a way to coach his officers and staff members while also improving his tactical decision making skills.

There are several things a commander must do at the outset to ensure that his battle staff training is effective:

- Spell out his commitment to professional development and battle staff

competency in two critical documents—his command philosophy and his training guidance. Battle staff training can easily be overcome by events if it is not programmed on short-range and long-range training calendars and training schedules.

- Conduct battle staff training during the training cycle. The cycle is designed to build the individual or small-unit skills necessary to overall success. In a good unit where noncom-

missioned officers (NCOs) serve as the principal trainers for individual and team training, officers and staff members should be available to develop their NCOs' individual, leadership, and staff skills.

- Tie battle staff competency to the unit's mission essential task list (METL). Junior leaders and staff officers are more productive and benefit in the long run when their professional development is focused on collective METL tasks and the associated sub-unit and individual tasks.

- Establish the focus of his staff during the period he allocates for staff training. The staff is always engaged in the routine work of the organization, but only the most serious issues should interfere with battle staff training.

- Emphasize detailed knowledge of the battlefield operating systems (BOS). A thoroughly integrated, combat-ready staff knows the details of the battlefield operating systems as they pertain to each staff section and to the staff as a whole. Coordination and the exchange of information are most effective when knowledgeable people work as a team and are familiar with what is relevant to combat orders, coordination, and execution.

Both tactical knowledge of the BOSs and their sound application are essential for all officers. Expert instructors are available within the combined arms team: The fire support officer (FSO) should teach fire support along with the air liaison officer (ALO). The S-2—in coordination with brigade and division intelligence personnel—should teach the intelligence preparation of the battlefield (IPB) process.

The best BOS instruction demonstrates the way the systems interact. The IPB relates to the fire support plan, for example, because named areas of interest are targeted. A well-schooled staff coordinates and integrates combined arms concepts, and this facilitates the tactical decision making process and the development of plans.

Since tactical decision making and staff planning are critical training tasks, Army Regulation 350-1, *Army Training*, encourages "command group training,"

such as command post and map exercises and tactical exercises without troops (TEWTs). The staff exercise is a "command group" training method that makes the deliberate planning process easier. It is particularly adaptable to the cycle. A properly executed staff exercise is a good way for every staff member and unit leader to develop his tactical planning skills.

To initiate a STAFFEX, a battalion commander can request a complete combat order from his brigade headquarters; this order then becomes the basis for the battalion's mission analysis and restated mission. The order also gives the commander an opportunity to improve his ability to provide clear, concise guidance on the many subjects he must address before the estimate process begins. Everyone on the staff is engaged in staff estimates and associated briefings, the commander's decision, additional planning guidance, and order production.

Everyone, including the commander, will improve and learn through a continuous after-action review (AAR) process. The BOSs are a key focus of these discussions. The staff produces an order, prepares a backbrief for the brigade commander, and briefs the final order to the company commanders and selected platoon leaders. These officers, in turn, issue orders, coordinate, rehearse, and conduct AARs of their respective operations.

A STAFFEX can be conducted in a manner that provides time for the staff and the commanders to prepare for the green cycle. A battalion that initiates its green cycle by airborne assault, for example, can use the STAFFEX, in coordination with its brigade headquarters, to produce the necessary order and movement matrixes in the yellow cycle. Company commanders can prepare orders and backbriefs and rehearse their tactical operations. This provides time in the beginning to do things right and to share lessons during scheduled periods of professional exchange.

As a battalion commander, I scheduled at least one STAFFEX each quarter. If the focus of the green cycle

was squad or platoon training, the situation often allowed professional development operations such as a command post exercise or a TEWT with the company commanders. This continued exchange of tactical thinking and communication between command posts was effective multi-echelon training.

Staff, command post, and tactical exercises were as fast-paced as the training level and the situation allowed. I established a goal of 18 hours for deliberate planning that led to a published order by the staff. Several additional hours were needed to provide time for AARs and professional discussion. Accelerated exercises were conducted to produce orders in six to 12 hours. In the yellow cycle, staff exercises were normally conducted in the battalion headquarters, but the work was sometimes conducted in the battalion tactical operations center (set up in garrison) to condition the staff to operations in the field.

Commanders in today's Army are faced with ever-increasing demands, but battle staff training can continue to be done if it is integrated into a unit's total training and operations package. This training engages staff officers, commanders, and small-unit leaders. Properly scheduled and focused, it can save prime, green-cycle training time and lead to greater success in collective unit training.

Achieving battle staff competency is key to a unit's tactical success and overall readiness. Training of this nature—coupled with sound professional development practices that include coaching and mentoring at the unit level—will therefore continue to be a high priority for the Army's senior leaders. Sound, well-planned training will produce the battle staffs that direct and support the force that will fight and win on tomorrow's battlefield.

Lieutenant Colonel Roland J. Tiso, Jr., has served in various command and staff positions in the 2d, 25th, and 101st Infantry Divisions and commanded the 1st Battalion, 508th Infantry, in Panama. He is now assigned to J-5, U.S. Central Command. He is a 1973 ROTC graduate of Virginia Military Institute and holds a master's degree from James Madison University.

The Training and Evaluation Plan

CAPTAIN JOSEPH J. DICHAIRO

How do you plan training at platoon and company level? Do you give your subordinates guidance on which collective, leader, and individual tasks they're to train on? Do you limit them to one or two critical "high-payoff" tasks, or let them choose tasks to train on from the unit's mission essential task list (METL)? Do you have a focus and an evaluation plan for your training? Are the noncommissioned officers (NCOs) and the executive officer (XO) involved in the planning process?

If you have trouble answering these questions, a planning aid is available to help you plan all of your collective training. The Training and Evaluation Plan (TEP) provides a process for planning collective training from platoon through battalion level. Beginning with leader training (which should be done before any collective training), the TEP is a formal, operation-order type of document designed to give you a training focus (the terminal training objective). It also includes and identifies the evaluation, concept of support, and after-action review (AAR) plans for the training.

It is imperative that we properly plan all of our training. Given today's limited resources, shrinking budgets, and force structure, we must prepare ourselves and our soldiers to meet numerous contingencies around the globe. Normally, an infantry battalion working within the routine of a training, mission, and support cycle is given only six weeks each quarter to accomplish the task of preparing for combat operations. The way we use this precious time is critical to our combat readiness.

The TEP is derived from the old Battalion Training Management System. Today's newer training doctrine (Field Manual 25-101, *Battle-Focused Training*) does not outline a process for plan-

ning collective training, but it does outline a system of "pre-execution checks" to be conducted during the six weeks before the training.

The process of preparing a training and evaluation plan begins upon receipt of the quarterly training guidance. First, the dates available for collective task training are identified. Then the training officers and noncommissioned officers develop training concepts during platoon and company training meetings. This should be done at T - 7 or T - 8 ("T" being the current training week). At T - 6, the TEP is in its final draft ready for approval by the company and battalion commanders.

The TEP is a great planning aid and also an excellent way to train subordinate leaders on the fundamentals of training management. Before teaching your leaders how to prepare a TEP, have them read Chapter 3 (Mission Outlines) of ARTEP 7-8, *Mission Training Plan for the Infantry Rifle Platoon and Squad*, or 7-10 MTP, *Mission Training Plan for the Infantry Rifle Company*. The mission "trees" in this chapter

outline the relationship between METL, collective, and individual tasks and the way these tasks support one another. Additionally, leaders should become familiar with the concept of "high-payoff" tasks; these are the collective tasks found in numerous mission trees. (The collective task *Move Tactically*, for example, is found under every tested task in Chapter 3 of ARTEP 7-10 MTP.)

The TEP Diagram

The TEP begins with identifying the task you plan to accomplish, the *conditions* under which the task will be trained (day, night, blank fire, live fire), and the measurable *standards* that are to be achieved. The *terminal training objective* identifies the one or two tasks a unit will focus on and complete during the training period. If you are trying to achieve trained status on a specific task or event, the terminal training objective should outline it. Looking at this objective in a different perspective, it is the desired "end state" upon completion of training. Identifying the terminal training objective is the most difficult and time-consuming step in developing the TEP. But it assigns a definite focus, forcing a unit to do less, but do it better.

The next step is to determine which collective, leader, and individual tasks to train on. Once this is done, identify which of these tasks will be or can be trained on before the training. For example, because of time constraints, the leader may not have enough time to train on all the tasks he would like to include, and it is imperative to determine which tasks are critical to unit success during the upcoming training exercise. If leader training is to work, it must be planned, resourced, and put on the training schedule. Assign a subordinate

SQUAD LEVEL TEP OUTLINE

- I. Terminal training objective (TTO)
 - A. Fire team TTO
 - B. Individual soldier TTO
- II. Intermediate training objectives
 - A. Collective tasks
 - B. Leader tasks
 - C. Individual tasks
- III. Tasks to be trained before collective training
 - A. Hand grenade skills
 - B. MOUT and team level skills
 - C. Leader evaluation
- IV. Tasks to be evaluated during training
- V. Time schedule
- VI. Plan for retraining
- VII. After-action review plan
- VIII. Opportunity training
- IX. Concept of support
- X. OPFOR plan
- XI. Safety

leader to teach it, make it performance-oriented, and put the name of the leader assigned to teach each class on the training schedule. Assigning "ownership" of this process helps ensure that the class will be taught professionally.

The next step involves picking the most critical individual, leader, or collective tasks you will evaluate. The evaluators will normally be the platoon leaders and sergeants, the first sergeant, or the company commander. Time is usually tight during exercises once you consider planning for AARs and retraining. Use caution in determining how many tasks you choose to evaluate.

The TEP and Company Leaders

Using the TEP properly allows a unit to synchronize the efforts of all company leaders. If he desires, the company commander can develop the company TEP for all company training. During the company training meeting, the TEP is put together. At T - 7 or T - 8, the commander gathers input from his platoon and section leaders on what collective tasks they have identified as needing training. From this input, the commander determines the collective tasks that are critical to accomplish during the upcoming training. Next, the commander and first sergeant outline which critical individual tasks will be trained on.

The First Sergeant and NCOs. The first sergeant determines the individual tasks that support the collective tasks on which the commander chooses to focus. The first sergeant's decision is based upon the recommendations from his platoon and section sergeants who gather their input from their NCOs during platoon training meetings.

If this interaction between the platoon sergeants and their NCOs is to work, all NCOs must be familiar with the basics of the mission trees in ARTEPs 7-8 and 7-10, the common task training manual, the Soldier's Manual, and FM 25-101. This familiarization can be accomplished by having the first sergeant and the senior NCOs in the company use their expertise and knowledge to teach NCO professional development classes on the various in-

dividual and collective tasks. This will help the NCOs determine the tasks in which they are deficient. In addition, the first sergeant, with advice from his platoon sergeants, outlines which tasks are to be evaluated during training, and this should be his focus when he is out checking training.

The Platoon Leaders. The platoon leaders normally develop most of the TEPs with the assistance of their platoon sergeants and squad leaders. Although some training management is taught during the Infantry Officer Basic Course, many lieutenants arrive in their units unprepared to plan and execute a sound training plan. This lack of knowledge could be the reason some platoons drop below the "band of excellence" between collective training periods. The platoon leader is often confused about what the training should include and how to go about preparing to execute the training. This problem is compounded if he does not receive quarterly training guidance from the company commander. A platoon leader who can plan training and communicate how he wants it executed will be much more successful early in his tenure.

Preparing a TEP will force a platoon leader to read and understand the manuals of his trade. Additionally, he will begin to learn how important planning is and how much time it can actually take. Some lieutenants may already understand the relationship they are supposed to foster with their NCOs, but if not, working and designing a TEP will require them to seek the advice of their platoon sergeants and squad leaders. This interchange will produce informed squad and team leaders, and ownership of training is accomplished; once leaders have written input into any training, they feel obligated to execute it to a higher degree.

The Executive Officer. The most under-rated person to play a part in the company training plan is the XO. If all of this planned training is not resourced properly, the plan will fail and the process of the TEP will not function.

A general rule to follow is never to

plan training that is not resourced. Once T - 6 arrives and the company commander submits his training schedules to the battalion commander and S-3 for signatures, all training for T - 6 should have been resourced.

The TEP helps the resourcing process by having the platoon leaders identify which assets they need to accomplish their training. The company XO participates in the training process by recommending amounts and types of resources. Completing the TEP and giving it to the XO prepares him to request these resources. These requests are normally turned in at the weekly battalion resource meetings.

Why do you need to plan training in such detail? Many leaders may choose to sidestep this process, considering planning too awkward or too rigid, or a waste of time, because "things change." But planning is the most important part of the cyclic training process, next to conducting proper AARs. If the TEP process is too formal for you, then tailor it to fit the needs of your unit. For example, I recommend that you at least publish the task, conditions, and standards. It's okay to give subordinate leaders autonomy, but you must still provide clear guidance and the standards to be attained.

The Training and Evaluation Plan is one of many tools company-level leaders can use to plan and execute training. Once leaders learn the process of formulating a TEP, the process becomes almost a habit. The payoff is twofold: Leaders actually learn to apply training management doctrine, and they prepare and execute excellent training for their soldiers.

Today, every hour of training counts. We must be ready to execute our missions across the globe, sometimes with limited notice, and the TEP is a tool that can help us accomplish this task.

Captain Joseph J. Dichairo commanded a company in the 4th Battalion, 27th Infantry, 25th Infantry Division. He has also served as a brigade S-1 and aide de camp in the 25th Division, and he led a platoon in the 2d Ranger Battalion during Operation JUST CAUSE in Panama. He is a 1986 ROTC graduate of Niagara University.

INFANTRY CAREER NOTES



OCS—WHAT ARE YOUR CHANCES?

If you're thinking about applying for Officer Candidate School (OCS), the following statistics from the September 1995 selection board will show you how your qualifications compare to those of the soldiers selected.

According to the Total Army Personnel Command (PERSCOM), the factors that carry the most weight in the selection process are PT scores, local board results, commander evaluations, and college degrees.

SEPTEMBER 1995 OCS BOARD RESULTS				
	APPLICANTS	SELECTED	NOT SELECTED	PERCENT SELECTED
Average Grade	E-5	E-5	E-5	
Average Age	28	28	28	
Average GT Score	120	121	120	
Average OSB	107	108	106	
Average APFT	272	286	265	
Average TIS	57 months	63 months	54 months	
Local Board Score	64	70	60	
EDUCATION:				
AA Degree	74	25	49	34
AS Degree	18	7	11	39
BA Degree	98	30	68	31
BS Degree	120	46	74	38
MA Degree	2	1	1	50
MS Degree	4	3	1	75
Other Degree	0	0	0	0
60+ Credit Hours	159	51	108	32
TOTAL APPLICANTS	475	163	312	34
Men	416	144	272	35
Women	59	19	40	32

LINGUISTS SOUGHT FOR USAR MI COMPANY

The 356th Military Intelligence Company (Linguist) is looking for linguists in Arabic, Farsi, and Russian who hold MOSs 97B, 97E, 98C, and 98G. The 356th is a U.S. Army Reserve company located in Atlanta, Georgia.

The company also has a number of MOS 97L (Interpreter/Translator) positions available in the same three languages. Vacancies exist in all enlisted grades, and warrant officer positions are open in MOSs 351B, 351E, 352C, and 352G.

The 97L MOS is a new specialty

found only in the reserve components. Army Reserve soldiers in other MOSs are eligible to transfer into 97L if they are rated at a language proficiency level of L2/R2 or higher in these three languages. Reservists who are proficient in other languages at the L2/R2 level or higher will also be considered on a case-by-case basis.

For more information, contact MAJ Alfred Beverly or SSG Scott Jones at (404) 363-5633/5634.

NWTC NEEDS INSTRUCTORS

The Northern Warfare Training Center (NWTC) at Fort Greely, Alaska,

is looking for instructors.

To qualify, noncommissioned officers should hold MOS 11B or 11C and be graduates of the Basic Mountaineering and Mountain Leader Courses (summer and winter) or have experience in mountaineering and skiing.

Resumes may be sent to the Commandant, Northern Warfare Training Center, ATTN: APVG-GNW, 501 2nd Street #2900, APO AP 96508-2900. Telephone inquiries may be directed to DSN 317-873-4107 or commercial (907) 873-4107.

RESERVE CGSOC ADDS TELETRAINING

U.S. Army Reserve officers who attend the nonresident Command and General Staff Officers Course (CGSOC) this year will get part of their instruction through video teletraining (VTT) from resident instructors at Fort Leavenworth.

The non-resident CGSOC, which lasts two years, is divided into four phases: Phases I and III run from October until May, one night a week or one weekend a month. Phases II and IV are offered in two-week periods each summer.

The VTT portion of non-resident instruction will make up one hour of the four-hour class (on weeknights only) for Phases I and III. VTT gives students a chance to exchange information with each other and to question the instructor.

To be eligible to enroll in the non-resident option, Army Reservists must be majors or promotable captains who have completed the Combined Arms and Services Staff School. Qualifying officers who want to sign up for non-resident training may call the School of Corresponding Studies at Fort Leavenworth, (913) 758-3401/3340.

Reserve officers may also apply for the resident CGSOC to Department of the Army's Office of the Chief of Army Reserve (OCAR) selection board, announced annually, or take the course entirely by correspondence.

LOGISTICS TRAINING FOR SENIOR OFFICERS

The Senior Officer Logistics Management Course (SOLMC) is specifically designed to update battalion and brigade commanders, primary staff officers, and Department of the Army civilians working in the logistics field. The course encompasses maintenance, supply, readiness, and transportation procedures and offers hands-on experience with vehicles, unit-level logistics computer, ammunition, medical, communications, and NBC (nuclear, biological, and chemical) equipment.

The one-week course is conducted 12 times each fiscal year at Fort Knox, Kentucky. (Class schedules for the rest of Fiscal Year 1996 are shown in the accompanying table.) It is open to officers of all active and reserve component Army branches, the U.S. Marine Corps, and allied nations. Officers must be in the rank of major and above and civilians in the rank of GS-11 and above. Class quotas may be obtained through normal U.S. Army Training and Doctrine Command channels.

Requests for further information about the course or for assistance in obtaining class quotas should be directed to the SOLMC Branch Chief, DSN 464-8152/3411, or commercial (502) 624-8152/3411. The mailing address is Commandant, U.S. Army Armor School, ATTN: ATSB-SBA-L, Fort Knox, KY 40121-5200.

CLASS NUMBER	CLASS DATES
96-05	04-09 FEB 96
96-06	17-22 MAR 96
96-07	14-19 APR 96
96-08	12-17 MAY 96
96-09	16-21 JUN 96
96-10	14-19 JUL 96
96-11	18-23 AUG 96
96-12	15-20 SEP 96

INVOLVING SOLDIERS IN CAREER MANAGEMENT

The U.S. Total Army Personnel Command (PERSCOM) has announced a series of initiatives designed to help soldiers participate in the management of their careers.

The Enlisted Personnel Management Directorate (EPMD) has developed five new means of communication that should help soldiers communicate better with their career managers.

Interactive Voice Response System (IVRS). The IVRS is an automated telephone system that provides soldiers with career information 24 hours a day. To use the system, a soldier dials 1-800-FYI-EPMD or DSN 221-EPMD and enters his social security number. He is then presented with menu options that will tell him if he is on assignment or scheduled to attend an Army school, along with topical information on retention, recruiting, drill sergeant, Special Forces, Rangers, compassionate reassignment, exceptional family member program, and separation.

Expanded E-Mail Capabilities. EPMD also encourages the use of E-Mail. Information exchanges can be conducted 24 hours a day on such sub-

jects as the status of personnel actions, future schooling, or assignments. A complete list of E-Mail addresses is shown in the table.

High-speed FAX Machines. Soldiers and personnel service centers can save time by FAXing communications directly to the desired career branch within EPMD for processing.

PERSGRAM. This mailgram is designed to supplement the chain of command in giving soldiers career or assignment information that is important to them.

To help a soldier keep track of all these new communication tools, EPMD is distributing a wallet-sized information card that lists his career manager's phone number, E-Mail address, FAX number, and IVRS instructions and telephone number. Soldiers can get their pocket cards at their servicing personnel centers.

To find out more about these innovations, contact the PERSCOM Public Affairs Office at E-Mail tapcpao@hoffman-emh1.army.mil or telephone (703) 325-8857, DSN 221-8857.

ENLISTED PERSONNEL MANAGEMENT DIRECTORATE			
E-Mail Addresses are: USERID@HOFFMAN-EMH1.ARMY.MIL			
FAX and Phone Numbers are Commercial (703) 325- or DSN 221-			
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BOOK REVIEWS



***My War.* By Andy Rooney. Times Books, 1995. 318 Pages. \$25.00.** Reviewed by Major General Albert H. Smith, Jr., U.S. Army, Retired.

Andy Rooney says in the Preface, "For three of my four years in the Army, I saw the fighting from close up. I can't forget much of what I saw, and I want to write it down." In this, his latest book, he does just that, and makes a unique and most welcome contribution to our understanding of World War II. His experiences and observations during his service in the United States Army, from induction in July 1941 until honorable discharge in August 1945, are fascinating, to say the least.

Although he was a junior noncommissioned officer, his duties as a reporter for *Stars and Stripes*, the military newspaper for U.S. Forces, enabled him to view the war in Europe literally from top to bottom—from the Supreme Commander's headquarters, to a B-17 on a bombing run over Germany, to an infantryman's foxhole at Normandy. As a novice journalist he learned his trade from Ernie Pyle, Walter Cronkite, Don Whitehead, Jack Thompson, Bob Capa, and other great war correspondents. His special legacy to American veterans and their families lies in his more than 200 stories published in *Stars and Stripes*. In this book, he weaves these and other firsthand accounts into an exciting reading adventure, especially for the "old soldiers" who served in the European Theater of Operations between 1942 and 1945.

The titles of his six chapters summarize his journey through those turbulent times: "Drafted," "Private Andy Rooney," "The Air War," "The Land War," "Germany, At Last," and "Going Home."

The reader takes a liking to the young Andy Rooney within the first dozen pages. On the Colgate football team, he was small and neither fast nor agile. He was highly intelligent, but had only a marginal interest in college academics—except for some creative writing classes. Toward the end of his Junior year, he was unexpectedly drafted, with a reporting date of 7 July 1941.

Private Rooney's first year in the Army was not an easy one. Although capable of

performing any military duties assigned him, he was constantly "goofing off," frustrating his sergeants and lieutenants at every turn. This period was not, however, without its bright moments, such as his marriage to Margie Howard and their honeymoon in Saint Augustine, Florida. That happy sojourn soon ended when his unit was shipped to England for pre-invasion training. There, good fortune smiled upon him when his application for transfer landed him the position as a correspondent for *Stars and Stripes*.

Beginning with Chapter 3, Rooney relates his wartime experiences skillfully and with emotion, candor, and pride. He uses a wide range of eyewitness accounts to support his contention that "the best story in the British Isles for a reporter was the air war against Germany." There were 68 U.S. air bases—each with countless stories—in the British Isles, under the Eighth and Ninth Air Forces. One of the most memorable of Rooney's war stories is that of how Sergeant Maynard (Snuffy) Smith, of the 306th Bomber Group, U.S. Army Air Corps, earned his Medal of Honor on a mission over Europe on 1 May 1943. To better appreciate his subject, Rooney flew on three bombing missions over France in B-26s and two raids on Germany with B-17s. Together, he and Sergeant Bud Hutton wrote *Air Gunner*, which was published by Farrar and Rhinehart.

Sergeant Rooney landed on Utah Beach in Normandy several days after the amphibious assault on D-Day and quickly moved inland to carry out his duties as a war correspondent. He received what he calls "a crash course in land warfare," observing the U.S. divisions' fight through the hedgerows of the Cotentin Peninsula to capture Cherbourg. June and July 1944 were learning months for him; he not only mastered the basics of Army operations but also worked closely with seasoned reporters such as Ernie Pyle and others who taught him how best to cover the ground war.

Since I moved along the same general axis of advance through France and Belgium into the heart of Germany, I found Rooney's reports of what happened along that road to victory particularly interesting. I regret that

I was not able to enter Paris with General Leclerc's French Second Armored Division as he did—and then stay on for a week or so to savor the liberated city.

In his next-to-last chapter, Rooney recounts experiences with U.S. forces from mid-September 1944 until late April 1945. His *Stars and Stripes* articles highlight major historical actions such as the capture of Aachen, the crossing of the Rhine River, and the first meeting of U.S. and Soviet forces, at Torgau on the Elbe River. Other accounts describe the human dimension, recalling what happened to individuals: the liberation of American POWs, many of whom were captured when their bombers were shot down; the horrors of concentration camps such as Buchenwald; the death of Major General Maurice Rose on 30 March 1945, as he led his renowned 3d Armored Division to victory; and countless stories of soldiers' courage. As the German surrender ended World War II in Europe, Rooney and his *Stars and Stripes* colleagues could reflect on a job well done—they had kept their Army, Navy, and Air Corps buddies informed on a daily basis.

The final chapter—"Going Home"—chronicles further memorable and enjoyable episodes during Rooney's return to the United States and civilian life, including a post-discharge adventure in Hollywood.

The most obvious audience for *My War* includes the veterans of World War II, in whom this superb book will strike many a responsive chord. However, its interest and relevance extend beyond those men and women who served. Today's military history buffs will find it fascinating for the perspectives and historical anecdotes it offers, and for this personal glimpse of a respected reporter whose name is recognized across the Nation.

Purchase *My War*, read it, share it with your friends, and think about its message to future generations.

***Hitler's Last Gamble: The Battle of the Bulge, December 1944-January 1945.* By Trevor N. Dupuy, David L. Bongard, and Richard C. Anderson, Jr. HarperCollins,**

1994. 565 Pages. \$30.00. Reviewed by Lieutenant Colonel Albert N. Garland, U.S. Army, Retired.

This is a difficult book to read. It has too few maps, contains a lot of material that has little to do with the course of the campaign, and has material in the footnotes (all gathered at the end of the volume) that would have strengthened the main narrative. In fact, as the book is organized, I recommend the reader look over the footnotes for each section of the book before tackling the various chapters and appendixes.

The main narrative of some 358 pages differs little from that found in the official U.S. Army histories of the Bulge. Unfortunately, the authors throw into their narrative—particularly in the early chapters—brief division histories and biographical material on general officers (division, corps, army commanders). These break a reader's concentration and should have been moved to an appendix.

In addition, West Point graduates commanding battalions and regiments are identified by class year in the early chapters, and it is not clear what these nuggets of information have to do with the campaign story. (For example, several lines are devoted to a regimental commander who "was one of a group of 405 officers known in the U.S. Army as the 'thundering herd,' the graduates of the West Point Class of 1924, the largest class to graduate from the U.S. Military Academy before 1939." That officer is never mentioned again. The reader is also alerted to the fact that an infantry battalion commander in the 1st Infantry Division "had a Ph.D. from Clemson University.")

In later chapters, instead of biographical data, the reader is subjected to almost weekly U.S. and German casualty figures without any explanation of the principal effects those casualties had on unit performance.

The book contains an epilogue in which the authors give their answers to 16 frequently asked questions about the Bulge; eight lengthy appendixes, including one on the Malmedy massacre and the post-war trials concerning this incident; a list of the source materials used in preparing the volume; and a 15-page index that contains a number of errors.

As a rifle company commander in the 84th Infantry Division during the Bulge, I take exception to the authors' rendition of the Verdennes action, although I admit it closely parallels the version in Hugh Cole's official history.

There are other items on which I disagree with the authors:

First, Terry Allen was not relieved from command of the 1st Infantry Division in Sicily in August 1943 "largely because of his exasperation with superiors who resisted accepting his tactical precepts, and his acerbic tongue." There were other more important reasons, one of which was the division's actions in North Africa after the fighting there had ended.

Second, James Van Fleet was not solely responsible for turning around the 90th Infantry Division. That honor falls to Raymond McLain.

Finally, as in most of the late Trevor Dupuy's writings about the war in Europe, the reader is subjected to yet another Dupuy computerized model that supposedly demonstrates conclusively "the Germans were better fighters than we were unit for unit" and we won the war only "because the Allies overwhelmed the Germans with numbers of men and machines."

The strength of this book lies not in its narrative but in the epilogue, footnotes, and appendixes. The authors must be complimented for much of the information in those sections.

***LBJ and Vietnam: A Different Kind of War.* By George C. Herring. University of Texas Press, 1994. 228 Pages. \$29.95.** Reviewed by Dr. Joe P. Dunn, Converse College.

George Herring is the nation's leading student of the diplomacy and policy-making of U.S. involvement in the Vietnam War, and this is the best study of policy-making during the Johnson administration. Herring discusses how the limited war theory, the military structures that had evolved to conduct this type of conflict, and Johnson's leadership style created the strategy, or actually lack of it, and implementation of the war. Incisive chapters are devoted to the command system in Vietnam, the early pacification effort, the varied private and third-country peace offensives, and the attempt to mold American public opinion. He demonstrates how these elements failed to be coordinated into a coherent effort and how the deficiencies of the system became glaringly evident in the period following Tet 1968.

Although the Johnson administration recognized that no real strategy existed and that the war was unsuccessful, no alternative was proposed or even any serious discussion undertaken. Each military service and each civilian component largely went its own way with little coordination or joint effort. Johnson's political style of giving everybody something and not allowing himself to be

pinned down to a precise procedure and goal, as well as his intolerance for any form of organized dissent, created a morass. Johnson sought various viewpoints but demanded that every view be presented only to him. He demanded total control and allowed no open exchange or any potential factions. His dominance of his military advisors further exacerbated the problem of a valid assessment of strategy.

Herring's characterizations of Johnson, McNamara, Rusk, the Joint Chiefs, and other leaders are exceptional—a marvelous study of the role of personalities in the decision process. Robert McNamara, in his memoir, *In Retrospect*, bows to Herring's evaluations several times and recognizes the authority of the book by citing it as he challenges other interpretations.

Although Herring vividly clarifies the errors, he makes no attempt to propose an alternative approach; indeed, he is doubtful that other strategies would have been any more successful. His ultimate conclusion is that "American policymakers thus took on in Vietnam a problem that was in all likelihood beyond their control."

In the vast literature on the Vietnam War, this book is one of the central and most fundamental interpretations. Whether one agrees or disagrees with the conclusions, every student of the war must confront this masterful analysis.

***General Vasey's War.* By David Horner. Melbourne University Press, 1992. 364 Pages. \$39.95.** Reviewed by Lieutenant Colonel Harold E. Raugh, Jr., U.S. Army.

Australian Major General George A. Vasey was the epitome of the combat infantry commander, always concerned with the accomplishment of the mission and the welfare of his men. Commissioned in 1915, Vasey served on the Western Front during World War I, then persevered as a professional soldier during the difficult interwar years of retrenchment and stagnation (he served 20 years as a major).

World War II gave Vasey an opportunity to demonstrate his leadership abilities. He served as chief of staff of the 6th Australian Division in North Africa, 1940-1941, then commanded a brigade in the little-known 1941 Greek and Crete campaigns. On New Guinea, he commanded both the 6th and 7th Australian Divisions during the battles of Kokoda and Buna. After reconstituting and retraining the latter unit, he took it back to New Guinea in August 1943 and commanded it for more than seven months in ferocious, debilitating jungle warfare.

The strain of incessant combat in a tropical environment took its toll as Vasey in 1944 developed polyneuritis, the widespread poisoning of the body's nervous system, and almost died. The biggest battle of his life may have been his recovery and appointment in March 1945 to again command the 6th Australian Division on Hollandia, but fate intervened, and he was killed in a plane crash enroute to his new command.

Author David Horner, a noted Australian military historian and soldier, has presented his balanced portrait of Vasey with the General's many descriptive and insightful (although censored) letters to his wife as a background. The letters especially reveal Vasey's compassion and concern for his soldiers, whom he frequently referred to as "these wonderful men I command." The author has used many other primary sources in his research, including personal papers, diaries, and interviews. Dozens of photographs and 14 maps vividly illustrate the text.

Vasey's War chronicles interesting campaigns that are not generally known to American readers and also describes the tactics and techniques of jungle and other types of warfare. Vasey, whom General Douglas MacArthur considered "an excellent soldier in every sense of the term," cared about his mission and soldiers more than life itself. This interesting, inspirational study deserves a wide readership.

***Leaders & Battles: The Art of Military Leadership.* By W.J. Wood. Presidio, 1995. Hardcover edition published in 1984. 352 Pages. \$15.95, Softbound.** Reviewed by Colonel George G. Eddy, U.S. Army, Retired.

Author W.J. Wood claims that battles can be won through leadership that embraces certain *attributes* found in proven battle leaders. His book could be a companion piece to *Brave Decisions*, by Colonel Harry Maihafer (reviewed in *INFANTRY*'s September-October 1995 issue, page 52). Maihafer stresses the importance of moral courage, while Wood identifies six leadership attributes: physical courage, moral courage, will, intellect, presence, and energy. *Will* includes boldness and tenacity, and *intellect* includes imagination, flexibility, and judgment. Not specifically mentioned are competence, knowledge, and integrity, but we can assume these belong to intellect.

In his 11 battles, ranging from Scipio in Spain in 206 B.C. to Colonel von Lettow-Vorbeck in German East Africa in 1914, the author takes us on a near worldwide journey

of military triumphs involving American, French, German, British, Spanish, and Roman officers. Each battle and each leader is described selectively in terms of the six attributes. Wood states that he scanned more than 1,500 battles from Megiddo in 1469 B.C. to the present, and concluded that six dynamics appear regularly and consistently in the battlefield area: danger, chance, exertion, uncertainty, apprehension, and frustration.

Except for readers whose knowledge of military history is extensive and who are familiar with the military leaders Wood cites, most readers will probably recognize only the names of Scipio Africanus, Hernando Cortez, Daniel Morgan, Anthony Wayne, and George Armstrong Custer. But the other leaders not so well known, such as French Marshal Davout, also selectively illustrate Wood's attributes.

Using the "living history" approach, Wood imagines conversations and thoughts under fire. While this technique breathes life into the unfolding events, some realists may object that Wood's "words" improperly color the events, creating impressions that may be false even though the outcomes of the battles are beyond dispute. Nonetheless, this method makes for absorbing reading, especially the account of the battle against the Zulus at Rourke's Drift in 1879, and that of von Lettow-Vorbeck against the British in German East Africa in 1914. Most readers probably will agree that Wood has not taken undue license with his imaginative "conversations" and that this approach actually enhances the drama of the battles and the aims of the book.

In the book's conclusion, Wood summarizes the attributes illustrated in his examples to include 26 more from other battles (from 37 B.C. to 1954) not described in the book. This compilation shows that the single attribute found more than any other in successful battle after battle was courage (94 percent of the time), followed by intellect (89 percent), and will (86 percent). When attributes were combined, with all the battles he describes and the 26 others to which he refers, the combination that predominated in triumph was courage, will, and intellect (58 percent of the time).

As leadership is taught at all military schools, this book should be required reading.

***Fields of Glory: A History and Tour Guide of the Atlanta Campaign.* By Jim Miles. Rutledge Hill Press, 1995. (Originally published in 1989.) 192 Pages. \$14.95.**

***To the Sea: A History and Tour Guide of Sherman's March.* By Jim Miles. Rutledge Hill Press, 1989. 321 Pages. \$18.95.**

***Piercing the Heartland: A History and Tour Guide of the Fort Donelson, Shiloh, and Perryville Campaigns.* By Jim Miles. Rutledge Hill Press, 1991. 176 Pages. \$12.95.**

***Paths to Victory: A History and Tour Guide of the Stone's River, Chickamauga, Chattanooga, Knoxville, and Nashville Campaigns.* By Jim Miles. Rutledge Hill Press, 1991. 187 Pages. \$12.95.**

***A River Unvexed: A History and Tour Guide of the Campaign for the Mississippi River.* By Jim Miles. Rutledge Hill Press, 1994. 594 Pages. \$24.95.** Reviewed by Dr. Charles E. White, Infantry School Historian.

These books—the first five of a proposed eight-part Civil War Campaigns Series—are an ambitious attempt to place the Western Theater in its proper perspective.

According to author Jim Miles, the outcome of the Civil War was decided in the heartland of the Confederacy, not in Virginia, Maryland, or Pennsylvania. Unlike those in the Eastern Theater, Union and Confederate armies in the West marched incredible distances and fought fierce battles for control of entire states. Unfortunately, the sacrifice and valor of the soldiers who fought on both sides in the Western Theater "has been too long neglected." Far too much attention has been given to the Eastern Theater, where Robert E. Lee fought a valiant struggle that essentially amounted to nothing. Indeed, it was not until "Western" general Ulysses S. Grant arrived in the East that Lee met his match and was decisively defeated.

The heartland of the Confederacy contained most of the South's vital raw materials, manufacturing facilities, and agricultural bounty. Here, iron, copper, munitions, gunpowder, cotton, and food were produced in abundance. The heartland was also the key to the Confederacy's vital interior transportation network, which consisted of half a dozen major rivers and several long railroad lines that permitted the quick transfer of troops and material between fronts.

The battlefield of the heartland stretched for nearly 500 miles, from the Mississippi River in the west to the Cumberland Gap in the east. It included an area of more than 150,000 square miles in Kentucky and Tennessee, northern Mississippi, Alabama, and Georgia. This prize was so valuable that many of the war's bloodiest battles were fought to control it. For example, the cam-

paign for control of the Mississippi stretched for more than 500 miles, touched seven states, resulted in 20 major battles and sieges, lasted for more than two years, and involved more than 200,000 soldiers.

Nothing in the Eastern Theater could compare to this. While Lee in the East achieved a series of brilliant but hollow victories against inept Union generals, Grant in the West was busy capturing Confederate armies, resources, and population, and occupying Southern territory. After two years of bloody war in the East, Lee had little to show for his efforts, while Grant had sealed the fate of the Confederacy with victories at Forts Henry and Donelson and at Shiloh, Vicksburg, and Chattanooga. Miles is certainly correct when he asserts that the Civil War was won in the West.

As their titles suggest, these books provide both a history of the campaigns and a number of driving tours that enable the reader to see firsthand the battlefields and important sites of the Western Theater. Good maps supplement each text. Miles also includes the names, addresses, and telephone numbers of national, state, and local agencies that can assist the traveler.

For anyone seeking to understand the campaigns that won the U.S. Civil War for the Union, these books provide the best starting point.

Hunters and Shooters: An Oral History of the U.S. Navy SEALs in Vietnam. Edited by Bill Fawcett. William Morrow, 1995. 350 Pages. \$23.00. Reviewed by Michael F. Dilley, Davidsonville, Maryland.

Although oral histories have been around for a few years, they do not seem to sell very well in book form. The technique of using oral histories or interviews is more closely associated with historical research intended to preserve the memories of participants while they are still alive. This technique is more often used as a research tool by historians or history students than it is by writers as the basis for a book. There are two notable exceptions dealing with the Vietnam War—*Everything We Had* and *Bloods*—and *Hunters and Shooters* ranks with these. It, too, apparently started as a research project to preserve unit history, as it was written in cooperation with the Underwater Demolition Team (UDT)/Sea, Air, Land (SEAL) Museum.

This book might more accurately be subtitled "An Oral History of SEAL Team Two in Vietnam" since 14 of the 15 soldiers interviewed served on that team. The other had

belonged to Team Two but was transferred to Team One to be sent to Vietnam.

This book covers a very broad perspective of the experiences in SEAL Team Two as well as in Vietnam. Some of those interviewed had previously served in UDT units and were original members of Team Two, so the author also discusses the expansion of the Navy's special warfare capability. Some of them, and not just officers, did not stay assigned to the SEALs. One, Third Class Electrician's Mate Dick Pouliet, later designed and oversaw the manufacture, assembly, and deployment of a "sail" to fix NASA's *Skylab*. All of those interviewed, regardless of when they went through, shared the training (whether it was UDTB, UDTR, or BUD/S) as a common base. All, that is, except a hospital corpsman, Greg McPartlin, who was not permitted to receive some of the training, including "Hell Week," because of then-current interpretations of the Geneva Conventions. All also served in combat, some of them at the same time. Interestingly enough, McPartlin had served in Vietnam as a corpsman with Third Marine Force Reconnaissance before transferring to the SEALs.

Singling out one experience as being better than others, or even as typical, is not necessary. They all form the mosaic that made up SEAL Team Two at the time. This book is a valuable contribution to the history of special operations forces, Navy Special Warfare operations, and the Vietnam War. I recommend it to all who have these interests and to students of military history in general. I look forward to a similar oral history of SEAL Team One.

RECENT AND RECOMMENDED

The World Factbook: 1994-95. By the Central Intelligence Agency. Brassey's, 1994. 512 Pages. \$32.00.

The Patterns of War Since the Eighteenth Century. Second Edition. By Larry H. Addington. Indiana University Press, 1994. 384 Pages. \$14.95, Softbound.

Fires and Furies: The Los Angeles Riots of 1992. By Major General James D. Delk, Retired. ETC Publications (700 East Vereda del Sur, Palm Springs, CA 92262-4816), 1994. 390 Pages. \$28.95.

War Against Japan. By Sidney C. Moody, Jr., and the Photographers of The Associated Press. Presidio Press, 1994. 192 Pages. \$19.95.

Hero of Beecher Island: The Life and Military Career of George A. Forsyth. By David Dixon. University of Nebraska Press, 1994. 257 Pages. \$32.50.

Once a Legend: "Red Mike" Edson of the Marine Raiders. By Jon T. Hoffman. Presidio Press, 1994. 432 Pages. \$24.95.

Women in the Military: An Unfinished Revolution. Revised edition. By Major General Jeanne Holm, U.S. Air Force, Retired. Presidio Press, 1994. 544 Pages. \$16.95, Softbound.

Quest: Searching for the Truth of Germany's Nazi Past. By Ib Melchior and Frank Brandenburg. Presidio Press, 1994. Originally published in 1990. 344 Pages. \$12.95, Softbound.

Captive of the Rising Sun: The POW Memoirs of Rear Admiral Donald T. Giles, Jr. Naval Institute Press, 1994. 235 Pages. \$27.95.

Let the Sea Make a Noise: Four Hundred Years of Cataclysm, Conquest, War and Folly in the North Pacific. By Walter A. McDougall. Avon Books, 1994. 793 Pages. \$17.50, Softbound.

The Golden Thirteen: Recollections of the First Black Naval Officers. Edited by Paul Stillwell. Berkley, 1994. 304 Pages. \$15.00, Softbound.

Armored Cav: A Guided Tour of an Armored Cavalry Regiment. By Tom Clancy. Berkley Press, 1994. 325 Pages. \$15.00, Softbound.

On Air Defense. By James D. Crabtree. Praeger, 1994. 256 Pages. \$19.95.

Blood on the Shores: Soviet SEALs in World War II. By Viktor Leonov. Translated by James F. Gebhardt. Ballantine, 1994. 287 Pages. \$5.99, Softbound.

Leading the Way: How Vietnam Veterans Rebuilt the U.S. Military. By Al Santoli. (Originally published in 1993.) Ballantine, 1994. 409 Pages. \$5.99, Softbound.

Odd Man Out: The Story of the Singapore Traitor. By Peter Elphick and Michael Smith. Hodder and Stoughton, 1994 (distributed by Trafalgar Square, North Pomfret, VT 05053). 265 Pages. \$13.95, Softbound.

Killing Zone: A Professional's Guide to Preparing and Preventing Ambushes. By Gary Stubblefield and Mark Monday. Paladin, 1994. 240 Pages. \$14.95, Softbound.

Patton: The Man Behind the Legend, 1885-1945. By Martin Blumenson. (Originally published in 1985.) William Morrow, 1994. 320 Pages. \$15.00, Softbound.

Forces Sweethearts: Wartime Romance from the First World War to the Gulf. By Joanna Lumley. Bloomsbury, 1994 (distributed by Trafalgar Square, North Pomfret, VT 05053). 192 Pages. \$34.95.

Tenting on the Plains: Or, General Custer in Kansas and Texas. By Elizabeth B. Custer. University of Oklahoma Press, 1994. 424 Pages. \$12.95, Softbound.

Timelines of War: A Chronology of Warfare from 100,000 B.C. to the Present. By David Brownstone and Irene Franck. Little, Brown, 1994. 576 Pages. \$29.95.

Imperial Spies Invade Russia: The British Intelligence Interventions, 1918. By A.J. Plotke. Contributions in Military Studies, Number 131. Greenwood, 1993. 304 Pages. \$55.00.

Naval Warfare in the Eastern Mediterranean, 1940-1945. By Charles W. Koburger, Jr. Praeger, 1993. 192 Pages. \$49.95.

One Tough Marine. By D.N. Hamblen and B. Norton. (Published in hardcover in 1993.) Ballantine, 1994. \$5.99, Softbound.

Element of Surprise: Navy SEALs in Vietnam. By Darryl Young. (Published in hardcover in 1993 by William Morrow.) Ballantine, 1995. 275 Pages. \$4.95, Softbound.

Den of Lions. by Terry Anderson. Ballantine, 1994. 418 Pages. \$5.99, Softbound.

From The Editor

GOING SOMEWHERE?

Soldiers tend to move around a lot, and those moves involve a number of actions that can help things go smoothly. As the Editor of INFANTRY, I worry about your change of address, because I want to make sure your copy of our branch bulletin gets to you without delay, wherever you go. How you send us your new address is not important; you can use one of the postal change of address cards, simply drop a post card or letter in the mail, or call us at DSN 835-2350, or commercial (706) 545-2350 or 687-2841, and we'll take it from there. If a copy gets lost in the mail, let us know, and a replacement will be on the way. When you write or call with a question about your subscription, please be sure to give us a current telephone number as well; I can call you to resolve subscription problems a lot faster than I can get a letter to you.

Here's something else to consider. The mission of the Army has expanded considerably in the past ten years, and the deployment of forces to the former Yugoslavia is an example of only one of the challenges that will face us as we enter the next century. If we are to continue to serve the force, INFANTRY must focus on those issues that will support the Army's wider purpose. During the past two years, we have run a number of articles that directly relate to the conditions and mission that the deploying peacekeepers are likely to encounter. These articles have included route reconnaissance and minefield clearance operations, operations in cold climates, field sanitation, field expedient map making, convoy security, a tactical SOP, the role of the support platoon leader, platoon gunnery, field and combat trains operations, selected infantry weapons, and operations other than war, to name a few. Copies of these magazines are being issued to soldiers deploying from Fort Benning, and others are being mailed to units already in theater.

If you think you may be able to use these or other materials we have, write and tell us. If you have a trusted ally in the mail room, you can probably get one of the unit copies of INFANTRY; if not, the best way to ensure delivery is to get your own subscription. As a service to subscribers, we also offer an index of past issues and research assistance for articles previously published in our magazine.

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