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FRONT COVER:

A Soldier with the 2nd Battalion, 27th Infantry Regiment, 10th Mountain Division, secures a site February 16 in preparation for a Civil Medical Assistant mission in Ghazni, Afghanistan. (Photo by Specialist Gul A. Alisan)

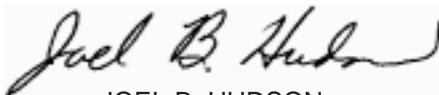
BACK COVER:

Soldiers from the 2nd Battalion, 6th Infantry Regiment, 1st Armored Division, prepare to enter a building during a close quarters combat drill in Baghdad, Iraq. (Photo by Specialist Darryl T. Magby)

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Commandant's Note

BRIGADIER GENERAL BENJAMIN C. FREAKLEY

TRAINING ADAPTIVE LEADERS AND UNITS

When General (Retired) Freddy Franks was about to deploy the VII Corps to Saudi Arabia for Operation Desert Shield, he visited Colonel (Retired) Russell P. "Red" Reeder, Jr., the famous commander of the 12th Infantry Regiment, 4th Infantry Division, during the Normandy landings on D-Day, June 6, 1944. General Franks asked Colonel Reeder how he built adaptability into his unit prior to the invasion. He said he trained his unit to deal with uncertainty, elaborating on both his training in Tennessee and later in England. He first focused on combat critical tasks and drills. Once his unit gained the competence and confidence in these core competencies, he started to work on flexibility and adaptability. For instance, he would allow a unit to plan and prepare for a mission but change the objective or task organization just prior to LD. Injecting this uncertainty into training paid off, making the unit far more adaptable when it landed in the wrong area on D-Day. On that fateful day, Colonel Reeder had two choices: either get back on the landing craft and brave the gauntlet of direct and indirect fires again or adapt. Thanks to the unit's training, it was able to adapt and secure its beachhead.

As leaders in the violent, uncertain, complex, and ambiguous contemporary operating environment (COE), we must take counsel from Colonel Reeder and proactively build competence, confidence, flexibility, and adaptability into our leaders and formations. The traits and factors that make adaptive leaders and units are not just intuitive; they can and must be developed and reinforced. How we build adaptability in the minds of leaders is very similar to the way we build any muscle in our body: through exercise. With more repetitions our minds become more adaptable.

Likewise, a regionally distinctive, adaptive threat has replaced, to some degree, the predictable, doctrinally rigid



threat we faced two decades ago. Remnants of the Taliban, Al Qaeda, and Iraqi dissident groups know they cannot survive a decisive engagement with American Infantry, so they resort to ambushes, mines, taking hostages, and hit-and-run attacks. This phenomenon is not unfamiliar to our Army or Infantry. History, including our own, is replete with examples of how a weaker army adopts its tactics to offset its opponent's numerical or technological superiority. What is unique is the diversity of the Threat's tactics from city

to city, village to village, and tribe to tribe. In Matt Zeigler's book *Three Block War: U.S. Marines in Iraq* and the U.S. Command and General Staff College publication *Sharp Corners*, the authors correctly outline the dilemma our junior leaders face. Providing subordinates a vision and clear intent, mission-type orders, and maximum latitude has proven more valuable than relying on checklists.

My focus as the Chief of Infantry is building flexibility and adaptability through our doctrine, professional education, and in our assignment considerations. Experience-based doctrine is our starting point, because it serves as the basis for much of what we do. Although we recognize that our doctrine continues to evolve, we also know that it is sound. In fact, it is being validated daily in Kosovo, Afghanistan, and in Iraq. At a minimum, our doctrine provides us with a common language and way of thinking, and provides the framework for initiative and a point of departure for the tactics, techniques, and procedures (TTPs) that we see being developed by adaptable young American leaders throughout the world. These conditional TTPs soon find application among units facing similar conditions in a like environment. We are working to capture the more enduring of these TTPs, review them, and share them either through the Center for Army Lessons Learned or our own collaborative site for quick turnaround to both

combat Theaters and to units preparing for deployment. These enduring TTPs and lessons learned will also find their place in our doctrinal manuals and lesson plans. But doctrinal improvements will only take us so far in terms of instilling and sustaining adaptability in our leaders and units.

We will complement our doctrinal effort with professional education programs that foster and sustain adaptability. These programs must continue to produce Soldiers and leaders well-grounded in doctrine and who are well disciplined and well-rounded. The goal is to place our officers and noncommissioned officers into as many tactical dilemmas as possible during their respective courses. This is nothing new; adaptability has long been a thread that runs through the fabric of our American tradition and of our military culture. A reading of our Army's history reveals skirmishes, battles, and wars won by Soldiers and units through their valor, their initiative, and their ability to respond to the unexpected. Our resident instruction is designed to build upon these qualities by maximizing the use of student Tactical Decision Exercises with the appropriate levels of peer and instructor evaluation. This is how we will prepare leaders to anticipate the unexpected, to react, and to seize and hold the initiative.

Finally, career management policies must afford opportunities for a diverse array of assignments that expose leaders and Soldiers to various types of units, climates, and geographical areas that further encourage and sustain adaptability. The leader's role in this effort is a crucial



one, since the maneuver commander will serve as the combined arms integrator at company, battalion, and brigade level. To successfully accomplish this, experience in multiple types of infantry and combined arms assignments is imperative. Experience teaches the enduring lessons, and we will work closely with the Human Resources Command to provide our combined arms leaders of the future with every possible advantage.

It is clear that we need to model our own training after Colonel Reeder's. His example of tough, realistic training under varying conditions accustoms leaders and units to confronting and solving a wide array of tactical dilemmas, builds competence and confidence, and develops the Soldiers' and units' ability to quickly adapt to new contingencies. Such training prepares leaders for the challenge of battle command at the same time it promotes Soldiers' confidence in the unit and its commander. Commanders must work to create and sustain an environment in which training deficiencies are identified and corrected, innovation is rewarded, and honest mistakes are accepted as the price of growing leaders. Today, our nation confronts an enemy who will stop at nothing to attack our interests and kill our citizens. We have beaten them in two countries in the past two years, and now they are desperate. As the Army continues to prosecute the Global War on Terrorism, it is adaptive leaders and units who will track down and kill those who have attacked us.

Follow me!



Staff Sergeant Charles B. Johnson

INFANTRY NEWS



USAMU To Offer Squad Designated Marksman Instructor Course

The U.S. Army Marksmanship Unit has announced that it will provide a new Squad Designated Marksman Instructor Course to help Soldiers improve their war-fighting marksmanship skills. Army Marksmanship Unit shooters have nearly doubled the number of rifle and pistol marksmanship train-the-trainer missions they conduct and will now also provide this Squad Designated Marksman Instructor Course.

The first class, scheduled for November 8-19, will be a comprehensive M16 course designed to hit enemy targets to 500 meters; this class will be open to only Fort Benning Soldiers. Future classes are planned for December 6-17, January 10-21 and January 31-February 11; all classes are limited to a maximum of 30 students.

Soldiers will be instructed in areas of marksmanship, range estimation, and target detection; there will be numerous practical exercises including instruction on known and unknown distance rifle ranges. The course will be available to noncommissioned officers in team leader through platoon sergeant positions, with priority going to Soldiers in combat arms.

The course is leader training to develop Soldier long-range shooting skills, according to USAMU Commander Lieutenant Colonel David J. Liwanag.

Currently, Soldiers receive about 12 days of basic rifle marksmanship in Basic Training, focusing on distances of 300 meters and closer. The Army currently has no advanced or sustainment marksmanship training to hit targets past 300 meters



with the M16 to the maximum effective range of 550 meters.

"The Squad Designated Marksman Instructor Course will offer commanders an excellent tool to train Soldiers in combat and advanced marksmanship techniques," Liwanag continued. "This is especially valuable now with troops deployed in combat and with the Army Chief of Staff's emphasis on individual Soldier combat skills." Recently Army Chief of Staff General Peter J. Schoomaker stated that "every Soldier is a rifleman."

"When they complete the course, trainers will have the ability to identify and train Soldiers in their units to hit targets 500 meters out. Targets at 200 and 300 meters won't be much of a challenge," Liwanag said. "Leaders will get hands-on training, range practical application and training materials provided by the Army Marksmanship Unit."

The award-winning shooters of the Army Marksmanship Unit's Service Rifle Team will teach the Squad Designated Marksman course. These shooters specialize in firing small arms that are organic to units within the military including the M14, bolt-action rifles and all variations of the M16 and M4 at distances up to 1,000 yards.

For more information on the Squad Designated Marksman Instructor Course, contact Michael J. Behnke, USAMU chief of competitions, at michael.behnke@usarec.army.mil or (706) 545-7841 or USAMU Training NCO Janet Sokolowski T (706) 545-1410; the fax is (706) 545-6252.

Reunions

The Society of the First Infantry Division (Big Red One) will hold its 86th annual reunion July 28 - August 1 in Chicago, Illinois. For more information, write to the society at 1933 Morris Road, Blue Bell, PA 19422 or call (888) 324-4733, fax (215) 661-1934. E-mail is Soc1ID@aol.com

The 45th Infantry Division Association (THUNDERBIRDS) will hold a reunion September 30 - October 4 in Oklahoma City, Oklahoma. For more information, contact Raul Trevino at 2145 NE Street, Oklahoma City, OK 73111 or (210) 681-9134.

The Association of the 3rd Armored Division (SPEARHEAD) will hold its fourth annual reunion in Columbus, Ohio, July 14-18. For more information, call Carl Erickson at (301) 520-3275 or visit www.3AD.org

USAMU Soldiers Train Troops in Iraq

SPECIALIST CHAD D. WILKERSON, 372ND MOBILE PUBLIC AFFAIRS DETACHMENT

To maintain an efficient and effective fighting force, Soldiers never stop training. Even while conducting combat operations in a foreign land, Soldiers must test and refine their fighting skills to stay one step ahead of their enemies on the battlefield.

With the lessons learned in Operation Enduring Freedom and Iraqi Freedom, the U.S. Army has increased focus and changed its approach on marksmanship.

Soldiers of the U.S. Army Marksmanship Unit (USAMU) of Fort Benning, Georgia, have conducted classes for Soldiers of the 1st Armored Division at ranges all over Baghdad — classes that prepare them for the type of combat they can expect in modern urban war.

"We are traveling around Baghdad at the request of the 1st AD, training their troops in what we call high performance shooting or combat marksmanship under urban considerations," said Staff Sergeant Aaron Hampton, USAMU Service Pistol Team shooter and instructor. Hampton and the other members of his team are veteran competition shooters who have harnessed their knowledge and experience into a three-day, intensive close quarters combat training, he said.

The purpose of the course, said Hampton, is to train Soldiers on marksmanship from unconventional positions, such as entering a room or while driving.

"Our training starts where the Army's basic rifle marksmanship leaves off," Hampton said. "We want to take Soldiers out of the foxholes and prone positions and teach them how to stand, move and shoot more effectively and efficiently."

The class begins with classroom-style instruction focusing on safety and then progresses onto the basics of moving and shooting on foot as part of a team. Everything from the basic firing stance and holding the weapon, to evacuating a vehicle and communicating with teammates is



Specialist Andrew Meisner

Staff Sergeant Aaron Hampton (right) helps a student with his shot placement at the USAMU range held at Baghdad International Airport in Iraq.

covered in the training.

"We want to give our Soldiers confidence," Hampton said. "The last thing any Soldier should have to worry about in an urban conflict is 'Will my rounds hit the intended target?' This training is increasing Soldier confidence, combat survivability and lethality on this urban battlefield."

Perhaps the most important aspect of the training is that it provides Soldiers with techniques that are easily passed on to other Soldiers.

"We have been able to package this training so it is manageable, and each Soldier is able to walk away with tangible benefits and the ability to go out and train others in the unit," Hampton said. "It is definitely a force multiplier."

This was the Army Marksmanship Unit Service Pistol Team's fourth iteration of the course, and Hampton said the feedback has been positive.

Nearly 100 comment cards were collected, and the instructors received only

one complaint — Soldiers wished they had received the training long ago.

"The Soldiers I brought out here with me said this is the best training they have received since they have been in the Army," said Staff Sergeant Curtis George, section sergeant and tank commander with Company A, 2nd Battalion, 37th Armor Regiment. "This is new, exciting and effective."

George said missions in the past required a skill set that was new and unfamiliar to them. He said the close-quarters, dynamic-style marksmanship training they received during the high-performance shooting class will make them much more effective on the streets of Baghdad.

"Here in Iraq, we have had a lot of shooting on the move and a lot of raids where we enter rooms," George said. "Even though the urban environment is still fairly new to the Army, that is where the new wars are, and that is where we need to learn how to fight."

Study Says Load Too Heavy

Nowhere in Afghanistan did Lieutenant Colonel Charles Dean see the folkloric 120-pound rucksack reputed to be carried by a dismounted infantryman in combat, but what these Soldiers do carry continues to weigh too much.

Dean, an infantry officer serving as the Army's liaison to the Institute for Soldier Nanotechnologies at the Massachusetts Institute of Technology (MIT), presented findings of a study on the modern warrior's combat load last November at the U.S. Army Soldier Systems Center in Natick, Massachusetts.

He field trained and then led a team of seven carefully selected Airborne Rangers who volunteered to collect combat load data from paratroopers within the 82nd Airborne Division operating in Afghanistan.

They weighed combat loads and inventoried individual items of equipment carried by 764 out of 1,305 paratroopers assigned to the infantry rifle companies within Task Force Devil. Team members then packed the identical gear, rehearsed with the units and finally served as members of rifle platoons and squads within the task force on 15 separate dismounted combat missions against the enemy.

"If we want to reduce weight and bulk,

you can throw a gazillion dollars into technology, but weight today is twice where it should be, and you can't reduce weight by technology alone," Dean said. "The solution is to get the weight off the Soldiers. The reality is to accept that some things have to come off the guy's back."

A fighting load is everything worn or carried except a rucksack and should be held to less than 48 pounds, according to the Army field manual for foot marches. The next level, approach march load, adds a light rucksack and should not exceed 72 pounds. In the worst-case scenario, emergency approach march loads require a larger rucksack, raising the total weight to 120-150 pounds.

After reviewing the data, the average rifleman's fighting load was 63 pounds, which meant he was carrying on average 36 percent of his body weight before strapping on a rucksack. The average approach march load was 96 pounds or 55 percent of an average rifleman's body weight, and the emergency approach march load average was 127 pounds or 71 percent of an average rifleman's body weight.

For more information, visit the Soldier Systems Center website at www.natick.army.mil.

Enemy Employs New Tactic

In Iraq, coalition officials reported a new tactic used by terrorist forces: using aid convoys to smuggle arms.

In restive Fallujah, where tensions remain high between Marines and the local population, a convoy of humanitarian goods was found to contain weapons and ammunition, according to CJTF 7 officials.

U.S. Marines working with Iraqi forces in the area reported finding armor-piercing rounds, aiming sights for rockets, and rifles hidden in bags of rice, grain and tea. "The man detained for transporting the weapons was wearing a poorly made Red Crescent uniform in an attempt to make the convoy look legitimate," a spokesman said in a statement.

Also in Fallujah, Marines engaged an enemy sniper, who then fled in an Iraqi ambulance. "By using the ambulances, (the enemy forces) put wounded and dying Iraqis in harm's way, preventing them the services they need to reach medical care," the spokesman said.

(Taken from an American Forces Information Service news article dated April 15.)

ITEMS OF INTEREST

A flashlight is something we hardly ever think about. We have one on top of the fridge, one in the car, and a couple of small ones in a drawer. And whenever we need a flashlight, for some ironic reason the batteries are near dead or the bulb needs to be replaced. Flashlights are not a reliable tool in our household. But in a military environment, a reliable flashlight can be the difference between life and death.

Lightwave™ designed a brand new flashlight based on a revolutionary new LED (light-emitting diode) technology instead of using a bulb. LEDs are up to 100 times more energy efficient than a light bulb. Light bulbs have a tendency to burn out fast. The fragile bulbs used in flashlights last 10, maybe 20 hours. LEDs, however, are virtually indestructible.

The new Lightwave™ flashlight is always ready to be used. The Model 3000 uses seven super-bright, white LEDs and runs 700 hours on three alkaline C-cell batteries, compared to a normal



flashlight which runs for only eight to 10 hours. This means that the batteries powering a Lightwave 3000 flashlight will last up to one month.

Additionally, the Lightwave 3000 only weighs 6.4 ounces. This means it is about 25 percent lighter than a typical C cell flashlight. It is water resistant and will provide bright white light in any weather condition. Its durable construction, with genuine rubber over-molding, means you will not break a light element if you drop it onto the ground.

Lightwave also makes a "Head Torch." The "Head Torch" places the light source directly on the user's forehead, allowing for totally hands-free operation. Many units are using this light source instead of a traditional flashlight.

Lightwave flashlights are available through the military supply system. For more information, call Bruce Brown at (714) 593-2801.



Joe Burlas

Staff Sergeant Charles W. Blackwell of the Texas National Guard tackles a 500-yard target during the All-Army Small Arms Championship. Blackwell was named the 2004 overall individual champion.

All-Army Small Arms Championships Hone Combat Skills

JOE BURLAS, ARMY NEWS SERVICE

While the All-Army Small Arms Championships is an M16 rifle and M9 pistol competition, this year it was also an advanced marksmanship workshop that will help competitors share combat skills with Soldiers at their home units.

More than 170 Soldiers, representing the active force, Army Reserve, National Guard and Cadet Command, participated in the first Small Arms Championships since 1994, March 15-25 at Fort Benning, Georgia.

Staff Sergeant Charles W. Blackwell, individual winner of the last Small Arms Championship in 1994, emerged again as this year's overall champion at the end of individual competition March 19. Blackwell is a member of the Texas National Guard.

Major Timothy S. Kean, Texas National Guard, finished second overall; and Sergeant First Class David J. Kerin, Pennsylvania National Guard, placed third. Major Rhonda L. Bright, 81st Regional Readiness Command, was the top female shooter in the overall individual phase.

Attendees first competed in an individual competition consisting of three M9 pistol matches and three M16 matches. The competition then moved to team matches with both the M16 and M9. The championships finish March 25 with a long-range match with competitors using M14 or M24 rifles.

The All-Army marksman competition was revived because

recent Army operations have demonstrated the need for Soldiers to feel confidence in the ability of their weapons to engage targets at ranges beyond what they experience on training ranges, according to Lieutenant Colonel David Liwanag, commander of the U.S. Army Marksmanship Unit. USAMU hosted the event.

"What better time to bring this championship back than now when we are at war?" Liwanag said. "We've got commanders saying they can see a lot farther in the deserts of Iraq and the mountains of Afghanistan than the 300-meter ranges their Soldiers are used to shooting on. Here, they fire out to 500 yards and see they can hit the target at that distance — that's about 200 yards farther than most Soldiers are trained to shoot."

Competitors were not expected to be expert long-distance marksmen with their weapons when they arrived. USAMU staff gave a two-day workshop at the beginning of the competition consisting of classroom training and familiarization shooting on the range.

Two of the most important lessons shooters learned during that workshop were to be comfortable changing the windage on the sight when shooting at long distances and to anticipate the drop of the bullet over that distance, Liwanag said.

The workshop and subsequent competition matches also refreshed competitors' knowledge of the standing, sitting and

offhand shooting positions. Record M16 fire requires just the supported prone and supported standing positions. Using the sling for a steady firing position was reinforced throughout the championships training.

Each participant received a service pistol and service rifle marksmanship book, and a data book to take notes for the basis of lesson plans. All who completed the training received an instructor certificate from USAMU. The intent of the training is for the competitors to go back to their units and make a difference by passing on advanced marksmanship skills to their fellow Soldiers, Liwanag said.

"Combat marksmanship is training our Soldiers' need — look at the Guard and Reserve; we're mobilizing thousands of Soldiers each month for deployment," said First Sergeant Michael Brown, team captain for the 81st Regional Readiness Command competitors and a member of the Army Reserve Combat Marksmanship Team. "Sharing what we learn here may save lives of some of those deploying Soldiers."

Good marksmanship isn't just for rifles and pistols, Liwanag said, as it crosses all shooting disciplines, including shooting a

main tank gun or using a machine gun.

In next year's competition, Liwanag said he plans to have shooters fire wearing full body armor as he does not see Soldiers going into battle in the future without it. Likewise, he plans to add night firing training if the resources are available to reflect the reality that the Army fights at night.

Bright said she has been shooting competitively since she was 9 years old — first with a National Rifle Association club, on the U.S. Military Academy Rifle Team as a cadet in the mid 1980s and with USAMU while on active duty. She is double qualified for the Service Rifle Distinguished Badge and was the 1993, 1995 and 1998 air pistol national champion.

"After shooting for so many years, I still learned a lot during this competition — and I am definitely going to pass on what I learned to others in my unit," Bright said. "I'll be back for next year's competition too."

For more All-Army Small Arms Championships results or information on the U.S. Army Marksmanship Unit, visit the USAMU Website, www.usarec.army.mil/hq/amu.



U.S. Army photo

During the All-Army Small Arms Championships, Soldiers prepare for the M9 pistol portion of the competition. Active-duty, National Guard, and Reserve Soldiers competed in the event at Fort Benning, Georgia.

All-Army Small Arms Championship Results

U.S. Army Combined Small Arms Overall Individual Champion —

SSG Charles W. Blackwell

2nd place — MAJ Timothy S. Kean

3rd place — SFC David J. Kerin

High Female Shooter —

MAJ Rhonda L. Bright

Novice Division

1st place —

SGM Patrick A. McNamara

2nd place — CPT Gregory L. Wooten

3rd place — SGT Sean M. Toner

4th place — SGT William P. Green

5th place — SSG Todd A. Bailey

6th place — SSG Russell W. Stone

Cadet Division

1st place — Cadet Donald P. Skidmore

High Active Army Shooter —

SSG Brian P. Arnold

High Active Army Junior Enlisted

Novice — SPC Scott Grant

High Active Army Senior Enlisted

Novice — SGT Sean M. Toner

Secretary of the Army Combat Pistol Match

1st place — SSG Charles W. Blackwell

2nd place — MAJ Timothy S. Kean

3rd place — MAJ Rhonda L. Bright

Chief of Staff of the Army (CSA) Combat Pistol Match

1st place — SSG Charles W. Blackwell

2nd place — MAJ Timothy S. Kean

3rd place — SSG Michael Discioscia

Excellence in Competition (EIC) Pistol Match

1st place — SSG Charles W. Blackwell

2nd place — WO4 Albert Wood

3rd place — MSG Thomas Boyle

Secretary of the Army Combat Rifle Match

1st place — SFC David J. Kerin

2nd place — SPC Steven Woodruff

3rd place — SSG David Hastings

Chief of Staff of the Army (CSA) Combat Rifle Match

1st place — SFC David J. Kerin

2nd place — SSG Bruce Roscoe

3rd place — SFC Gregory Neiderhiser

Excellence in Competition (EIC) Rifle Match

1st place — MAJ Rhonda L. Bright

2nd place — MSG Beverly Spungin

3rd place — SFC David J. Kerin

**More results can be found at
www.usarec.army.mil/hq/amu.**

PROFESSIONAL FORUM



Conventional Forces, Special Forces and the Hidden Guerrilla

SERGEANT FIRST CLASS JAMES MEYERS

Leaders create conditions for success. Organizing, equipping, training, and leading Soldiers to accomplish operational missions are the goals of leaders. Will and determination mold Soldiers into effective organizations. Full spectrum operations demand Army leaders who are masters of both the art and the science of military operations, and have the training and temperament to adapt to any situation. Success comes from imaginative, flexible, and daring Soldiers and leaders.

— U.S. Army Field Manual 90-8, *Counterguerrilla Operations*

The Army's counterguerrilla manual, FM 90-8, states, "Counterguerrilla operations are geared to the active military element of the insurgent movement only." FM 90-8 also states, "An insurgent organization may have both an overt and a covert element. The overt element, the guerrilla, is readily identified." FM 90-8 goes on to explain, in detail, how conventional forces should conduct counterguerrilla operations against the readily identifiable guerrilla. But what if the Army is fighting a guerrilla that isn't readily identifiable?

In an article of the October 6, 2003, *Wall Street Journal*, Brigadier General Martin Dempsey stated, "Right now, I have more than enough combat power. What I need to know is where to apply it." This is the situation that faces the Army units conducting counterguerrilla operations in Iraq. But General Dempsey's predicament is not limited to Iraq. From my personal experience, I watched as 82nd Airborne troops in Afghanistan conducted operations without any real tactical intelligence.

The writers of FM 90-8 were conventional Soldiers who knew how to be conventional warfighters. Their instruction manual on how to fight an insurgency was based on what they knew — how to use units trained in conventional infantry tactics to fight a guerrilla that presumably would present a readily identifiable target.

The writers knew how to "find and fix" an enemy that had a presence on the rural battlefield. Unfortunately, the battlefield tactics the writers wrote about in FM 90-8 were designed almost exclusively for use against an easily identifiable and rural insurgent (the Viet Cong). FM 90-8 fails to address in depth the tactics and techniques that should be employed to identify insurgents that

camouflage themselves in the local populace as they have, and do, in such places as Somalia, Afghanistan, and Iraq. I believe that FM 90-8's lack of depth is a major reason for the U.S. Army's continuing difficulty in conducting successful operations against a latent and incipient insurgency. I also believe there is an effective model that the U.S. Army could emulate when it is faced with conducting counterguerrilla operations against guerrillas that refuse to present an easily identifiable target.

The New York Police Department (NYPD) has been fighting a latent incipient insurgency for years involving a "resistance" that includes organized elements and unorganized, individual elements; the resistance may or may not be easily identifiable.

The insurgency they are fighting is simply their war on crime. Every day the NYPD is searching for contraband, looking for illegal weapons, getting into shoot-outs, making arrests, and defending against attacks on law enforcement officers. In recent history, the NYPD has been quite successful in reducing crime in New York City. The NYPD's success in combating crime is obvious in everything from the reduced amount of graffiti in the subways to the dramatic reduction of the murder rate.

The NYPD tried numerous things to improve its performance. Many of the tactics and techniques adapted by the NYPD were technologies and leadership ideals already in use by the U.S. military.

Now it may be time for the U.S. Army to look towards the NYPD for ideas on how to improve its ability to fight an insurgency. The part of the NYPD that I believe is most relevant to the U.S. Army is the force structure that the NYPD utilizes in each precinct.

Each precinct's work force is basically broken down into two groups: uniform and detective.

The uniform division is made up of regular uniformed officers and uniformed officers assigned to specialized sections. The majority of the officers in a precinct are uniformed officers who conduct regular patrol duties. These officers provide a visible presence to the public and respond to calls for help. Other uniformed officers are assigned to specialized sections such as the Emergency Services Unit, Street Narcotics Unit, and the Street Crimes Unit. These officers conduct duties that target issues in the community, but they are also available to immediately assist patrol officers.

The other major part of any NYPD precinct is the detective section. The detectives do not conduct patrols and generally do not work in uniform unless there is a temporary, specific or special need for additional uniformed officers.

The detectives in each precinct report directly to the precinct commander, but the head of all NYPD detectives (at NYPD headquarters) has ultimate control over the detectives in each precinct.

The detectives work closely with the uniformed officers and complement their work. Detectives are typically older officers who first served as uniformed officers before becoming detectives. Thus, the detectives are familiar with the NYPD and police procedures. Many times the detectives have numerous human sources in the precinct that provide them with valuable information. The detectives collect all of their criminal information by either clandestine (working undercover) or semi-clandestine (conducting interviews in civilian attire) means.

How does the NYPD model relate to the U.S. Army? A conventional military battalion is broken down into numerous specialty sections just like the NYPD. In an infantry unit, the majority of the troops are common, uniformed grunts, just like the NYPD. And just like the NYPD's force structure, an infantry battalion has specialty units such as scout platoons, mortar platoons, anti-armor platoons, and maybe even a hand-picked quick reaction force (QRF).

But what the infantry battalion lacks is



Department of Defense photo
U.S. Special Forces troops ride horseback as they work with members of the Northern Alliance in Afghanistan during Operation Enduring Freedom in November 2001.

a detective section. By not having a detective section, the infantry battalion has no clandestine or semi-clandestine means of developing battlefield information into tactical intelligence.

The U.S. Army, however, does have its own detective section — Special Forces (SF). SF Soldiers are typically older, experienced Soldiers who have spent time in regular Army units before passing Special Forces Assessment and Selection and the "Q" (Qualification) Course.

SF Soldiers have been around the Army and know how to conduct conventional operations. Many of these Soldiers have been in countries where conventional forces end up conducting counterguerrilla operations. SF Soldiers are trained to develop human contacts by clandestine and semi-clandestine means.

Unfortunately, even though SF is considered a force multiplier, SF Soldiers rarely work in a situation where they are assigned to directly support conventional forces in anything other than a special reconnaissance (SR) mission.

I believe that a SF Advanced Special Operations Techniques (ASOT)-trained ODA (Operational Detachment-Alpha) would be indispensable to an infantry battalion. When dealing with a guerrilla that conceals himself among the populace (much like drug dealers), human intelligence (HUMINT) is probably the most effective way of developing information about the guerrilla that can be turned into tactical intelligence. An ASOT ODA is specifically geared towards HUMINT. The precinct detectives develop information on criminal activities, which

is then turned into indictments and arrest warrants. Like the detectives, an ASOT ODA is trained to develop local HUMINT sources in order to develop information that can then be turned into tactical intelligence.

An ASOT ODA could develop tactical intelligence to directly support a conventional commander and help him apply his combat power. While I was serving in Afghanistan, SF provided virtually all of the tactical intelligence that the local 82nd Airborne company commander received. The tactical intelligence SF provided him was almost exclusively derived from HUMINT collection by the local SF unit.

Now, I am not suggesting that each Army battalion be permanently assigned its own ODA, or that the ODA should be under the conventional forces command. I believe that the easiest model to emulate would be the current model used by SF ODAs when they conduct SR missions that support conventional commanders. Following current doctrine, the SF ODA would support the conventional commander, but would still be controlled by a Special Operations Command and Control Element (SOCCE) assigned to the supported conventional commander.

Luckily, the 82nd Airborne company commander I dealt with was farsighted enough to realize that SF Soldiers with beards didn't affect his mission success. The valuable tactical intelligence that SF provided, however, did affect his mission success.

By leveraging SF's unique skills, I believe that SF can act as a valuable force multiplier for conventional forces. Just like a precinct commander in the NYPD, a battalion commander needs a detective section when he is conducting a counterguerrilla operation in which the guerrilla decides to conceal himself among the local population.

Sergeant First Class James Meyers served as a senior communications sergeant for a National Guard Special Forces company in Afghanistan. He currently serves with the Special Operations Command Pacific. Meyers is a graduate of the Special Operations Qualification Course and has a bachelor's degree in international relations.

OPSEC is Everyone's Responsibility: CHANGING A MINDSET

SECOND LIEUTENANT JAMES A. CAPOBIANCO

"In the Global War on Terrorism, we face an insidious and adaptive adversary capable of gathering open source information on our operations and intentions. Do not provide him assistance through uncontrolled release of information that may compromise our own force protection. We are an Army at war and our Soldiers deserve the best operations security (OPSEC) we can provide."

— General Peter J. Schoomaker,
Chief of Staff of the Army

THE IMPORTANCE OF OPERATIONS SECURITY

According to a memorandum from the office of the Secretary of Defense, Soldiers in Afghanistan found an Al Qaeda training manual; this manual purports that by "using public sources openly and without resorting to illegal means, it is possible to gather at least 80 percent of information about the enemy." The U.S. is an open nation; our founding principles of liberty and freedom compel such openness. In fact, the Department of Defense alone maintains more than 700 gigabytes of web-based data. Based upon captured documents, the realities of American society, and other intelligence indicators, we must assume that our enemies use our openness as a fertile bed for intelligence gathering. Specifically, it is a sure bet that adversaries are routinely accessing and monitoring Internet sites and other open-source media to gain an advantage against our superiorly equipped and trained forces.

The modern American concept of war has tended to neglect the existence and real threat of espionage conducted against the United States and its allies. Soldiers have adjusted well to increased operations tempo

and deployments. They are meeting unforeseen challenges with innovation and courage. Yet, some Soldiers are failing to recognize the potential damage they are causing by failing to protect critical information on past, present, and future operations.

Central in our struggle to accomplish our mission is our ability to establish and maintain OPSEC. Failure to enforce basic OPSEC rules and regulations results in the transmission of potentially damaging information into the hands of our adversaries. In order to enforce OPSEC, all Soldiers must learn what type of information needs to be protected and how to protect it.

WHAT IS OPSEC?

OPSEC is a continuous process that must occur during times of peace and war. Current OPSEC guidelines prohibit the posting, discussion, or description of tactics, techniques, and procedures (TTPs) that pertain to small unit operations and how Soldiers operate in the current environment. Additionally, information which contains lessons learned or system capabilities/vulnerabilities must not be placed in a public or non-secure environment. (See your local intelligence office for your unit's complete OPSEC regulations.)

Knowing what is and what is not critical information is the basis for establishing and maintaining good OPSEC. Specifically, Soldiers must know what information is considered critical information or essential elements of friendly information (EEFI). In general, critical information is considered to be "specific facts about friendly intentions, capabilities, and activities vitally needed by adversaries for them to plan and act effectively so as to guarantee failure or unacceptable

consequences for friendly mission accomplishment" (Joint Pub 1-02). EEFIs are associated with "key questions likely to be asked by adversary officials and intelligence systems about specific friendly intentions, capabilities, and activities, so they can obtain answers critical to their operational effectiveness" (Joint Pub 1-02).

HOW TO PROTECT OPSEC

Equally imperative to successful OPSEC is being aware of how critical information and EEFIs are compromised. Virtually every means of communication can be compromised. However, the easiest and most prevalent means is through open sources. Open-source materials include, but are not limited to: webpages, news channels, newspapers, technical manuals, field manuals, and government white papers.

The most common ways our enemies obtain information are through monitoring and intercepting:

- ✓ Websites,
- ✓ Cell phones,
- ✓ Pagers,
- ✓ PDAs,
- ✓ Telephones, and
- ✓ Trash.

Information leaked through these sources is easily preventable. The easiest way to counter enemy attempts is to simply not transmit pertinent information via these mediums and to be cognizant of what type of information is placed in the trash and how that trash is ultimately disposed. Additionally, it is crucial that information controls be placed on government-sponsored webpages. Information posted and linked to these sites must be reviewed to ensure that no critical information or EEFIs are included. If such information is to be posted, it must — at a minimum — be accompanied by password protection.

Protecting OPSEC is everyone's responsibility. Every Soldier possesses some knowledge that is coveted by our enemies. Soldiers must be mindful of the content of their public discussions, phone conversations, and e-mail. In order to guarantee the protection of vital information, Soldiers must assume that someone else may either be listening to their conversations, or reading their written correspondence. While at work, Soldiers must use an approved means of secure communication whenever transmitting sensitive information.



COMMON OPSEC VIOLATIONS

American Soldiers routinely discuss their deployment schedules with friends and family through unclassified mediums. Soldiers are returning from theater and posting their tactical experiences in chat forums, on message boards, and in other open-source media. The majority of these individuals are merely trying to share their hard-gained knowledge with their peers. These attempts are understandable and even encouraged; yet they must be conducted in appropriate settings. Without proper control measures, sensitive information flows directly to the enemy. The result of a well-intended, open-source dispersal of information is the potential disruption and dissolution of American military security and success.

For example, lessons learned regarding logistical planning and execution may provide a terrorist with enough knowledge to successfully infiltrate and sabotage a critical supply center or route used by coalition forces. Discussing how to conduct a patrol or raid will give the enemy a foundation from which he can build a formidable defense and countermeasures. Listing limitations and vulnerabilities of a piece of equipment is one of the most damaging OPSEC violations. While your intentions may be to suggest improvements and present a means of overcoming the limitation, in essence, you are telling the adversary what your equipment can and cannot do. If the enemy knows a piece of equipment works inconsistently in inclement weather or erratically in restrictive terrain, then he can plan accordingly and strip American forces of their technological superiority and turn it into a potential hindrance. This is of particularly grave concern when the equipment is a prototype or is undergoing research and development (R&D) for final fielding. Any information pertaining to R&D allows present and future enemies to monitor, anticipate, and exploit our technological advancements and initiatives.

With the increasing prominence of the Internet, many Soldiers are using it as a means to share information whose indiscriminate dissemination may ultimately prove detrimental to the safety and success of our troops. Before sharing information, think about who

else may have access to it. If you did not need to enter a password to gain access to a website, then neither does the enemy.

Also of growing concern are article submissions to open-source magazines and newspapers. *Infantry Magazine* routinely receives articles which contain a great deal of useful information on how to conduct patrols, avoid ambushes — in general, how to be successful on the modern battlefield. Unfortunately, some of this information is "too good" for publishing and can only appear on our secure, password-protected website. We certainly do not wish to discourage the

submission of pertinent and timely articles, nor do we wish to ebb the exchange of experiences and ideas, but we do recommend you proofread your text for potential OPSEC violations. Historical reviews of tactics and missions are almost always acceptable in their entirety, but information pertaining to current operations must be closely assessed before it can be openly distributed.

Violations in OPSEC give our adversaries one piece of the puzzle at a time. Enemy information gathering is predicated upon patience and persistence. Over time, the enemy is able to gather enough information to make an informed decision on how we conduct our missions and as to what our future intentions are.

CONCLUSION

Operations security is a practice that must be adhered to at all times. It is a policy that is as equally imperative in peace as it is in war. Despite its importance, Soldiers have become lax in their adherence to proper OPSEC procedures. Information pertaining to deployment schedules, missions, tactics, and recent lessons learned is just some of the information being shared through numerous open source mediums. The indiscriminate sharing of information will damage ongoing and future military operations; it is only a matter of when and to what degree. Soldiers must learn what information needs to be protected and how to protect it.

The war on terror is being waged incessantly at home and abroad; given the will and tenacity of the American Soldier, it will result in victory. However, we must not provide our enemy with detailed information on how we operate — to do so compromises the security and safety of our troops. What may seem to be of no intelligence value to you may prove to be the coups de grace in the planning and implementation of a future terrorist attack. Remember, OPSEC is everyone's responsibility!

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Egyptian General Abdel-Moneim Riad

The Creation of an Adaptive Military Thinker

LIEUTENANT COMMANDER YOUSSEF ABOUL-ENEIN, U.S. NAVY

Arab militaries are notoriously known for lack of individual initiative and a rigidity that tends to favor scripted methods of warfare. Some nations like Egypt are trying to get away from Soviet-style doctrine and are slowly attempting to adopt combined arms and western-style tactics. Arab general staffs, on a more philosophical level, must understand that whether adopting eastern bloc or western arms by default buy into their doctrine and military methods of fighting. When posed with this question, senior Egyptian generals point to the 1973 Yom-Kippur War as an example of using Soviet technology with Egyptian improvisation and tactics. It is hard to argue the success of the opening days of the 1973 Arab-Israeli War, but what is troubling with this answer is that they are fighting the last war and see the war from the lens of the opening days and not in its entirety. Many Arabic books on the 1973 war focus on the opening successes of Egyptian and Syrian forces but pay scarce attention to lessons learned as Israeli forces tactically achieved the entrapment of the Egyptian Third Army. When confronted, it is easy to blame superpower politics for their loss.

Mohammed Mohammed Al-Gawady, a prolific military author and historian, has conducted quality research and interviewed more than a dozen Egyptian generals, revealing the depth of their tactical and strategic thoughts. He has published several volumes on Egyptian generals who fought, planned, and discussed the 1967 Six-Day War, 1967 Reconstruction of the Egyptian Armed Forces, and 1973 Yom-Kippur War. In the late '90s and early 2000, Al-Gawady wrote the biographies and strategic thoughts of several Egyptian generals like the late Abdel-Ghanny Al-Gamassy (Operations Director, 1973 War), Madkoor Abu-al-Eez (Air Marshal after the 1967 War) and many more. Egyptians owe this writer gratitude for preserving the Arab perspective of modern warfare.

In 1984, as a young physician, Al-Gawady wrote a small, 54-page pocket book entitled *Al-Shaheed Abdel-Moneim Riad, Samaa Al-Askariyah Al-Misriyah* (The Martyr [General] Abdel-Moneim Riad, Sky [Model] of the Egyptian Army). The book is published by Dar-Al-Ateebah (Physician's House Press) in Cairo and won Al-Gawady the 1984 National Literature Prize for Biography by Arabic Language Academy Prize for Literature. For members of the U.S. armed forces who train and exercise with the Egyptians, this book offers insight into what Egyptian officers consider as the model modern military commander; his military style is similar to the American way of military leadership. General Riad, who served less than two years as Egypt's chief of staff from 1967-

1969, was a warrior-scholar, admired for his ability to formulate strategic plans and for pointing out problems to his superiors and proposing solutions. His martyrdom is not due to a callous suicidal religious misinterpretation; instead his death came while inspecting the front lines along the Suez Canal, motivating Egyptian artillery and infantrymen when an artillery duel broke out and a shell landed directly in his foxhole. The book focuses on his life from his childhood until his death and specifically the cultivation of an Egyptian military tactician. Officers and Soldiers today can take lessons from his ethic of education, caring for troops and bringing bad news to commanders.

Early Life

Abdel-Moneim Riad was born in 1919 near the village of Tanta along the Nile Delta. His father Mohammed Riad was a military officer — a lieutenant colonel who served as an instructor in Egypt's military academy. In 1928, his father received orders to El-Arish in Gaza. Abdel-Moneim spent his childhood playing in and around the sandy and craggy hills of Gaza, becoming an expert scout along Wadi Arish while playing with Bedouin children and observing military maneuvers conducted by his father. In 1930, the family moved to Alexandria where his father was promoted to colonel and given command of the 2nd Awritah (Battalion). After graduating high school in 1936, Riad wanted a career in the army, but his mother overruled him. He spent a semester at Qasr-el-Ainy Medical School, where he participated in anti-British demonstrations that led to the 1936 Anglo-Egyptian Treaty. The treaty opened Egypt's military schools to the lower classes of society, and over the years Riad would join other cadets like Anwar Sadat and Gamal Abdel Nasser, who would become Egypt's leaders, and Saad-Eddine Al-Shazly, Ismail Ali and a collection of future chiefs of staffs and war ministers.

After seeing a military recruiter once again, he implored his parents who finally relented and on October 6, 1936, he joined the military academy. The academy divided its curriculum into three stages of advancement: preparatory, middle, and senior. Riad was considered a strong personality who quickly grasped his lessons and proceeded to assist other cadets with their studies; he was not known to engage in any activity that did not advance his physical or mental abilities at the military academy. He would graduate with Anwar Sadat in 1938 as a class adjutant and at the top of his class. Colonel Futuh Bey, the academy dean, writes in his record, "He is an exemplary student in all aspects; he gives his best effort and can be relied upon."

While Sadat went on to the signal corps, and many others chose armor, infantry or flight training, Abdel-Moneim Riad went into a unit of the Egyptian armed forces that was established only a year before — anti-air artillery and air defense. He chose this arm of the Egyptian military because he was eager to be part of a newly developed discipline of arms. Second Lieutenant Riad was assigned temporarily under the tutelage of a British captain working in the operations division specializing in anti-air defense in Zamalek (A Cairo district). He used the time to familiarize himself with ballistics, physical principles of trajectory and mathematical calculations to vector ordnance in the air. He studied different types of guns and the command of gun crews. The young lieutenant used his spare time to improve his English at the British Council (an education facility) in Cairo.

World War II

At the outbreak of World War II in 1939, British military leaders in Cairo augmented forces with Egyptian regulars. At this point Riad was a first lieutenant and demonstrated great proficiency in directing Egyptian anti-air gun crews against mock targets. Many Egyptian crews including Riad's would be deployed to defend major Egyptian city centers like Alexandria and Cairo. The author highlights that Nazi planes did raid Alexandria and that Riad spent most of World War II as part of air defense units charged with protecting the crucial port city, home to British Navy ships and supply convoys that were replenishing

the British 8th Army fighting at El-Alamein. Riad's actions under fire and ability to organize defenses as well as command crews got the attention of senior British and Egyptian commanders. He spent part of the war as an anti-air and air defense instructor at the artillery school in Abbassia Barracks in Cairo, training units and traveling with them to Alexandria to command and deploy them. By 1944, he was given permanent orders as an anti-air gunnery and command instructor at the artillery school in Cairo. That same year he was selected to be among the first class of officers to attend the General Staff College in Egypt and graduated in December 1944 with a master's degree in military sciences.

The Young Officer Has Potential

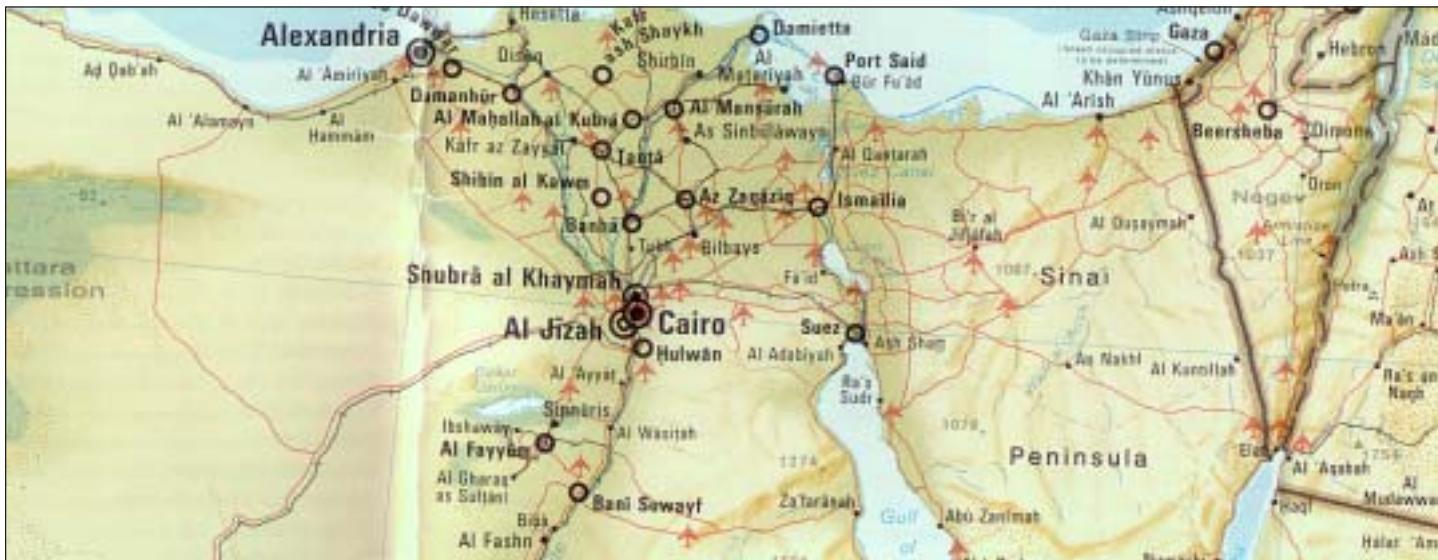
His service in World War II and excellence at military schools including as an instructor was rewarded with a chance to attend the British Artillery School in South Wales learning all elements of artillery operations and its use with other arms. He spent a little under one year in England leaving in February 1946. During the first Arab Israeli-War in 1948, Riad, a major, would be assigned as a staff officer at Cairo Headquarters. The effectiveness of his tour as a staff officer was summarized by General Omar Tantawi who commanded Egyptian artillery units in Palestine; "Despite appalling battle conditions in Palestine, inadequate weapons, poor and nonexistent logistical planning, little information on the enemy (Israeli) forces, I felt that Major Riad was the only thinking

mind in the planning and operations division in Cairo, he rescued me and never let me down throughout operations (in Palestine)." He would be decorated in February 1949 with a Gold Meritorious Medal for his staff work.

Between 1948 and the 1956 Suez War, Riad served as commandant of the anti-air defense school between 1952 and 1953. While at the anti-air school, he focused on education methods and curriculum reform. This included an emphasis on cutting edge training and encouraging students to improvise and innovate with the weapons at hand. He then assumed command of the 1st Anti-Air Brigade in Alexandria. As commander of the brigade, he noted that the pilotless planes which were imported and used to train gun crews cost the Egyptian government 50,000 Egyptian pounds. These planes were radio guided and once hit became useless. Riad, now a lieutenant colonel, brought the problem of cost and one-time use to his brother Dr. Mahmoud Riad, a Ph.D. in electronic engineering who conducted a reverse engineering of the imported plane and worked with his brother to produce a local version for a quarter of the cost. Another innovation Abdel-Moneim Riad conducted during this time was the introduction of radar and electronics to anti-air guns. He argued and saw the potential of radar combined with anti-air guns as a means of increasing accuracy.

The 1956 Suez War

When the combined invasion of Israeli,



British and French forces of Egypt began in 1956 to remove Nasser from power, Riad leapt into his command car and shuttled between Cairo's airfields in an effort to organize defenses and give orders to fire on jets attacking Egypt's Air Force assets on the ground. While missiles slammed into the airports and runways were torn by cluster bombs, Riad would see Egyptian aircrues pushing planes into hardened shelters and attempting to disperse the fighter aircraft. Riad would learn much from the Suez campaign, and it would shape his ideas when he became Chief of Staff 11 years later. While Nasser and War Minister Amer were drunk with political victory, Eisenhower ordered a withdrawal of Anglo-French Israeli forces to forestall a superpower confrontation. Riad understood the Suez War was a military failure and saw airspace in a new light.

The M.V. Frunze Academy

Starting in 1958, Colonel Riad attended a year-long course at the famous Frunze Higher Military Academy, the Soviet Union's premier school for advanced tactics and strategy. He was among the second group of Arab students to attend the academy. There he absorbed lessons directly from Soviet brigade, divisional, and army commanders who fought in World War II. The Soviets were impressed by his knowledge of Russian (Riad would learn Russian, English, French, and German) and his seat was marked by the Frunze instructors for incoming Arab officers to know that here sat the Golden General of the class of 1959. He learned Russian, German, and French by investing in private tutors as early as 1952. A main criticism of the book, it offers no information on Riad's thesis or the battles he took an interest in. Upon his return, he was promoted to flag rank.

Riad then worked at the Egyptian General Staff headquarters as an advisor on air defense. Despite his rank, he attended the latest courses offered by the Egyptian artillery school in missile defense, advanced rocketry, and several other topics to keep current on the latest advances in air defense systems.

General Riad Confronts the Egyptian Military Culture

Riad observed an Egyptian army in disarray with nepotism and military leaders attempting to profit from their office without regard to the military readiness of the forces under their command. The Egyptian Army began to operate as a business — focusing on money making and losing sight of its real mission. He began criticizing what he saw and warned of a massive defeat of Egyptian forces; he also threatened to resign his commission. Recognizing he was the only expert in anti-air defense, Egyptian leaders could not easily accept his resignation, but they could not allow him to criticize the war minister and his cronies. A compromise was reached and he was dispatched to Jordan as part of the Unified Arab Command. This decision saved him from the taint of the 1967 Six-Day War and propelled him to become Armed Forces Chief of Staff, since Nasser was looking for a new breed of Egyptian senior officer to reconstruct his tattered forces.

Riad Gains Unified Command Experience

No record exists of how Riad felt when he was given orders to Jordan, but certainly being selected as Armed Forces Chief of Staff was far from his mind. He probably felt this was an exile for



Egyptian State Information Service, Ministry of Information Web site

Members of the Egyptian Infantry hoist the Egyptian Flag on top of the Israeli Bar Lev Line during the 1973 Yom-Kippur War.

speaking out against military decay and corruption. His new post at the Unified Arab Command allowed him to visit several Arab nations and their leaders and military officers, learning of their plans and attempting to fashion a theory of an Arab-wide air defense network that would guarantee freedom of movement within Arab nations before laying out offensive plans against Israel.

Between March 1965 and July 1966 he attended the Egyptian Higher Military College (known now as the Nasser Higher Military College) where he once again distinguished himself academically before returning to Jordan as a lieutenant general. Riad became convinced in the end of May that Israel would attack Egypt and he requested the Jordanians to relieve him so he could go to Egypt and organize air defenses. His request was refused, but one hour before Israeli jets decimated the Egyptian air force, Jordanian observers reported a mass formation of Israeli Air Force jets headed towards Egypt. General Riad was informed and he sent a signal to Egypt, which through a series of errors and changing of codes never reached the Egyptian General Staff. (The Jordanians were not informed of the new codes.)

1967 War

In late May 1967, General Riad met with King Hussein, who reviewed the troops under his command. The book contains no reference as to the formations Riad commanded or the sector within the Jordanian front he fought in, but it does mention the attachment Jordanian forces felt for Riad, who was a dynamic organizer under fire. On June 11th, Nasser had gone through the process of accepting responsibility for the crushing defeat, and the process of removing War Minister General Amer began and ended with his suicide. While Riad was in Jordan, Nasser named him Egypt's new Armed Forces Chief of Staff and he would serve alongside the new War Minister General Mohammed Fawzy.

Riad spent the first days assessing the Suez Canal front to discover the reasons for the route of the Egyptian Army, which were:

- Egypt lacked an effective Command and Control System;
 - Officers who fled and did not command troops; and
 - There were semi-literate soldiers fighting a 20th century war.
- General Fawzy, General Ismail Ali (commanded the Suez Front

from 1967-1972), and General Riad took a hard look at the Egyptian Armed Forces and began to make reconstruction plans on several levels. This early book by Al-Gawady differs from his 1999-2002 books that explore in depth the discussions between generals, and the Egyptian president.

Some of Riad's actions as chief of staff included:

□ Restructuring of recruitment and the draft with an emphasis on college and high school educated soldiers capable of making the most of complex weapons systems.

□ Equipping the Egyptian Armed Forces with the latest technology (every weapons proposal was studied carefully by General Riad who considered Egypt's advantages in infantry and assuring airspace protection.)

□ The Battle of Ras-Al-Aish occurred in late 1967 and involved an Israeli armored attempt to expand into Port Fouad. Egyptian infantry and Special Forces (Saaqah) were able to repel the advance, with Riad following developments and putting pressure on generals to extend them supplies and armaments. This battle demonstrated to Riad the capability of Egyptian infantry and the need to capitalize on this strength by equipping them with anti-tank weaponry and leveling the Israeli reliance on rapidly moving armor.

□ Sinking of INS *Eilat*, on October 21, 1967; the Israeli destroyer *Eilat* was met by two Egyptian fast attack missile boats. The Egyptian commanding officer engaged the destroyer with two Soviet Styx-missiles and sunk the destroyer. It was the first time in naval history a warship was sunk by a missile. It was Riad's 48th birthday and he followed events from the Cairo General Staff Headquarters. The operation lasted more than two minutes from the time of engagement to the sinking of the *Eilat*.

□ In December 1968, Israeli reconnaissance jets flew over the Gulf of Suez. Riad decided to test the SAM-missile technology provided by the Soviets. According to the book, three Israeli planes were downed, and this experiment led to the massive SAM wall used to negate Israel's air advantage in the opening days of the 1973 war.

□ Riad also authorized insertion missions in the Sinai to reconnoiter Israeli positions and conduct sabotage. This was in addition to undertaking mass artillery harassment making the Israeli side of the Suez as uncomfortable as possible. The Egyptians were experimenting with methods that were employed in mass in the 1973 war.

Strategic Thoughts on Air Defense

In Baghdad, Riad attended the conference of Arab Armed Forces Chief of Staffs and by then he had argued that investments in infantry, tanks, and an air force is useless if Arab forces could not guarantee freedom of movement within Arab borders. He urged for an integrated Arab air defense system that tied Egypt, Syria, Jordan, Iraq and Lebanon into several strategic command and control centers. He also envisioned the dispersal of Arab jet fighters throughout several Arab states with a central command and control which could concentrate jet fighters and bombers to where they are needed or to conduct a concentrated offensive against Israeli targets. This would make the mission of Israel knocking out Arab air forces much more difficult with this new Arab integrated air

defense system and combined jet fighter/bomber vectoring method.

Upon his return from Baghdad, Riad went to inspect the front lines of the Suez front and motivate Egyptian troops by sharing with them his recent trip to Iraq. An artillery duel broke out and he took cover in a foxhole that sustained artillery hits; he died in the field.

Strategic Legacy of General Riad

General Riad's ideas of breaking down Arab goals into two phases was unveiled by Nasser in an Arab League Summit. The first phase was securing military freedom of action within Arab states, particularly its air defense. The second and final objective was to collectively liberate Palestine and lands taken by the Israelis in 1967.

In 1953, Colonel Riad challenged a Swiss firm building an anti-air system for Egypt, arguing that technology and jet fighters have changed the way anti-air guns can be employed and especially the rate of fire of anti-air projectiles. He brought together Swiss and Egyptian engineers who modified the system to Egyptian specifications. This is a lesson to military leaders of the need to push contractors to provide capable weapons systems. The book claims that Riad's modifications were employed in NATO countries as well.

Riad also wanted reform in education; it was not enough for an instructor to be a subject matter expert. He invested in a two month course for military instructors to attend at Egypt's Education Ministry. He wanted people who had the skills to impart knowledge to students. Riad was the first general to concern himself with the way Egyptian officers and soldiers learned from western and soviet manuals. He insisted that students not only study the Arabic translations but also make an effort to read the tactical works and operational manuals in the original language it was published.

General Riad also paid attention to the individual soldier. During a lecture to military doctors, he said a doctor's place was beside the fighting infantryman, ensuring he was in top physical condition and treating his battle wounds. Despite the presence of military technology, a military cook (field morale) can make the difference as to defeat or victory. Riad also believed that military commanders are made not born through education, opportunity, trust and experience. He urged Egyptian generals to give their juniors chances to excel and learn from their mistakes. He also believed in soliciting advice from second and third echelons before making a military decision or drafting war plans.

General Riad also firmly believed in the separation of military and civil affairs. He criticized the practice of appointing generals to diplomatic posts and governorships of cities and provinces. He felt this was inappropriate military interference with politics and detracted from the main mission of military readiness. General Riad also had some unconventional ideas; he believed that marriage and a professional military career was incompatible and never married.

Lieutenant Commander Youssef Aboul-Enein is currently serving as the country director for North Africa and Egyptian Affairs at the Office of the Secretary of Defense. He is a frequent contributor of essays and reviews on Middle East issues for Department of Defense publications. Translations of Arabic materials cited represent Aboul-Enein's understanding of the material and any errors are unintended. Special thanks goes to the Chicago Public Library for making the Arabic work available to the author.

Battlefield Medicine: A NEW PERSPECTIVE

LIEUTENANT COLONEL
DONALD L. PARSONS,
U.S. ARMY RETIRED

The United States military is the foremost fighting force in the world today. We have the most modern weapons systems and the most sophisticated delivery techniques known to man. However, Soldiers continue to die on today's battlefield the same way they died during the Civil War. While we have made tremendous advances in modern medicine, we have not figured out how to keep people from being killed in combat.

The Army Medical Department (AMEDD) spends a great deal of money improving our medical capabilities in training and equipment for Soldier care at echelons II and above, (new digital X-ray, surgeons farther forward than ever before), but little has been done to improve the treatment and outcomes at the point of wounding. We know that 90 percent of all combat deaths occur before a casualty reaches a definitive medical facility, and if the Soldier survives long enough to reach definitive care his or her chances of survival are excellent.

There needs to be a shift in our thinking; the days of not providing self-aid and lying there and yelling "Medic" are over. We must have the ability to assess our own wounds, provide self or buddy aid if needed, and continue the mission if able. The bottom line is the Army needs Soldiers who are equipped and trained at the point of wounding to decrease preventable battlefield death. This strategy will increase the unit's combat effectiveness and its survivability.

If we could make some minor changes in our common Soldier medical skills training, we could improve the survival rate of 15-20 percent of all battlefield deaths.



Sergeant Vernon Freeman

A Soldier with the 2nd Battalion, 6th Infantry Regiment renders aid to a team member with a simulated gunshot wound during urban combat training in Baghdad, Iraq.

"It is difficult to emphasize sufficiently the importance of initial treatment on the battlefield. What the wounded Soldier does on his own behalf, or what his infantry colleagues do for him, and what the company aidman does for a traumatic amputation or a gaping wound of the chest, in the thick of battle, in the dust and heat or in blowing snow — on these simple procedures depend life and death... A slight improvement in the skill and judgment of the company aidman will save... more human lives than will the attainment of 100-percent perfection in the surgical hospital."

— Lieutenant Colonel (Dr.)
Douglas Lindsey,
Presentation to the Army Medical
Graduate School 1951

That is the objective of this article.

Statistical analysis of battlefield deaths show that Soldiers die from the following wounds:

- Penetrating head trauma — 31%
- Uncorrectable torso trauma — 25%
- Potentially correctable torso trauma — 10%
- Exsanguination (blood loss) from

- extremity wounds — 9%
- Mutilating blast trauma — 7%
- Tension pneumothorax (collapsed lung under pressure) — 5%
- Airway problems — 1%

Many of the above wounds are not survivable even with a fully staffed hospital present at the site of injury. However, the three leading causes of preventable battlefield death are: extremity hemorrhage, tension pneumothorax, and airway problems. We currently train our medics as well as our combat lifesavers (CLS) to treat these conditions, but it is conceivable that they will not be available when a Soldier is wounded. If a Soldier has an airway problem or major hemorrhage, he has only a few minutes to correct that problem before he is beyond help. We should train and equip every Soldier to respond to these injuries as well.

The 75th Ranger Regiment has done just that with all of their Soldiers. The Ranger First Responder Course trains every Ranger to provide basic lifesaving care in specific tasks. In addition, they have provided additional medical training (EMT) for some squad members to help improve Soldier survivability. They have placed medical equipment throughout the squad

and trained their warfighters to use it effectively. Each squad carries a SKED® or Talon® litter for evacuation, and every Soldier carries a hemorrhage control kit. Certain individuals in the squad also carry additional IV fluids. This allows each squad to be self-sustaining and supplements the supplies carried by the combat medic. It also allows Soldiers to begin treating life-threatening conditions until more experienced care arrives.

The critical tasks involved in the Army First Responder Course would consist of:

- ☛ Conducting a rapid patient survey (ABCs — airway, breathing, circulation);
- ☛ Inserting a nasopharyngeal airway and placing the casualty in the recovery position;
- ☛ Treating life-threatening chest injuries with an occlusive dressing and performing a needle chest decompression if necessary; and
- ☛ Controlling external bleeding using an emergency trauma dressing and/or a tourniquet.

Training each Soldier to perform these four tasks can help reduce the killed in action (KIA) rates and reduce the battlefield mortality by 15-20 percent. These simple tasks can be taught during basic training and reinforced annually by common task training (CTT). In addition, refresher training can be conducted prior to deployment. Organic medical assets can conduct training easily in the unit area. Leaders must take the initiative to mandate this training for all of their Soldiers whether they are combat arms or support.

When we send Soldiers into combat, there is always a risk of injury. We can mitigate this risk by ensuring proper medical training for our Soldiers. They must be proficient in lifesaving skills as well as combat tasks. Casualty play and the use of lifesaving medical skills need to be incorporated into all training exercises. If leaders are not trained to expect casualties during a mission, how will they learn to handle

"If during the next war you could do only two things, namely (1) put a tourniquet on, and (2) relieve a tension pneumothorax, then you can probably avoid between 70 and 90 percent of all the preventable deaths on the battlefield."

— Colonel (Dr.) Ron Bellamy,
Army Trauma surgeon who has completed
extensive research on combat casualties

these victims when they arise? Casualty scenarios in combat usually entail both a medical problem and a tactical problem. We want the best possible outcome for the Soldier and the mission.

Providing training for organic medical assets is also an area that needs emphasis. New philosophies on how to care for casualties in combat have been developed and taught in the Special Operations community, and have effectively saved lives in both Iraq and Afghanistan. Tactical combat casualty care is appropriate for all units

engaged with the enemy and has been approved by the American College of Surgeons and the National Association of Emergency Medical Technicians. Unlike civilian training, which deals with noncombat situations, this course offers realistic training in tactical medicine. The most important aspect of caring for trauma victims on the battlefield is well thought out planning for that environment and appropriate training of combat medical personnel. Good medicine can sometimes be bad tactics. Bad tactics can get everyone killed and/or cause the mission to fail.

Commanders need to put this medical training on the training schedule, get the medics out of the motor pool and allow their organic medical officers to upgrade their skills. Evaluate their competency on the same schedule as you do basic rifle marksmanship.

In addition, a new first aid kit for individual Soldiers will need to be developed to accommodate additional supplies needed to save lives. This kit (Figure 1) will need to consist of a tourniquet, a nasal airway, a 10-14-gauge 3-inch needle and catheter unit, and an emergency trauma dressing (not the old battle dressing). These supplies will allow every Soldier to be equipped to treat the three most common causes of preventable death on the battlefield.

These changes can only come about with the interest and enthusiasm of the Army's leadership. Battalion, brigade, and division commanders need to implement this training in all of their units. Empower each individual Soldier to save his or his buddy's life by initiating lifesaving skills on today's battlefield. Incorporate "Tactical Combat Casualty Care" as the standard for providing care in combat. Ensure your medics are as well-trained and proficient as your warfighters. These are simple principles that can be incorporated into our daily business that will help to mitigate the risks associated with sending Soldiers into harm's way.

Retired Lieutenant Colonel Donald L. Parsons served 30 years in the Army first as a Special Forces medic and then as a physician's assistant. He retired as the program director for the Army's Physician Assistant program. Parsons currently serves in the Army Medical Department's Department of Combat Medic Training.



Figure 1 — Individual First Aid Kit

Preparing a Mechanized Infantry Task Force for Combat

— An NCO's PERSPECTIVE —

FIRST SERGEANT DEREK MCCREA

In October 2002, Task Force 3-15 Infantry of the 3rd Infantry Division (Mechanized) deployed to Kuwait as part of Operation Intrinsic Action. We started to train, realizing the longer we were deployed to Kuwait the more imminent possible war became. On March 20, 2003, we crossed the border into Iraq as part of Operation Iraqi Freedom. The training the unit conducted while preparing for war included live fires, beginning with every Soldier qualifying with his personal weapon, and culminating with task force and brigade live-fire exercises. TF 3-15's intense infantry training program proved to be very valuable when combat operations began. The rehearsals and pre-combat inspections we conducted prior to combat also played a key role in the unit's overall success.

Infantry Training

Upon arrival at Camp New York in Kuwait, units were hungry to begin training

in preparation for war. While at the camp, team and squad leaders trained their Soldiers on entering and clearing trenches and knocking out bunkers. Team leaders also conducted opportunity training on all of their Soldiers' assigned equipment whenever time was available.

The first training away from Camp New York was at the platoon and company level and involved maneuvering mounted and dismounted forces in a desert environment. The training was designed to familiarize teams, squads, platoons, and companies on fire and maneuver techniques in the desert. Units concentrated on movement techniques and formations using inner visibility lines (IV), wadis, rock quarries, and open desert.

Initially, units encountered difficulties with dispersion and the use of terrain

for maximum cover and concealment.

The countless hours of maneuver training greatly improved the unit's movement and command and control. Companies conducted repetitive training on movement to contact, hasty attacks, and deliberate attacks until units displayed proficiency in the tasks.

It is very difficult to remain undetected in open desert. Man-made rock quarries provided excellent cover and concealment from enemy forces during the training. We realized the importance of placing infantrymen close to the objective in a desert environment. Platoons that dismounted their infantry squads near the objective had more success than the ones that dismounted farther away. These Soldiers would be exhausted by the time they reached the objective. On the other hand, the Soldiers who were dropped close to the objective were more aggressive and



Soldiers from Task Force 3-15 secure a street in Amiriyah, Iraq, during an early morning raid.
Photo by Specialist Derek Gaines



Courtesy photo

Soldiers from Task Force 3-15 practice entering and clearing rooms at a MOUT site prior to the start of Operation Iraqi Freedom.

successful in their mission. The M2A2 Bradley fighting vehicles (BFVs) provided massive suppressive fires on the objectives. This allowed the dismounts to be taken within 50 to 100 meters of trenches and bunkers with minimum enemy fire.

After conducting company training, we executed a task force live fire followed by a brigade combat team live-fire exercise. Each live fire lasted 10 days and deployed dismounted infantry on every objective to clear trenches and bunkers while the M2A2 BFVs provided overwatch and suppressive fires with 25mm cannons and M240C machine guns. While still moving, the Bradleys would fire suppressive fires of high explosive 25mm and 7.62 ammunition into the trenches and bunkers. As the vehicles began to slow down (but not stop), the ramps came down and the dismounts were in position before the ramp hit the ground. The dismounts would clear the trenches as the Bradleys shifted fires onto the threat beyond the objective. It was an awesome display of synchronized firepower, especially at night.

Command Sergeant Major Robert Gallagher and Captain Fred Cannan planned and resourced the construction of a one-of-a-kind urban operations facility, which was built by Military Professional Resources Incorporated (MPRI). More than 100 live fires were conducted there at team, squad, platoon, and company levels. The unit conducted round-robin training for the entire month of January 2002. Training sites for the round-robin training consisted of the urban operations site, a trench, and a demolitions range. Companies also rotated through an abandoned strip mine complex, which comprised more than 20 buildings for the unit to clear. The unit conducted dry, blank, and live-fire exercises at the strip mine complex with the dismounted infantry and M2A2s.

Soldiers trained at the site on reflexive fire training, obstacle

breeching, and room and building clearing. The facility was uniquely designed and comprised seven trailers with a fan range of 270 degrees. We had never conducted training at a range of this magnitude on Fort Stewart. Soldiers then began training on individual skills, which led to team, squad, platoon, and company dry and live-fire missions in daylight and limited visibility. Squads were not allowed to conduct live fires until the leaders and Soldiers demonstrated proficiency in the principles and fundamentals of close quarters combat (CQC). At the urban operations facility, BFVs and M1A1 Abrams tanks provided supporting fire while the dismounted infantry Soldiers assaulted and cleared the objective. Leaders from the team leader to the command sergeant major gave after action reviews (AARs) on their element's performance after each mission. During the training, the task force also established a marking standing operating procedure (SOP) that was eventually adopted by the brigade and the division. The SOP established a strap called the "Wolf Tail," a field expedient item constructed for marking trenches, rooms, and bunkers. The "Wolf Tail" has infrared (IR), thermal, and daylight recognition capability. A weight attached to a cord and strap made of VS-17 panel or engineer tape would be draped over areas to show supporting fires' locations and status of rooms and cleared areas.

The trench built by MPRI next to the shoot house was 250-meters long and gave units the opportunity to use AT4s, grenades, and claymores. At the trench, squads trained on knocking out bunkers, and the platoons trained on entering and clearing a trench. The unit used SOPs learned from previous training at trenches on Camp New York and Camp New Jersey. Bicycle flags marked the status of Soldiers in the trench and were observed by the M2A2 BFVs in a support by fire position. One-foot-long VS-17 panels

were used to signal the support by fire and to shift fires off of the objective. Squads also used bean bags made of VS-17 panels to mark points of entry into trenches. During limited visibility, the dismounts taped IR chemlights and a strip of thermal tape to the bicycle flags, and VS-17 panels to signal location, shift fire, and cease-fire. Both thermal tape and IR chemlights were used to allow the BFVs to observe the thermal tape with their integrated sight unit (ISU). Enemy targets were placed in and beyond the trench so the elements had to react to a counterattack after consolidation and reorganization. During the counterattack, Soldiers engaged targets with claymore mines, AT4s, and small arms.

Night Vision Devices

Prior to deploying to Kuwait, the unit received new night vision equipment consisting of the PEQ2, M68, and AN/PAQ-4. However, we did not receive sufficient technical manuals (TM) that should have come with the equipment. For example, in one company I could not find a single TM for the PEQ-2, AN/PAQ-4, or the M68. It would have been very beneficial to have one TM on each piece of equipment for Soldiers to conduct proper preventative maintenance checks and services (PMCS) on their equipment. Another valuable tool that we did not use enough is the Advanced Infantry Marksmanship Strategies and Standards (AIMSS) compact disc for training Soldiers on the Army's inventory of optics. We did not have access to enough computers in Kuwait to conduct the required training with the AIMMS. A train-the-trainer program for AIMMS would greatly benefit units' proficiency on night vision equipment, and training should be conducted at home station prior to deployments and throughout the training cycle. The compact disc is available from the U.S. Army Infantry School (USAIS) at Fort Benning, Georgia.

The United States infantry Soldier has the most technologically advanced equipment on the battlefield; however, in Kuwait and Iraq, not all of our Soldiers had the most up-to-date night vision devices. The Soldiers in the field trains and combat trains were issued the AN/PVS-7A after consolidating all of the 7Ds for the line companies. One major advantage of the AN/PVS-7D over the AN/PVS-7A is the

The training the task force conducted proved extremely valuable when it was tasked to be the first infantry unit to enter the heart of Baghdad.

7D has the detachable head mount for the Kevlar. The 7A has a very uncomfortable mounting strap, which lies directly on the Soldier's head and can create severe pain after numerous hours of movement in combat. The 7A's mount is also not nearly as stabilized as the mount on the 7D. For crew members of the M2A2 BFV, we modified the 7D mount to fit on the Soldiers Kevlar when dismounted and on the CVC (combat vehicle crewman) helmet when mounted. Not all infantry Soldiers assigned to dismount squads had AN/PVS-7D night vision devices and PEQ2 lasers for firing at targets at night. At a minimum, all three dismount squads in a platoon should be fully equipped with the most up-to-date equipment — AN/PVS-7Ds or AN/PVS-14s, PEQ2s for night, and M68s for day firing. The unit's overall firepower, effectiveness, and confidence would be greatly enhanced if every Soldier had both night vision devices and lasers.

Communications

The modified table of organizational equipment (MTOE) for the mechanized infantry platoon allows seven SINCGARS radios, but that number should be raised to 10 in order to be combat effective on today's battlefield. The Icom radios that are issued to platoons are good for communications between squad leaders and team leaders, but they are not the best equipment for communication between the platoon leader and his squad leaders. The platoon leader is responsible for maintaining command and control of four BFVs that all monitor the SINCGARS in a secure mode with their CVCs. He also must monitor the company net. For the platoon leader to be able to command and control the dismount elements, it is imperative that the three dismount squads have one SINCGARS per squad. When the dismount element performs missions, they do not have ample communication with the M2A2 BFVs. Command and control is very difficult to maintain when the platoon leader

dismounts with three nine-man squads of infantry Soldiers. The missions performed by the dismounted infantry sometimes require separation, making communication difficult. Out of the four BFVs, the platoon leader and platoon sergeant get two radios each and their wingmen get one radio each. Presently, there is one authorized radio for the platoon leader to take with him when he dismounts the vehicle. It is very rare that all radios are 100-percent operable and it creates an even worse problem if one radio goes down. The platoon leader then dismounts without any way to maintain communications with his mounted element. There may also be occasions where the bravo section of a M2A2 BFV is separated from the platoon leader's section. If this section has to dismount, under the present MTOE authorization those Soldiers will have no communication.

On April 7, 2003, at Objective Curly in Baghdad, the infantry dismounted from the M2A2 BFVs and received a mission to clear buildings in an area receiving massive enemy direct and indirect fires from 360 degrees. The platoon leader did not have radio communications with his three dismount squad elements and had to rely upon hand and arm signals as the primary means of communication. The squads entered and cleared trenches, rooms and buildings without radio communications. Communication between the platoon leader, all three dismount squads and the mounted element is crucial in the success of the mission.

Javelin vs. Dragon

The task force fielded and trained Soldiers on the Javelin while at Camp New York in Kuwait. The Javelin added range and lethality to the infantry platoon's arsenal of weapons to destroy armored vehicles, buildings, bunkers, mortar positions, and fortified positions. Unlike the Dragon, with a range of only 1,000 meters, the Javelin has a maximum effective range beyond 2,000 meters. The Dragon gunner has to track the target until the missile impacts on the target. On the other hand, the Javelin is a fire-and-forget missile that uses a forward looking imaging infrared system to lock onto a target. With the Javelin, the gunner can fire and seek cover instead of remaining exposed for the full-firing time like the Dragon. The Javelin

creates a much lighter Soldier load by providing an integrated day/night sights where the Dragon has two separate sights. The Javelin and the TOW missile on the M2A2 benefit the mechanized infantry. The weapon system more than doubles the range for defensive engagements compared to the Dragon. The Javelin can be tied into the decisive point in the engagement area at a range comparable to the 25mm and TOW on the M2A2 BFV. In TF 3-15, we had M1A1 tanks to also complement the firing of the M2A2 BFV and the Javelin. The Javelin should continue to be fielded to all ground forces to best complement the firepower Soldiers have on the ground. During Operation Iraqi Freedom, we placed the tanks on the most likely avenue of approach for an armored threat. During the fast-paced offensive operations in Iraq, Task Force 3-15 Infantry fired no Javelins. The M2A2 BFVs and M1A1 tanks destroyed the threat prior to the dismounted infantry being dismounted. The majority of direct fire engagements for Task Force 3-15 Infantry in Iraq were close range targets in urban terrain at less than 500 meters.

Nuclear, Biological and Chemical (NBC) Training

The U.S. Army has trained for years and become very proficient with the mission oriented protective posture (MOPP) suits. Upon arrival at Kuwait, we were informed we would be issued a new suit called the JSLIST (Joint Service Lightweight Integrated Suit Technology). The suit was not the same as the MOPP suit Soldiers had become accustomed to wearing, and we conducted operational and thorough decontamination training for a task force with more than 750 personnel. It is a skill level one task for Soldiers to put on the MOPP suit within eight minutes, but the JSLIST is a completely different suit that requires training for Soldiers to become proficient.

In January 2003, we began to receive JSLIST suits at the Soldier level. It is vital that Soldiers and leaders receive and train on that equipment prior to deploying to a hostile environment.

During NBC training in Kuwait, we used a great deal of water for the decontamination equipment at the training decontamination sites. The threat of NBC is real, and we must evaluate our resources and equipment for success in future combat missions.

We conducted SCUD drills to determine the proficiency of the task force if attacked by a possible chemical attack. After identifying the faults during the SCUD drills, we developed SOPs on how we would conduct unmasking for the task force. A system was developed where each company or separate element would have a different challenge, and the task force tactical operations center (TOC) would authenticate. The challenge and password remained the same for each company. This became the new SOP for future operations.

We also determined during the SCUD drills that the Soldiers needed to be able to perform their duties while wearing their protective masks. Soldiers conducted crew drills, battle drills, and skill-level one NBC tasks with their masks on. Task force Soldiers began wearing their protective masks for two

hours twice a week. Two hours were added onto that time each week. By the time we were at the third week, Soldiers could perform their combat-related duties with their masks on for six hours.

We conducted in-depth pre-combat inspections to ensure that all Soldiers had all of their equipment. The smallest thing, such as a serviceable canteen top which is used to drink water in a contaminated environment, is vital to a Soldier's survival in such an environment. Even our 2-quart canteens attached to the exterior of our rucksacks were kept full at all times. We became very conscious of the possibility of an attack. We drank the water from our camelbacks and saved the water in the canteens for possible NBC attacks.

We must pay attention to detail prior to deploying to combat, to ensure we have all the serviceable equipment to survive and win in a contaminated environment. We learned a valuable lesson that NBC training cannot be taken lightly. This training proved valuable when Kuwait was struck by a SCUD missile on March 20, the day we crossed the border into Iraq. Immediately upon hearing there was a possible incoming missile, Soldiers donned their protective masks and JSLISTS. The battalion chemical officer utilized the Joint Warning and Reporting Network (JWARN) to determine that the task force would not be in any danger from the SCUD attack. On another occasion our unit was preparing a hasty defense for a possible attack from an enemy armor brigade. All of the occupants of my vehicle started double checking to ensure they had a full canteen of water and that their 2-quart canteens were full. The serious NBC threat and capabilities of the enemy to use it were motivating factors in the continuous pre-combat inspections leaders conducted on their Soldier's NBC equipment. NBC training must be continuous throughout the training cycle, and all units should incorporate NBC into all of their individual and collective training.

Fratricide Avoidance

Task Force 3-15 Infantry destroyed more than a battalion of T72 tanks, a battalion of BMPs and killed more than 2,000 enemy troops during Operation Iraqi Freedom. The task force successfully traveled more than 700 kilometers in severely restrictive terrain for 21 days of intense combat maneuvers. Task Force 3-15 Infantry had no cases of fratricide for the duration of the war. This can be directly attributed to the fratricide avoidance training the task force



Sergeant Craig Zentkovich

A column of vehicles from B Company, 3rd Battalion, 15th Infantry Regiment, heads north in Iraq during Operation Iraqi Freedom March 31, 2003.

received while deployed to Kuwait.

All Soldiers in the task force were required to train on the recognition of combat vehicles (ROC-V) using a program on compact disk prior to February 15, 2003. This program is a superb product that all combat Soldiers should use to train and maintain their proficiency on vehicle recognition. The program depicts all known enemy and friendly vehicles at different ranges from the flank and front.

Upon arrival in Kuwait, we drew the fleet of vehicles that have been in Kuwait since Desert Storm. After conducting inspections on the vehicles, we realized 90

percent of the vehicles were missing their combat identification panels (CIPs). The CIP panels were not part of the issue from the Army Preposition Stock Fleet (APSF). The deficiencies were tracked and reported by company executive officers daily to focus efforts to get all vehicles to a 100-percent operational readiness rate. Vehicles should be maintained with all of the required equipment they will go to war with to prevent units from having the difficulties that we had in the rush to get the equipment for our vehicles. Some wheeled vehicles had to use Target Identification Panels (TIPs) made of cloth material that were strapped to the sides and front of the vehicles. The TIPs and CIPs both give off reverse polarity heat that can be detected in thermal sites and play a key role in preventing fratricide.

Phoenix lights greatly enhanced the ability for maneuver commanders to command and control and prevented possible fratricide from friendly fire. We programmed the Phoenix lights to a unique setting for each maneuver company. This enabled commanders to identify the location of a unit and flank units. They also prevented gunners and commanders from firing upon friendly forces during the hours of limited visibility. The Phoenix lights are powered by 9-volt batteries and are relatively cheap for the service that they provide. The 9-volt batteries must be changed out every 48 hours to ensure that the lights are functioning at their fullest capacity. The lights come with instructions for programming the blinking signals produced by them, which enables the user to program unique codes for their element. This proved very helpful to commanders in identifying all of the maneuver forces on the battlefield throughout operations in Iraq.

Bravo Company, 3-15 Infantry established an SOP for marking Soldiers' Kevlars with thermal and infrared tape. The tape identified Soldiers as friendly on the ground for air and other



Courtesy photo

Two Soldiers from Task Force 3-15 of the 3rd Infantry Division (Mechanized) scan the area during training prior to the start of Operation Iraqi Freedom.

forces in the immediate area. This also assisted dismounted forces in identifying their troops on the ground and helped the M2A2 BFV crews separate friendly from enemy troops in combat.

The Force XXI Battle Command Brigade and Battalion (FBCB2) proved very effective in fratricide avoidance. It provided accurate information on unit locations and served as a means of making informed decisions based on the array of friendly forces on the battlefield. The FBCB2 even displayed other task forces' locations, which increased our overall situational awareness of the units to our flanks.

The system also has the ability to electronically send messages and graphics immediately from senior to subordinate leaders on the battlefield. This feature allows commanders to send their orders and graphics at times when they cannot come together for an oral order. The FBCB2 allowed the task force to forward graphics, messages and fragmentary orders (FRAGOs) across distances that FM could not cover. On numerous occasions in Iraq, platoons were spread out over large areas covering terrain that the company commander could only see on a map. With the FBCB2, company commanders had the ability to visualize their platoons' locations, the terrain and the enemy. This created an ideal situation for commanders to make the best decisions.

Rehearsals

After issuing the operations order to the company commanders in February 2003, the staff realized they could not do the preferred doctrinal full-force rehearsal because incoming units had taken up much of the available training areas in Kuwait. The staff NCOs supervised construction of a 1:6,000 relief terrain model to rehearse for the mission. This terrain model was one-of-a-kind in the way that it was constructed. It was like a 20x40-foot puzzle with plywood on the bottom and 1:6,000-scale photographic imagery on top laminated with graphics drawn to scale over that. Upon completion, the terrain model could be stored in the back of a 2 1/2-ton truck and taken out and laid upon the ground for rehearsals.

The engineer company attached to our task force produced the imagery. The imagery assisted leaders in analyzing the terrain utilizing OCOKA (obstacles, cover and concealment, observation and fields of fire, key terrain, and avenues of approach). The terrain model so accurately depicted the terrain that it enabled the task force commander, Air Force, armor, mechanized infantry, attack



Specialist Derek Gaines

Soldiers from B Company, 3-15 Infantry patrol a neighborhood in Falluja, Iraq, during Operation Iraqi Freedom.

helicopters, combat service support, and fire support to identify and improve on avenues of approach and possible enemy positions. Leaders could identify and select the best routes by the detail provided of the networks of canals, bridges, farmland, and roads. Imagery is definitely the way to plan, rehearse and navigate in urban areas. The imagery also enabled the S2 (intelligence officer) to accurately portray possible enemy composition, disposition, and possible courses of action during his briefings to the company commanders. Imagery also accurately displayed revetments — commonly used as fighting positions — along our proposed attack route.

The task force's ability to synchronize all the battlefield operating systems was greatly increased by the imagery used in the numerous rehearsals we conducted. This rehearsal site became the primary site for more than 30 days of rehearsals that began at 1300 and sometimes went into the night. The rehearsals started with the staff and company commanders on the model, and after days of hard work, platoons and even squads used it. This style of rehearsal was generated to make up for the best type of rehearsal, a full-force rehearsal. The rehearsals synchronized five companies in traveling more than 700 kilometers over restrictive terrain

during the day and limited visibility operations, with limited confusion and a keen sense of situational awareness by all Soldiers and leaders in the unit. The only drawback to the imagery was the production time it took the engineers to provide the products to our task force. To best solve this units could be issued plotters at the task force and brigade combat team level to print out their own imagery for rapid reproduction. The FBCB2 could be used as a means to request and receive the imagery digitally in a combat environment where planning and rapid reproduction is vital.

Pre-Combat Inspections

Task Force 3-15 Infantry conducted pre-combat inspections of all assigned equipment and vehicles in the unit prior to the start of OIF. During the pre-combat inspections at Camp New York, great emphasis was placed on breach and demo kits, trench kits, enemy prisoner of war (EPW) kits as well as aid and litter kits. Breach kits were inspected for completeness and serviceability of grappling hooks, barbed wire gloves, and obstacle-marking material consisting of VS 17 panels and engineer tape. Demo kits were not prepared until we arrived in the attack position just prior to crossing the border into Iraq. Vehicle load plans established where demolition and claymore mines would be stored. The EPW kits contained flex cuffs made out of engineer tape, color-coded bands for marking enemy prisoners and zip strips. Every single vehicle at the line company level was stocked with one complete combat lifesaver (CLS) bag, with an extra bag for each dismount squad and an extra ammunition can filled with emergency first aid replacements. In addition to all of the CLS bags and first aid cans, each vehicle carried a personal first aid kit. All infantry Soldiers deployed with two field dressings, one cravat, and a complete IV stored in pouches on their body armor.

There was not enough room on the inside of the Bradley to store all of the Soldiers' equipment, so a standardized load plan for the M2A2 Bradley fighting vehicle was designed and adopted as the standard for the 3rd Infantry Division. The task force also added equipment to the M2A2 BFV to make it more combat ready. Racks were designed by C Company, 3-15 Infantry and were used on the exterior of all armored vehicles to add space for cargo on the outside. The racks added an extra 12 to 18 inches of carrying space on each side of the vehicles. The equipment stored in the racks also protected the vehicles from rocket-propelled grenades (RPGs) during the task force's three major battles in Baghdad. When the vehicles with equipment stored in these racks were hit by RPGs, the rounds did not penetrate the Bradleys. This modification, designed to store equipment, has probably saved many lives during combat in Iraq.

The AN/PSN-11 Precision Lightweight GPS Receiver is not the best equipment for navigating on the battlefield. A much better navigation tool for the military might be the Garmin 12 or the Magellan global positioning systems (GPSs). The AN/PSN-11 uses large lithium batteries that are expensive and hard to get. The lithium batteries also have to be properly discarded after use because they are hazardous waste. On the other hand, the other GPSs use AA batteries; they are smaller and outperform the AN/PSN-11. Leaders that used the store-purchased GPSs often had to navigate in Iraq in cases where vehicles with the AN/PSN-11 had difficulties moving quickly

from one location to another on the battlefield. The GPS allows the user to store many waypoints in an easy digital format. One NCO in the TOC stored more than 300 waypoints in his civilian purchased GPS and led the TOC across 700 kilometers of Iraq with no difficulties through severely restrictive terrain and urban environments.

The M2A2 BFVs that we were assigned in Kuwait were not the most updated version of the BFV. The BFVs we use at our home station of Fort Stewart, Georgia, are more technologically advanced. The vehicles we drew in Kuwait had the old-style seats that we had to remove in order to fit all of our infantrymen inside. The BFVs did not have the bench seats like the Operation Desert Storm (ODS) Bradleys at Fort Stewart. Sergeant First Class Childers of B Company, 3-15 Infantry, designed two ready boxes that were used as seats in the back of the Bradleys and were also used as ammunition carrying boxes. This invention assisted the task force greatly in its ability to carry ammunition and Soldiers into combat more efficiently. The M2A2 ODS BFV also has an azimuth indicator for the commander and the driver that aids in navigation and also calling for and adjusting indirect fires. We train in the United States on the most modern versions of the Bradley. Our Soldiers deserve to fight with the most advanced equipment available. We must train as we fight; Soldiers' lives and the success of the future military depends on it.

We owe it to our Soldiers to manage the time and resources that we have during the preparation

phase of combat to ensure the maximum amount of effectiveness when given the call to go to war.

Future Training

We should consider designing future training to simulate the realistic conditions and fighting that occurred in Iraq. In Iraq, we conducted numerous battle drills simultaneously. For example, in Baghdad on Objective Curly, one platoon would be clearing a trench at the same time they were entering and clearing a building. While M2A2 BFVs and M1A1 tanks were engaging targets, mortars and artillery were firing danger close missions that were landing within a 100 meters of friendly forces. The threat was firing from all directions with direct and indirect fires. Casualty evacuation was continuous, unlike the way we had trained so many times to conduct casualty evacuation after the mission was complete. The mission was continuous. Our aid station traveled with the combat units to give immediate care to the injured on the scene, which probably saved many lives.

Future training scenarios should incorporate civilians on the battlefield, suicide bombers, and unconventional forces in an urban environment to best replicate conditions found in Iraq. For example, on Objective Curly, the enemy had 150-200 troops, suicide bombers, and BMPs mixed in with innocent civilians. The enemy was organized and provided reinforcements. Innocent men, women, and children were all around us and we were challenged with identifying the threat in an environment where anyone could be the enemy. Suicide bombers charged our positions over and over again. Men dressed in civilian attire carried hidden RPGs

under their clothing and attempted to use surprise to engage and destroy U.S. forces.

Most engagements occurred in urban environments. The task force displayed a tactical advantage in urban areas by using the full potential of dismounted infantry, Bradleys, tanks and indirect fires. There was no place for the enemy to have a marked advantage over our forces in the desert. Our weapons' ranges and night vision capability ensured success in long-range engagements. What we must concentrate on for future training is the close battle in the cities, utilizing both conventional and unconventional U.S. forces. The task force and company team concept proved very successful in Iraq. With the M1A1 tanks out front providing fires down the depth of the city, M2A2 BFVs concentrated on destroying targets in buildings adjacent to them and long-range targets also. Infantry Soldiers on the ground were simultaneously clearing adjacent buildings and trenches of enemy resistance. Tanks, Bradleys and infantry on the ground synchronized to accomplish one goal are a lethal mix on today's battlefield in the cities.

The plan that we trained and rehearsed in Kuwait changed before our major battle into Baghdad. Task Force 3-15 Infantry planned for months on attacking an enemy that was destroyed by the Air Force before we could execute our plan. We received several fragmentary orders that completely changed our task and purpose in the war. We received a fragmentary order at the task force

level to move into Iraq only eight hours prior to execution. The staff took two hours to plan and produce the graphics and the order to be delivered to the companies. This gave the companies five hours to deliver their orders and intent down to the Soldier level. Army leaders of today must be flexible with the ability to receive fragmentary orders and execute missions with very little planning time. The National Training Center and Combat Maneuver Training Center should deliver more fragmentary orders with minimum planning time to challenge the leadership and staff in developing the skills necessary to survive and win in combat.

Our sacrifices in training determined the successes we had in war. We learned lessons in training and combat that can benefit future leaders in making decisions for the future of the mechanized infantry task force. We owe it to our Soldiers to manage the time and resources that we have during the preparation phase of combat to ensure the maximum amount of effectiveness when given the call to go to war.

First Sergeant Derek McCrea performed duties as platoon sergeant, first sergeant, and operations sergeant major within a 12-month period after being notified to deploy to Kuwait as part of Operation Desert Spring in 2002. He served as the operations sergeant major for Task Force 3-15 Infantry, 3rd Infantry Division (Mechanized) during Operation Iraqi Freedom. He is a graduate of the Battle Staff NCO Course and Master Gunner School. He is also a member of the Sergeant Audie Murphy Club.

FLEXIBILITY: Today's Leaders Adjust, Adapt, *OVERCOME*

CAPTAIN JOSEPH CLABURN

Today, more than ever, Army leaders are being required to work well beyond their scope to excel on the battlefield. The ability to adapt, adjust, and overcome has become more critical than ever before. On today's battlefield, the varying situations that our Soldiers and leaders face help create a truly combined force. Now, leaders find themselves conducting operations with forces across a broad spectrum. Young lieutenants coming right out of the Infantry Officer Basic Course may have to conduct operations with different units, branches, and countries. Our NCOs are not only leading young Soldiers on a fast-paced battlefield, but they are also being required to conduct these operations with attached units from different services and nations. Flexibility has become one of the many essential characteristics of a leader in today's Army, and this has been proven on the battlefields in Afghanistan and Iraq. One of the ways that we can help leaders become more adaptive to these changes is to incorporate more real-world experiences into their training plans as well as at the various combat training centers.

During Operation Enduring Freedom, the 1st Battalion, 187th Infantry Regiment from the 101st Airborne Division (Air Assault) conducted a cave-clearing operation known as Operation Mountain Lion on the Afghan/Pakistan border. The combat forces on the

ground at the time of the air assault were British motorized units in an overwatch position of the battalion's landing zone. The task of the battalion commander was to move into the valley and conduct a relief in place of the British unit on the ground, search and clear the terrorist training camp buildings and surrounding caves, and assess the civilian situation in the area for future stability and support operations (SASOs). The battalion successfully air assaulted into the area of operation and relieved the British forces on the ground. Almost immediately upon arrival into the area, a group of Afghan locals approached the leaders, and a new working relationship on the battlefield resulted. Over the next

couple of days of operations, the Soldiers of several companies in the battalion worked with the Afghan elders (who later revealed themselves to be old Mujahideen soldiers who fought the Russians in the 1980s), interacted and relieved the British units in the area, and conducted combat operations to search the enemy buildings and caves. While the medical personnel assessed the needs of the village, the leaders on this mission had tea with the local leaders. Upon returning from the mission, the battalion commander, Lieutenant Colonel Ronald Corkran, said that he had led "the largest A-team in the Army."

The essence of that statement may have set the stage for what future operations



Specialist David Marck, Jr.

Soldiers from the 1st Battalion, 187th Infantry Regiment, 101st Airborne Division (Air Assault) scan the ridgeline for enemy forces during Operation Anaconda in Afghanistan.

would be like in the U.S. Army. During my seven-month deployment as part of Operation Enduring Freedom, I had the opportunity to work with several of the conventional forces in the area of responsibility, such as the 10th Mountain and 82nd Airborne divisions, as well as coordinate intertheater flights with Air Force and Marine Corps' aircraft from several air bases. I found myself cross-talking with Special Forces elements and Air Force Special Operations Command personnel as well as being a liaison for the Joint Coordination Center with Pakistani forces. In retrospect, I can't recall any training conducted during the military schools I attended that could have prepared me to operate with so many people from such a broad spectrum.

On more than one occasion during Operation Iraqi Freedom, conventional and unconventional forces had to work together and perform missions alongside each other. Despite differing standing operating procedures (SOPs) and tactics, techniques, and procedures (TTPs), the foundation of being an infantryman rose above differences in Soldiers to make the mission a success. During the course of the war in Iraq, Special Forces units had to use the assets available from a mechanized infantry unit to help provide security and isolate objectives. While in Baghdad, my unit was assigned an area of responsibility where a Special Forces A-Team was also operating. Without having to do so, we shared intelligence information with each other specific to our area and would also assist each other with items of necessity. So, though our missions were different on a relative scale, our overall task was as united as if they were task organized to us or we to them. The military has never seen such cross utilization of forces in an operation like we have in Operation Iraqi Freedom. In our efforts to perfect the combined arms fight, we have set the bar even higher by considering a combined arms fight that incorporates joint operations of conventional, unconventional, and other government agencies such as the CIA.

In addition to working with and integrating such varying forces, leaders should also take into consideration how civilian and urbanized factors affect Soldiers. A quick differentiation between combative and non-combative forces in the urbanized fight is critical when dealing with situations like we faced in Iraq. The Joint Readiness Training Center (JRTC) is the only place in the Army to train leaders and Soldiers in this adaptive environment, and based on my experience, it was and is the best place to train Soldiers and leaders for this experience. On the asymmetric battlefield, where the enemy doesn't use conventional force-on-force tactics, units have to adapt to fast-paced and unpredictable situations. The need for a leader to be flexible is critical as the transition from combat operations to peacekeeping operations occurs quickly.

As the wars in Afghanistan and Iraq proved, the time period for defined combat operations has decreased. After the U.S. started



Private First Class Joshua Hutcheson

Soldiers from Bravo Company, 1st Battalion, 187th Infantry Regiment, detain a man who was seen leaving the house of a suspected arms dealer in Iraq.

combat operations in Afghanistan following September 11th, coalition forces successfully took over the capital of Kabul and removed the Taliban from power. All of this happened by December of 2001. U.S. forces began combat operations against Saddam Hussein's regime in March 2003, and President Bush proclaimed that combat operations had ceased by the beginning of May. Though combat operations in the two theaters have come to an end, offensive operations by coalition forces continue in both countries. The end of the combat phases of operations in both Afghanistan and Iraq have brought about the transition of military combat forces and ultimately added more mission essential tasks that Soldiers needed to be trained on.

SASO is a fairly new term in Army doctrine. With the quick transition from combat operations to stability and support operations, a new host of other groups have entered the battlefield. Civilian contractors from the U.S. government, newly trained Iraqi and Afghan police forces, and other government and non-government agencies have been introduced to the region to help provide stability and political guidance to the regions. The addition of these new groups of 'force multipliers' has made the spectrum of support operations that much broader.

As leaders, both officers and enlisted, we are presented with a wide variation of change that the battlefield brings to us. We must

be adaptive to certain situations like having to link-up and patrol with Special Forces units, securing a CIA safe house, or performing joint operations with foreign forces in a coalition. Everyone is feeling the effects of this truly combined force, from platoon leaders to the company commander in Iraq who has just been named the mayor of a small village north of Baghdad. TTPs being used in Iraq right now should be incorporated into JRTC, which has become the cornerstone of preparing the force for combat.

We must also pay close attention to young Soldiers and the difficulties they may experience from putting their weapons on safe in order to perform SASO after having constant vigilance on the battlefield. The individual Soldier from the 82nd Airborne who has never operated around M1 tanks must get training and experience before he conducts operations with a mechanized task force. The mission essential task lists (METL) for every unit in the Army should begin to incorporate the integration of civilians on the battlefield

and the intricate details of operating in the urban environment. We must face the fact that our military operations are no longer conducted in the open fields and deserts. Our fight, as short-lived as all of our conflicts have become since the Vietnam War, are slowly but surely creeping into the backyards and soccer fields of the nations in which we conduct operations. The dangers with these operations won't be the artillery that our Soldiers receive in their foxholes, but the improvised explosive devices left on the side of the road for our patrolling units. It is the sniper who lives in the building across the street of a company of residing infantrymen and the fanatical suicide bomber who drives up to our military checkpoints. JRTC must do better to help units integrate conventional and unconventional, government and non-government agencies, as well as friendly and opposing civilians. Rotations focusing solely on offensive and defensive operations should thus be changed to simulate an even and continuous distribution of offensive operations to

stability and support operations.

Leaders in today's Army need to be able to adjust, adapt, and overcome. Leaders displaying flexibility during this global war on terrorism are critical to our success. We, as an Army, must concentrate and focus on training our future forces for this new combined arms and joint operations fight and to efficiently transition into the stability and support operations that are now taking the forefront of our unit's missions. Proper training is crucial to the efficiency and survivability of our Soldiers no matter where we find ourselves deployed. It is the only way the Army will be able to continue with our tradition of serving from every theater in the world, whether it's fighting the combined arms fight or rebuilding a war-torn nation.

Captain Joseph Claburn served as the battalion movement officer for the 1st Battalion, 187th Infantry Regiment, 101st Airborne Division (Air Assault) from April 2001 to May 2003. While assigned to the 1-187th, Claburn completed deployments as part of Operation Enduring Freedom and Operation Iraqi Freedom.



Specialist David Marck, Jr.

Glider Assault on Eben Emael as an Archetype for the Future



CAPTAIN PAUL WITKOWSKI

In the wee hours of the morning on May 10, 1940, a flight of 11 German *Luftwaffe* Ju-52 tri-motor transport planes clawed their way into the dark sky above Ostheim, Germany. Connected behind each transport plane by a towrope was a high-wing motorless aircraft loaded with highly trained paratroopers. These paratroopers turned glidermen would make the opening blow of Germany's plan to seize France via striking through Holland, Luxembourg, and Belgium. Slightly over the Dutch border, the tow planes released their gliders. Nine of the 11 gliders reached their objective. Even though they had trained for months for this attack, none of the glidermen knew their objective by name until they loaded their gliders that morning. In the morning nautical twilight, nine *Luftwaffe* gliders silently descended upon the Belgian fortress of Fort Eben Emael. Within 20 minutes of landing, the 70 German glidermen rendered Belgium's most modern fortress, garrisoned by more than 800 soldiers, useless. The breach in Belgium's line of defense opened by these glidermen paved an open road for the German panzers to *Blitzkrieg* into the heart of Belgium.

This event not only marked the end of the Phoney War, but was also the debut of gliders in combat. Gliders were not a new invention; some of the earliest attempts at human flight were made in gliders. At the dawn of World War II, however, the concept of teaming powered aircraft with gliders to deliver combat troops to a specific landing zone in large enough numbers to overwhelm enemy defenders was revolutionary. The western Allies did not pursue a military glider program until after the Germans' success at Eben Emael. However, the Allies quickly exploited and expanded on what they had learned from German glider use at the fort. The German glider assault was a textbook example of the use of surprise in a military assault and served as a template for subsequent airborne operations conducted by the Allies in World War II.

In the larger sense, the attack on Eben Emael was just one small part of the German *Blitzkrieg* in action. German General Heinz Guderian is credited with developing the *Blitzkrieg* concept. Guderian's concept revolved around three essential components: attacking enemy command and communications structures, infiltrating past major enemy troop concentrations, and the use of the two-way wireless radio to control friendly attacking units, according to Len Deighton in his book *Blitzkrieg from the Rise of Hitler to the Fall of Dunkirk*. By examining the components, it is clear that the purpose was to defeat the enemy's command and control structure while avoiding the enemy's heavily defended areas. This left the enemy troops in the field without guidance from their headquarters and undermined their will to fight after being caught behind the German lines, facilitating their surrender.

The key elements of speed, combined arms, and wireless communications in conjunction with each other were crucial for *Blitzkrieg* to be successful. The point of main attack, *Schwerpunkt*, sought out holes in the enemy's defense to maintain constant forward progress in the attack. Combined arms refers to the close coordination of infantry, tanks, combat engineers, artillery, and close air support attacking in concert while maximizing the strengths and minimizing the weaknesses of each other. In the book *Blitzkrieg: Its History, Strategy, Economics and the Challenge to America*, author S.L.A. Marshall highlighted that, "the prime mission of tanks and aviation is to shatter enemy resistance and open the road for the advance of the motorized mass."

The breach created by armor and dive bombers would be exploited by motorized and foot infantry, who then take the battle to the enemy. The technological innovation of the wireless voice radio provided the glue that held the two other elements together. Deighton argued that, "Blitzkrieg could not exist without very close cooperation from all arms. In this respect, radiotelephony —



transmitting speech, rather than Morse code — was the most crucial element in the new style of war.” In a sense, without the radio there would have been no *Blitzkrieg*.

The inherent role of German paratroopers and glidermen made them an ideal force to support *Blitzkrieg*. These units were able to bypass enemy defenses by flying around them to seize key objectives from behind enemy lines. Two techniques governed the employment of airborne forces — the oil spot and airhead methods. The oil spot technique consisted of dropping small groups of paratroopers or glidermen over a wide area. The advantage to this method is that the enemy is not able to pinpoint the airborne troopers’ main objective; however, these small groups could easily be defeated one by one with strong counterattacks. The airhead method consisted of dropping a large number of troops in one area. The strength of this technique is the airborne troops are massed, but this also telegraphed their main effort to the enemy.

The German glider program was a direct result of the harsh sanctions imposed upon Germany in the Treaty of Versailles following the end of World War I. One of the stipulations in the treaty prohibited Germany from having an air force, but did not forbid the development and flying of gliders. This loophole in the treaty gave Germany the ability to train pilots who could readily transition to powered aircraft, as well as sparking aeronautical innovations in powerless flight. One of the offspring from the civilian glider development was Germany’s first military glider, the DFS-230. The DFS-230 was a high-wing monoplane, manned with one pilot and capable of transporting nine combat-equipped glidermen or 2,800 pounds of cargo. The development of the DFS-230 provided the *Luftwaffe* with the means to silently land combat troops on any designated landing zone with a high degree of accuracy.

As a result of the German invasion of Belgium in World War I, the Belgians developed a series of fixed fortresses and defensive lines to protect their neutrality. Fort Eben Emael was one of the new fortresses created to serve that purpose.

The German glider program was a direct result of the harsh sanctions imposed upon Germany in the Treaty of Versailles ... One of the stipulations in the treaty prohibited Germany from having an air force, but did not forbid the development and flying of gliders.

There were several reasons for the fort’s placement at Eben Emael, which included:

- * The construction of the Albert Canal created a ready-made site for the fort;
- * The line of sight from the location overlooked the thin strip of Netherlands and deep into Germany; and
- * The site was along the same axis of advance the Germans used in World War I.

Eben Emael’s artillery cannons were tasked with covering three bridges crossing the Albert Canal at the towns of Vroenhoven, Veltwezel, and Canne, which could facilitate or deny any invasion. As historian James E. Mrazek stated in his book, *The Fall of Eben Emael; Prelude to Dunkerque*, “The artillery had to support the Belgian infantry which protected these bridges by preventing the enemy from getting close to or taking them. If the bridges fell to the enemy, the fort’s artillery had to fire on and destroy the bridges.”

The fort contained an impressive array of weapons that included two 120mm guns, 16 75mm guns, 14 60mm anti-tank guns, five 60mm anti-aircraft guns and 11 machine-gun positions. The armaments were organized into two batteries. The artillery pieces, with their long range, were the offensive battery and were to support the Belgian defenders at the bridges along the border. The anti-tank guns and machine guns were the defensive battery to protect against ground assault on the fort’s walls. To man these weapon systems, the fort was to be garrisoned by 1,200 Belgian artillerymen. Additionally, the fort was designed with subterranean barracks and a tunnel network to protect those men. The tunnels interconnected the casemates

and cupolas on the fort’s surface to the underground living quarters.

Although Eben Emael was the most modern fort of its era, it suffered from several drawbacks. One of these was that all of the fort’s armaments were directed towards defending the outside perimeter of the fort with little attention given to internal defenses. Based on the trench warfare experience from World War I, infantry positions had also been eliminated. Finally, the design of the fort was not guarded as a national security secret as German subcontractors were brought in to do some of the construction work on the fort. Overall, Fort Eben Emael was well designed, constructed, armed, and garrisoned to defend against any attacking enemy Belgian military planners expected; however, the German attack on May 10, 1940, was not what they anticipated.

Plan Gelb

The German war plan to attack into France via the low countries, Holland, Luxemburg, and Belgium was developed by General Erich von Manstein and labeled Plan *Gelb* (yellow). The general concept of the operation was to deceive French commanders into thinking that the Germans would indeed attack France’s vaunted Maginot Line defenses — thus keeping French forces from reacting to the *Schwerpunkt*. At the same time, the *Schwerpunkt* would attack through the lightly defended lowland countries, bypassing France’s main defenses and driving to the channel coast from the undefended northern border with Belgium.

Some critics argue that Plan *Gelb* was an unimaginative copy of the World War I von Schlieffen plan. The von Schlieffen plan consisted of a small army defending against Tsarist thrusts in the east while the main body of the *Weimar* army marched through Belgium and France to encircle and crush the French army against its mountainous border with Switzerland. In the book, *The March of Conquest: The German Victories in Western Europe, 1940*, author Telford Taylor argued the contrary. “In fact, the original OKH (German Headquarters of the Army) plan bore only the most superficial resemblance to Schlieffen’s and, Manstein’s role is not to

be minimized, the final plan was no *coup d'oeil* (glance), but the production of a long evolution to which several others besides Manstein — including Adolph Hitler himself — contributed importantly,” Taylor said.

The assault on Eben Emael was one small operation in the larger Plan *Gelb*. The notion of the dramatic plan started with Hitler. Hitler proposed the idea to General Kurt Student, commander of the 7th *Flieger* Division, whose paratroopers would execute the mission as glidermen. Hitler inquired of General Student, “I have read something of your work with gliders, General Student. ... I have an idea. I think some of your attack gliders could land on top of Fort Eben Emael and your men could storm these works. Is that possible?”

General Student was given a day to think about the feasibility of such an attack. Once Student confirmed that it was possible to land gliders on such a small landing zone, Hitler revealed the other component that would ensure the downfall of the Belgian fort, a new development in explosives called the *Hohlladung* or hollow charge. The hollow charge is a specialized military explosive where the charge has been hollowed out in a conical shape and lined with sheet metal. When the charge is detonated, the explosion directs the metal liner and the majority of the force inwards. This creates a directed jet of high velocity molten steel and explosive force that is able to penetrate hardened steel or reinforced concrete. Military explosives prior to the development of the hollow charge lacked the ability to deeply penetrate steel and fortified positions.

Student also had to war game between the use of dropping paratroopers and the use of the untried glider in combat. Both means of delivering troops to the objective had advantages and disadvantages that were carefully weighed. One can assume that the silent approach of the glider, teamed with the fact that glidermen were able to unload from the glider ready to fight, were the decisive factors in Student’s selection of using gliders.

Student assigned the task to a company of paratroopers reinforced with a platoon of engineers under the command of Hauptmann (Captain) S. A. Koch, forming *Sturmabteilung* (Storm Detachment) Koch. Hauptmann Koch received his orders November 3, 1939, “direct(ing) him to accomplish three tasks. First, by surprise glider landings, to capture the bridges of Vroenhoven, Veltwezelt, and Canne intact. Second, to destroy with explosives the artillery and works of Fort Eben Emael and,



Allied Forces North Europe Website

When Fort Eben Emael was built, it was the most modern fort of its era. However, on May 10, 1940, 70 German glidermen rendered the fort useless within 20 minutes.

third, to hold his positions at the bridges and the fort until the arrival of German ground forces who were to relieve Koch’s units,” according to Mrazek. Since it was necessary to attack four different objectives within a seven-mile stretch along the Albert Canal, Koch’s company would have to operate as independent platoons.

To accomplish his mission, Koch task organized his *Sturmabteilung* into four different assault groups, giving a name to each. He tasked Lieutenant Gerhard Schacht, the leader of “Concrete” to seize the bridge at Vroenhoven with 96 men. Next, he tasked Lieutenant Gustav Altmann

to seize the Veltwezelt bridge with 92 soldiers called “Steel.” Then, Lieutenant Martin Schaechter was chosen to seize the bridge at Canne with force “Iron.” The final group, Lieutenant Rudolf Witzig’s engineer platoon, was named “Granite.” This platoon was composed of 85 men and received the mission of destroying Fort Eben Emael’s offensive weapons. Success could only be obtained if the fort’s weapons were destroyed and at least one of the three bridges was secured intact. Successfully capturing the bridges if the fort remained in Belgian hands would not be sufficient because they could rain artillery fire down on the bridges. In this manner, *Sturmabteilung* Koch’s objectives were interdependent on each other.

The assault groups had more than six months to prepare for the mission. The long duration created a pressing need to keep the operation a secret. Keeping the name of the objective secret from the glidermen until hours before executing the mission was one measure taken to ensure operational security. Only Koch and the platoon leaders were informed their objective was Fort Eben Emael in the planning and training stage. Each gliderman also signed a pact of secrecy stating he risked death if he spoke of his assignment. Another extreme security measure was to conceal the movement of the gliders from their training base at Hildesheim to their final departure airfield at Ostheim. The gliders were disassembled, transported in covered furniture trucks, unloaded and assembled under a smokescreen created by smoke generators, which the local papers reported as an engineer unit training to protect Dusseldorf from air raids. These security measures underline the strategic importance of the seizure of Eben Emael and the need to keep the method of delivery secret.

As the glider training started, Koch noted two recurring problems with the gliders and their pilots. The *Luftwaffe* glider

pilots' lack of skill was reflected in their performance by overshooting their landing targets. In order to rectify the training deficiency, *Deutsche Forschungsanstalt Fuer Segelflug* (DFS), the company that developed and built the DFS-230, sent two veteran glider pilots to train Koch's rookie pilots. Mrazek stated, "This eventually led to many a bewildered sport-glider champion receiving a polite invitation from the *Luftwaffe* to "volunteer" his services for a "delicate" mission." These "drafted" glider pilots were integrated into the *Sturmabteilung* Koch and flew the combat mission.

The other problem with the gliders resulted from conducting practice landings on surfaces identical to the surface on top of Eben Emael. The landing skid on the DFS-230 failed to produce enough friction to slow the gliders down in an acceptable distance. The pilots improvised by wrapping barbed wire around the landing skid, but this still did not shorten the landing distance. DFS was contacted to develop a braking system. After addressing these two issues, the glider component of the operation was ready for action.

The training of Granite was thorough and built on the basic skills of the combat engineer. Rehearsal areas were set up in the surrounding area of Hildesheim that outlined the exact dimensions of the fortifications atop Eben Emael. Once they mastered the general scheme of maneuver, the squads needed real fortifications to train on. Hauptmann Koch had the perfect solution; the Benes line in the German Sudetenland gave the glidermen similar fixed fortifications to develop techniques and procedures to reduce the hardened gun emplacements. The glidermen trained on attacking casemates and cupolas with flamethrowers, bangalore torpedoes, standard demolition charges, and small arms. The only weapon they did not train with was the hollow charge, since this new explosive was also used as the detonator for Germany's atomic bomb. Since it was a closely guarded state secret, Lieutenant Witzig was the only man to see a demonstration of the charge before the mission.

The Attack

On May 9, 1940, at 2130 hours Granite received their orders to execute the mission. At this point the men were finally informed of the name and location of the objective they had trained six months to attack. At 0300 hours, the glidermen loaded into the awaiting DFS-230s. By 0335 hours, the eleventh glider of Granite, Lieutenant Witzig's group, was pulled into the air by the Ju-52 transport plane for the 50-minute ride to the release point in the vicinity of Aachen. Two of the 11 gliders, one of which was Lieutenant Witzig's glider, experienced mishaps requiring them to cut loose from their tow aircraft short of the release point. Mrazek said, "The force, small to begin with, had shrunk to 70 men, 80 percent of its combat power. Ironically, a shot had yet to be fired." Even though the Belgians had even been alerted of German movement along the Dutch border at 0030 hours and the presence of a large formation of aircraft to the northwest of Maastricht at 0410 hours, the appearance of the silent aircraft still took them by surprise. The anti-aircraft emplacement on the fort opened fire as the first glider landed on the fort at 0425 hours.

The Belgian anti-aircraft gunners managed to hit six of the nine incoming gliders, but they were quickly overcome by glidermen pouring out of the landing gliders.

The actions on the objective by each squad of the Granite assault force are essentially carbon copies of each other. Although each squad had a different assault objective, each target was reduced in the same general manner. The gliders, one by one, in rapid succession landed on the small surface of the fortress. The majority of the seasoned glider pilots landed their gliders within 20 to 50 meters of their intended targets. The ready-to-fight glidermen disgorged from the gliders and charged toward their assigned casemate or cupola, dragging with them the 50-pound hollow charges.

Once at the casemate, two men assembled the two halves of the charge and placed the charge on the casemate. Then they ignited the demolition fuse and sought whatever cover they could find to avoid the secondary fragments from the exploding charge. After detonation, the squad inspected the damage and if necessary reengaged the casemate with another charge to render the fort's offensive weapons useless. Some squads entered the damaged weapons emplacements to kill the Belgian defenders or force them deep inside the fort. From there the squads attacked secondary targets and, if needed, attacked objectives of missing squads. Once that was completed, the glidermen assumed hasty defensive positions to defeat any counterattacks by the Belgian soldiers in the fort.

Within 20 minutes of landing, all of the critical offensive weapons of Fort Eben Emael were rendered inoperable; however, this did not mean that there was no longer a threat from the fort or from outside Belgian reinforcements. The Belgian commander, Major Jean Fritz Lucien Jottrand, called for other Belgian units to fire artillery on his fort to kill the German glidermen, which caused havoc on the fort's surface. The incoming fire caused the glidermen to seek cover in the knocked out casemates. The results of the long, hard training paid off as Sergeant Wenzel automatically assumed command in Lieutenant Witzig's absence. He directed other squads to attack remaining targets, organized a hasty defense, and reported the mission's status to Hauptmann Koch. He also directed airstrikes from *Stuka* dive bombers against reinforcing Belgian units. With extraordinary determination, Lieutenant Witzig was able to commandeer another tow aircraft to recover his glider outside of Cologne after his tow rope broke enroute to the fort; at around 0630 hours Witzig's glider finally landed inside Eben Emael.

The plan called for 'Granite' to destroy the fort's offensive batteries and hold the fort for four hours until relieved by the troops of 4th Armored Infantry Division. Dutch and Belgian resistance delayed the battle handover until May 11 at 0830 hours though — 24 hours later than planned. During this prolonged stay on the fort, the glidermen parried multiple counterattacks and managed to keep the Belgian artillerymen contained within the subterranean confines of the fort, as well as keep reinforcing Belgian units at bay from the fort by using air strikes. A total of 78 German glidermen landed on the fort and forced the capitulation of the Belgian garrison of 780 men in the world's strongest fort at



Aeronautical Systems Center History Office Website

Waco CG-4A Glider

a cost of four Germans killed and 12 wounded. Two elements provided the key to success: the combat glider and the hollow charge. Without either of these elements the seizure of Eben Emael would have cost much more in human lives and altered the attack routes and time schedule of Plan *Gelb*.

Perhaps the success at Fort Eben Emael set a false precedent for the Germans. A year later, the Germans took another huge gamble of sending a large-scale airborne invasion of the island of Crete. "Although 15,000 German airborne troops defeated a force almost three times their number, the Germans lost 5,000 killed and wounded and a large number of aircraft," Mzarek said. This bittersweet victory caused a drastic curtailment of glider and parachute operations. Granted, some glider operations continued such as the rescue of Benito Mussolini at Gran Sasso and emergency resupply operations in Russia, North Africa, and Eastern Europe towards the end of the war, but the Germans never attempted another large-scale glider and parachute attack.

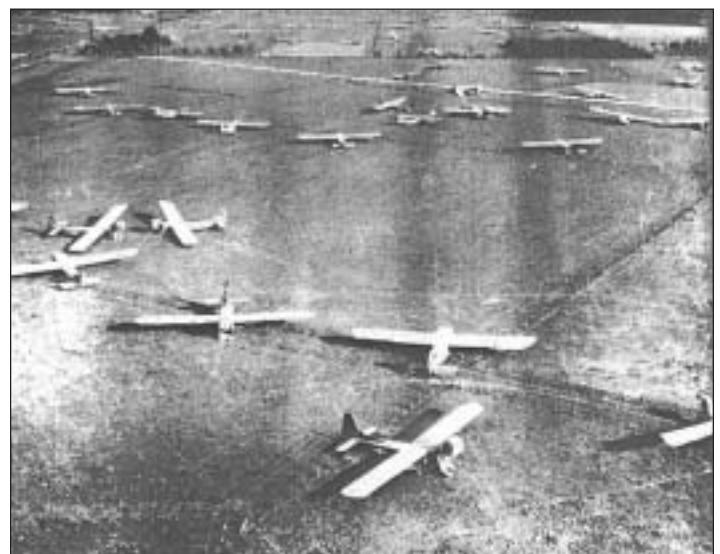
U.S. Glider Development

The highly successful German operation did not go unnoticed by the Western Allies; both Great Britain and the United States did not have a military glider program when *Sturmabteilung Koch* attacked Eben Emael in 1940. Nonetheless, the Allies learned much from the German assault. One of these lessons was the success of vertical envelopment. Instead of the traditional method of searching for an assailable flank by ground maneuver, aircraft and gliders were used to deliver men, weapons, and equipment from above, opening a new dimension to ground commanders. Second, gliders surprised, shocked, and stunned defenders which gave the glidermen a temporary advantage to overwhelm defenders.

The Allies saw there were limits to glider operations, but a combination of paratroopers and equipment-laden gliders would prove to be highly successful. Next, the Allies built upon the concept of combining airborne forces to seize key objectives and terrain to pave a corridor for follow-on ground forces. The western Allies mastered this concept on both large-scale invasions and small-scale commando missions. The final lesson was the importance of mission rehearsal exercises. Intensive preparation combined with good intelligence of the objective yielded a higher probability of mission accomplishment. The Allies built upon these lessons to produce a glider program that dwarfed the pioneering German one.

The United States was reluctant to explore the possibilities of using gliders. However, American intelligence agents took close notice of German gliders. A War Department intelligence report dated February 3, 1941, mentioned the sighting of German gliders: "While flying recently at Rangsdorf, near Berlin, an American official observer saw three

gliders on the ground, each hitched behind a Ju-52 airplane. The gliders were towed into the air, but they did not return to Rangsdorf, nor were they to be found two days later." The official gave an accurate description of a DFS-230 to which an intelligence officer added, "There has been numerous reports of the manufacture of troop carrying gliders in Germany ... This report, however, was the first in which an American official observer stated that he saw military gliders." Finally, under the direction of General Henry 'Hap' Arnold in 1941, the United States glider program was born.



U.S. Air Force Academy Website

CG-4A gliders are shown spread out in a field after the D-Day invasion in Normandy June 6, 1944.



325th Airborne Infantry Regiment Website

Allied forces used large-scale glider operations during World War II operations Overlord, Dragoon, Market Garden, and Varsity. The gliders were also used in smaller scale operations throughout the war.

By late 1944, the American glider fleet totaled more than 10,500 military gliders. To meet the pressing needs of production, gliders and their subassemblies were produced by a wide variety of manufacturers ranging from Ford Motor Company and piano companies to casket factories. The mainstay of the U.S. glider fleet was the Waco Aircraft Company's CG-4A. The CG-4A was constructed of a metal and wood frame covered with fabric, manned by a crew of two and with an allowable cargo load of 3,750 pounds, allowing it to carry 13 combat-equipped troops or a jeep or small artillery piece. The British equivalent, the Airspeed Horsa, was about twice as large in size and payload as its American counterpart. These gliders were used to take the fight to the Axis.

Allied Glider Operations in WWII

The Allies expanded the concept the Germans used at Eben Emael tenfold. Large-scale glider and paratroop drops were used several times during Operation Overlord, the invasion of Normandy; Operation Dragoon, the invasion of southern France; Operation Market Garden, deep penetration into Holland; and Operation Varsity, crossing the Rhine River into Germany. Each of these operations entailed a massive movement of troops and equipment via gliders that made the glider attack on Eben Emael pale in comparison.

The largest of all these operations was Market Garden, launched on September 17, 1944. British Field Marshal Montgomery developed the plan for the operation. The general concept was to lay a corridor of paratroopers and glidermen along a 60-mile stretch of Holland to secure key bridges ending just across the northern end of the Rhine River. The British XXX Corps, armored component, would punch through the German frontlines and link up with the three Allied Airborne Divisions in Holland, crossing the bridges seized by the airborne troopers. From

the northern terminus in Arnhem, Allied forces would be poised to strike deep into Germany's industrial heartland, hopefully bringing an early end to the war. Mrazek highlighted the scope of the operation: "Operation 'Market' was an airborne operation of unprecedented magnitude. A total of 34,876 troops had gone into battle by air — 13,781 by gliders, 20,190 by parachute, and 905 by aeroplane on a prepared landing strip. Gliders brought in 1,689 vehicles, 290 howitzers and 1,259 tons of ammunition and other supplies." The original plan for the operation required three consecutive days of good weather to deliver all of the gliders and paratroopers to their intended landing and drop zones. Out of the 2,596 British and American gliders dispatched for Operation Market, 2,239 gliders were effective and delivered men and equipment to

their designated landing zones. A corps worth of troops starting with the 101st Airborne Division in the southern sector stretched from Eindhoven to Uden to meet the 82nd Airborne Division in the center between Grave and Nijmegen and the British 1st Airborne Division with the 1st Polish Parachute Brigade at the northern tip in Arnhem. This overly ambitious plan went too far and ended in the near destruction of the British force at Arnhem.

The Allies also used gliders in small-scale operations. The British seized two bridges in Normandy on D-Day, June 6, 1944. Six Horsa gliders, each containing a platoon of glidermen, landed on a small strip of land between the two bridges, destroyed the defending Germans, defeated any counterattacks and held the bridges until relieved by follow-on forces of British paratroopers and Lord Simon Lovat's commandos landing on the beachhead. Major Howard's men defeated German counterattacks of tanks, infantry, gunboats, and frogmen until the linkup occurred. This operation was carried out successfully due to the silent insertion of Howard's men by glider on top of their objective.

Gliders were also used by the Allies to execute critical resupply missions in Europe, Pacific, and in the China-India-Burma theaters of operation. A striking example is the glider resupply mission launched to assist the encircled 101st Airborne Division at Bastogne during the Battle of the Bulge in December 1944. As the Germans tightened their encirclement of Bastogne, the American field hospital was overrun and ammunition was running low. General Anthony McAuliffe, the assistant division commander of the 101st, sent a message to Supreme Headquarters Allied Expeditionary Force, to request delivery of medical teams, supplies, and ammunition. This request was approved on December 26, 1944, and 11 gliders were sent into Bastogne. The following day a serial of 50 gliders were sent in with more

ammunition, gasoline, and supplies, but only 35 gliders successfully landed inside the Bastogne perimeter. Mrazek argued, “That all of the 15 were shot down is entirely possible, particularly if these were near the end of the air serial, for by that time the Germans were fully alerted.” The supplies delivered by the gliders helped bolster the beleaguered defenders until General George Patton’s Third Army broke through the German lines.

The glider as a means of insertion of troops and equipment had a very short life span, starting with its premier at Fort Eben Emael and ending with the only glider use in the Pacific at Luzon in the Philippine Islands in June 1945. In spite of the advantages gliders provided, military planners focused on their drawbacks, and this led to their demise. Gliders were difficult to maintain and required special maintenance crews detracted from the pool of maintainers for powered aircraft. In addition, gliders were easily damaged in landings. Another disadvantage of gliders was that they tied up powered aircraft to be tow planes that could have been used in other ways to support the mission. This is especially true for the British who lacked a good transport plane and were forced to use bombers as tow planes. The construction of gliders with their fabric skin and wooden supports in an age of metal powered aircraft made the glider easily susceptible to adverse weather, both on the ground and in the air. For these aforementioned reasons the glider’s combat existence only spanned the last five years of World War II.

Following World War II, the United States hung onto its glider program until the early 1950s before dropping it completely. Technological advances made in aeronautics drastically improved the capabilities of military transport aircraft to the point where even light tanks could be dropped by parachute. In addition, aircraft were designed that could land on unimproved landing strips. Also, the physical shape of aircraft changed to a wide-body design, which allowed vehicles to roll on and roll off. The most noticeable shift was the development of rotary wing aircraft.

The helicopter could place groups of Soldiers almost anywhere with pinpoint accuracy and could extract them — a feat that a glider could not do. By the 1950s, helicopters were inserting and extracting Soldiers in the mountains and rice paddies on the Korean peninsula. The glider’s replacement found its beginnings in the Korean War and would come of age in Southeast Asia in the mid-1960s.

However, the mission template established by the German glider seizure of Eben Emael would be echoed throughout the decades. The attempt to free American prisoners of war in November 1970 in North Vietnam is a good example. The plan, under the command of Colonel Arthur ‘Bull’ Simons, was to take a small group of Special Forces Soldiers via helicopters from Laos into the Son Tay prison site, 23 miles from Hanoi, and rescue the POWs. Colonel Simons used the same detailed level of training and rehearsals for Son Tay that Lieutenant Witzig employed for Eben Emael. In order to train the raiders, an exact replica of the prison was constructed at Eglin Air Force Base in Florida where they rehearsed every aspect of the raid. A part of the plan included crash landing a helicopter inside of the prison walls to stun and shock the North Vietnamese soldiers so the raiders could rescue the prisoners before the guards started killing them. However, when the raid was executed on November 21, 1970, the prisoners had unfortunately been moved to a different prison site, but the well-rehearsed plan was executed flawlessly in only 27 minutes.

Not only was the assault on Eben Emael the debut of the combat glider, but it also set a precedent for all glider operations conducted in World War II and in the decades that followed. German military exploitation of the glider, which was caused by the restrictions imposed upon Germany following World War I, ironically provided military leaders with a unique insertion method that capitalized on the silence of the motorless aircraft. Additionally, glider insertion of troops behind enemy lines fit in well with Guderian’s concept of *Blitzkrieg*. The detailed planning based on sound

intelligence, months of full scale mission rehearsals, and extreme security measures combined with the revolutionary use of the silent glider and the powerful hollow charge made possible assault force ‘Granite’s’ success in reducing Eben Emael’s defenses. Although the United States and Great Britain initially lacked military glider programs, they learned from the German success at Eben Emael and quickly developed programs that dwarfed Germany’s pioneering program. The prominence of gliders may have fallen as quickly it rose, but the sound principals in training and execution on the objective demonstrated by Lieutenant Witzig’s platoon on Eben Emael established a timeless template for other military units to emulate throughout the ages.

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325th Airborne Infantry Regiment Website

U.S. Army Soldiers prepare for a glider mission. After World War II, the U.S. continued its glider program until the early 1950s.

TRAINING NOTES



Close Quarters Combat Training *Using the IDPA System*

CAPTAIN JAY SHEBUSKI

After competing for several years within the Glock Sport Shooting Foundation (GSSF), the International Defensive Pistol Association (IDPA), the International Practical Shooting Confederation (IPSC) 3-gun, and numerous local plate, steel, and pin shooting competitions, I have concluded that infantrymen shoot poorly at close quarters combat (CQC) distances (i.e. 0 to 25 meters). There are plenty of civilian men and women who shoot as a hobby who can routinely outshoot infantrymen. I attribute this to the methodology that the practical/tactical civilian shooting sports have developed, which creates shooters who can reflexively engage multiple targets quickly and accurately at CQC distances. The U.S. Army Infantry is 30 years behind these organizations in CQC weapons training and qualification. Recent U.S. Army publications such as FM 90-10-1 — Change 1 (*An Infantryman's Guide to Combat in Built Up Areas*) and chapter 14 of the Ranger Handbook covering urban operations touch on the topics of shot placement and engagement time, but the Infantry has yet to develop an effective system to evaluate, improve, and sustain those individual CQC marksmanship skills. I propose that the Infantry adopt such a

system. A CQC individual weapons training methodology that integrates IDPA, weapons currently assigned to infantrymen (M9, M4, and M249), and the imperatives published in chapter 14 of the Ranger Handbook and FM 90-10-1, C1.

IDPA

IDPA shooting matches place individual pistol shooters in multiple civilian “real world” scenarios/courses of fire (COF) where they are evaluated on shot placement, engagement time, and weapon-handling skills. It is a mini-individual live-fire exercise requiring use of cover and shooting on the move, with targets that require multiple hits and value head and chest hits highest.

How it works

There are commonly four to seven COFs during a one-day IDPA match. Each COF is constructed in a three-sided, earth-bermed bay. After a safety brief, shooters are broken down into squads. Squads then rotate through the COFs in a round-robin fashion. At each COF, an informal scenario brief is read and explained to the squad. The squad safety officer (SO), a senior more experienced shooter, gives this brief. The SO also gives the range commands, handles the shot timer, and follows the shooter through the COF (Figure 1). The standard IDPA range commands are, “Load and make ready, shooter ready, standby, start signal (start signal can be verbal, audio buzzer, i.e. timer, or visual at the discretion of the range master/OIC), unload and show clear, holster/sling, range safe.” Each shooter moves up to the start position, receives the commands and negotiates the COF. Upon completion, the range is cleared by the SO, and the shooter’s time is recorded. Each target is reviewed for shot placement score, and any observed penalties are assessed. The shooter’s score is then recorded on his score sheet. Those individuals not shooting help paste the target holes, reset reactive targets, or act as the scorer.

The structure of an IDPA match, with its round-robin rotation, safety briefs, organic shooting squad leadership, and range commands lends itself to easy understanding by platoon and company leadership.



Figure 1

TRAINING NOTES

More importantly, it is a simple system that supercharges the learning process because it:

- ✗ Allows an individual to watch more experienced shooters perform;
- ✗ Gives shooters immediate shot placement feedback;
- ✗ Allows a shooter to receive a “hot wash” on his performance from a senior leader; and
- ✗ Gives shooters scores that will rank them against every shooter issued their weapon.

Shot placement (Target)

The current IDPA target (Figure 2) is similar in overall size to the 25-meter E-type silhouette that is used for firing the Alternate Pistol Qualification Course (APQC), but has scoring areas that reward head and upper chest hits. Our infantrymen need a similar CQC target that rewards habitual head, upper chest, and pelvis shot placement. Center mass shot placement is not the CQC standard.

In CQC, enemy soldiers must be incapacitated immediately. Shots that merely wound or that are mortal but do not incapacitate the target instantaneously are only slightly better than clean misses. Members of a clearing team should concentrate on achieving solid, well-placed headshots. This shot placement is difficult for some soldiers to learn, having been taught previously to aim at center of mass.

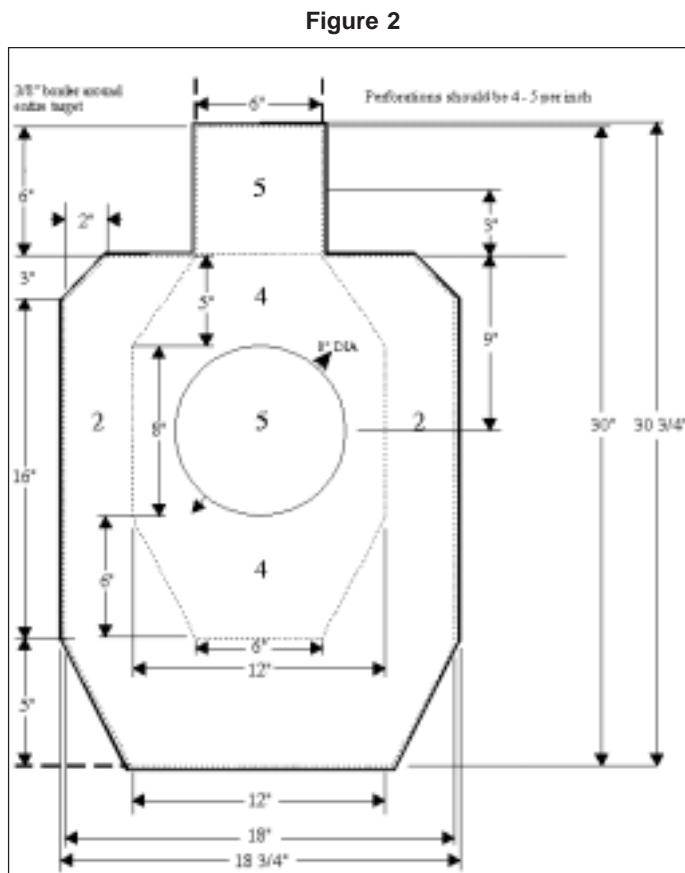
— FM 90-10-1, C1

Most close quarters engagements are won by who hits first and puts the enemy down. It is more important to knock a man down as soon as possible than it is to kill him.

— Ranger Handbook

An Infantryman must be trained to know where to place a shot that will knock down and/or kill the threat. He must be able to reflexively place those shots on multiple threats, continuing to engage the threat(s) until he has knocked them down and/or killed them.

The only shot placement that



guarantees immediate and total incapacitation is one roughly centered in the face, below the middle of the forehead, and above the upper lip. Shots to the side of the head above the horizontal line passing through the ear opening to just below the crown of the skull and from the cheekbones rearward to the occipital lobe are also effective. With practice, accurate shot placement can be achieved.

— FM 90-10-1, C1

I propose the U.S. Army Infantry adopt a CQC target template similar to the current IDPA model. The head scoring panel is identical. The upper chest scoring panel is similar, with no change to the heart scoring panel and the lung panel being shortened. Additionally, a pelvis scoring area, 18-inch by 5-inch, is placed just underneath where the waistline would be (Figure 3).

Scoring shot placement on the proposed CQC target with point values /points down Vickers Count: **head shots** are 5 pts/-0 pts down, **pelvis shots** are 5 pts/-0 pts down, **upper chest/heart** are 3 pts/-1 pts down, and **upper chest lung** shots are 2 pts/-2 pts down. The remainder of the target area is

scored as 1 point/-3. A target must have a minimum of 5 points scored or be penalized as a failure to neutralize the threat. All reactive or steel targets have a score of 5 points/-0. The points down or Vicker's Count scoring method is described in further depth below.

Scoring method

Scoring should be a component of shot placement, engagement time, and penalties. Currently, most infantry small arms training and qualification is conducted on a **PAR** time basis.

This means each string of fire will have a preset time limit to shoot the required number of rounds. As long as all shots are fired within the time limit, points scored on the target/targets is all that counts.

— IDPA Official Rule Book

As lawman and gun writer Bill Jordan observed, there is no second place winner in a gunfight. The shooter who can accurately place multiple shots on his opponent first, wins. The time difference between winning and losing may be .30 of a second. Smooth is **not** fast; fast **is** fast. Par time cannot be the CQC weapons training or qualification standard. I propose that the Infantry utilize an alternative time scoring method for individual CQC weapons training and qualification. This method requires what is commonly referred to as a shot timer to record engagement time.

A shot timer is a handheld computer that records the time it takes a shooter to initially engage a target, the time “splits” between shots and the total time from the start “tone” or first shot to last (i.e. a COF may begin with the first shot fired or the audible tone of the shot time). When using a shot timer, the Vickers Count scoring method should be used.

Vickers Count (for use when shooting speed shoots and scenarios) Vickers Count scoring is based on assessing the shooter a time penalty for every point they drop from the total possible point score (points down). To score Vickers Count simply take

the time it took to complete the string of fire (raw time) and ADD five tenths (.50) of a second for each point down from the possible score. Add any applicable penalties and total for your final score. As many shots as desired may be fired but only the best hits as specified by the course description will be scored (Example: If two hits per target are specified in the course description and you fired three shots, ONLY the two highest scoring hits will count for the score).

— IDPA Official Rule Book

Figure 3



Vickers count scoring example #1: The COF required two hits on T1. Total point score is **7** ($5 + 2 = 7$), so no failure to neutralize penalty. Total points down is **2** ($0 + 2 = 2$).

Total time from shot timer is 1.25 seconds.

$$\underline{2 (.50) = 1 + 1.25 = 2.25}$$

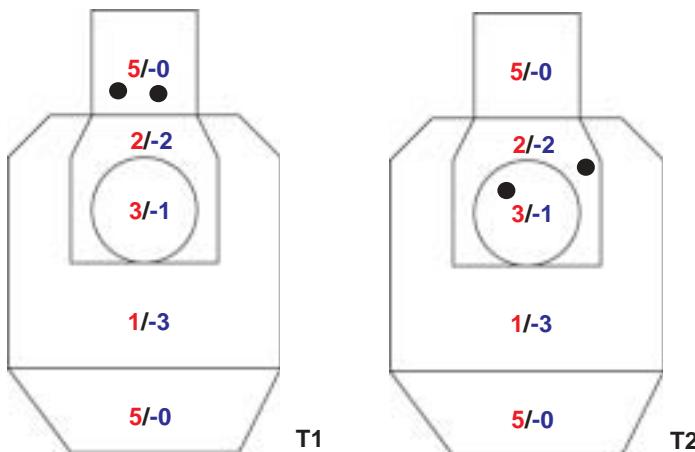
Points down x .50 + total time
= score

*When utilizing Vicker's Count scoring, the **low score is best**.

Vicker's count scoring example #2: The COF requires 2 body hits per target. Total point score for T1 = 10, T2 = 5; no failure to neutralize. Points down T1 = 0, points down T2 = 3; total = 3. Total time from shot timer = 2.56 seconds.

$$\underline{3 (.50) = 1.5 + 2.56 = 4.06}$$

Points down x .50 + total time = score



Tactics, Techniques, and Procedures (TTPs) and Penalties

The IDPA has developed TTPs into its scoring system. Most if not all of them were created to develop innate survival and weapon handling skills, which would benefit infantrymen.

Hits on a Non-threat Target: A single five-second penalty will be assessed per non-threat target hit. If you have more than



Figure 4

one hit on a non-threat target, you will still ONLY be a single five-second penalty for that target.

— IDPA Official Rule Book

This IDPA TTP focuses on improving what is referred to as **target discrimination** for infantrymen. C1, FM 90-10-1 describes this as a vital skill for our infantryman to acquire and sustain.

Target discrimination is the act of quickly distinguishing between combatant and noncombatant personnel and engaging only the combatants. U.S. forces engage in CQC in order to apply discriminating combat power and limit unnecessary casualties among noncombatants. Therefore, target discrimination is vital in CQC.

— FM 90-10-1, C1

Cover, when available, should be utilized by infantrymen to minimize their exposure to enemy fire. Currently, the use of cover is not part of an individual infantryman's marksmanship training. The proper use of cover is an evaluated TTP during IDPA matches and should be included in every infantryman's CQC marksmanship training (Figure 4).

Proper use of cover: If cover is available, the shooter must use it. More than 50 percent of the shooter's upper torso must be behind cover when engaging threat target and/or reloading. If in the opinion of the safety officer (SO) adequate cover is not being used (if the shooter does not have to move between target engagements, this is a strong indicator that adequate cover is NOT being used), the SO will yell **COVER**. If the competitor does NOT immediately move to adequate cover, a three-second procedural penalty will be assessed. All reloads must be executed behind cover if cover is available and must be completed before leaving cover. (Shooters may not move from one position of cover to another with an empty weapon.) Failure to reload behind cover or moving from cover with an empty weapon will result in a three-second procedural penalty per infraction.

— IDPA official Rule Book

Training

Utilizing this methodology, commanders should be given the opportunity to develop CQC marksmanship training COF that

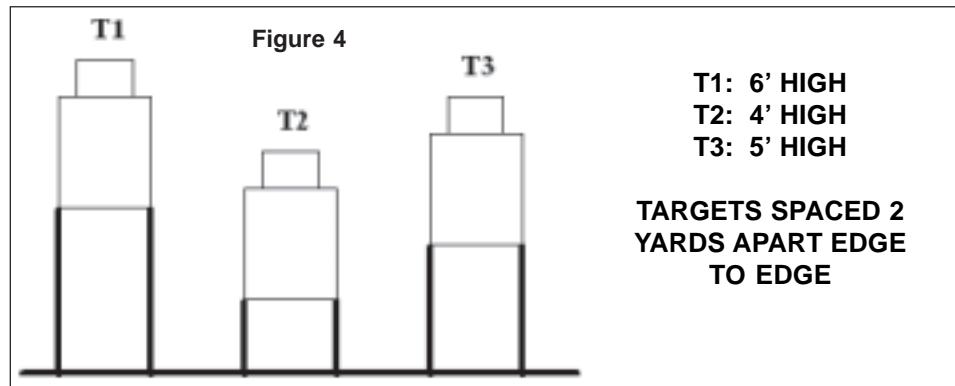
TRAINING NOTES

directly reflect mission requirements; for instance, several scenarios might depict a soldier conducting gate guard, a HMMWV patrol, a check point, moving down a hallway, an ambush in an alley, etc. Countless COFs are available to commanders on the Internet.

Several sites of interest are: www.idpa.com, www.tacticalshooters.com, and www.sportshooter.com.

Qualification

The IDPA qualification COF is composed of three stages fired at three targets, which are placed two yards apart at varying heights (Figure 4). It must be fired as one continuous COF. No breaks between strings. Shooters receive a score utilizing Vickers Count and



are ranked with shooters firing similar weapons. I recommend the Infantry adopt a modification of the IDPA qualifier shown in figures 5, 6, and 7.

* Engagements begin with shot timer

tone from prescribed start position.

* A 55-gallon barrel and a Bianchi-style barricade (a wall 24-inches wide by 6-feet tall) are needed to fire the qualifier.

* Body shot placement is shooter's choice.

FIGURE 5 — M9/M4/MP5 CQC INDIVIDUAL WEAPONS QUALIFICATION

STAGE1	DISTANCE	START POSITION	SHOT PLACEMENT per Tgt	TARGET(S)	RDS
String 1	4 meters	Low ready	2 hits pelvis, 1 head	T1	3
String 2	4 meters	Low ready	2 hits pelvis, 1 head	T2	3
String 3	4 meters	Low ready	2 hits pelvis, 1 head	T3	3
String 4	4 meters	Low ready	2 hits head	T1-T3	6
String 5	4 meters	Low ready, weak hand <i>(M4/MP5, weak shoulder)</i>	1 hit pelvis or head	T1-T3	3
String 6	4 meters	Back to target, low ready, 3 rounds in weapon, 1-3 round magazine in ammo pouch. At start, turn & engage T1-T3, 1 round ea., slide lock reload, engage T1-T3	2 hits head	T1-T3	6
String 7	4 meters	Low ready, strong hand <i>(M4/MP5, weak shoulder)</i>	2 hits pelvis, 1 head	T1-T3	6
STAGE2	DISTANCE	START POSITION	SHOT PLACEMENT per Tgt	TARGET(S)	RDS
String 1	8 meters	Low ready, engage moving forward to 4 m fault line	2 hits body	T1-T3	6
String 2	4 meters	Low ready, engage moving backward	2 hits body	T1-T3	6
String 3	8 meters	Back to target, low ready, 6 rounds in weapon, 1-6 round magazine in ammo pouch. At start, turn & engage T1-T3, 2 rounds ea., slide lock reload, engage T1-T3	4 hits body	T1-T3	12
String 4	8 meters	Low ready, strong hand <i>(M4/MP5, weak shoulder)</i>	2 hits body	T1-T3	6
STAGE3	DISTANCE	START POSITION	SHOT PLACEMENT per Tgt	TARGET(S)	RDS
String 1	15 meters	Low ready, drop to knee, engage T1-T3, 2 shots each from either side of 55-gal. barrel in tactical order, tactical reload, switch sides and engage T1-T3, 2 shots each in tactical order.	2 hits body	T1-T3	12
String 2	20 meters	Low ready, engage T1-T3, 2 shots each from either side of barricade, in tactical order, tactical reload, advance to 55-gal. barrel, drop to knee, engage T1-T3, either side of 55-gal. barrel, in tactical order.	2 hits body	T1-T3	12
String 3	15 meters	Low ready, drop to knee, engage T1-T3, 2 shots each from either side of 55-gal. barrel in tactical order.	2 hits body	T1-T3	6

FIGURE 6 — M249 CQC INDIVIDUAL WEAPONS QUALIFICATION

STAGE1	DISTANCE	START POSITION	SHOT PLACEMENT per Tgt	TARGET(S)	RDS
String 1	4 meters	Low ready	3 hits body	T1	3
String 2	4 meters	Low ready	3 hits body	T2	3
String 3	4 meters	Low ready	3 hits body	T3	3
String 4	4 meters	Low ready	3 hits body	T1-T3	9
String 5	4 meters	Low ready, weak shoulder	3 hits body	T1-T3	9
String 6	4 meters	Back to target, low ready, 9 round belt in weapon, 1-9 round magazine in ammo pouch. At start, turn & engage T1-T3, 3 round burst each, 3 round mag. reload, engage T1-T3 burst each	6 hits body	T1-T3	18
String 7	4 meters	Low ready, weak shoulder	3 hits body	T1-T3	9
STAGE2	DISTANCE	START POSITION	SHOT PLACEMENT per Tgt	TARGET(S)	RDS
String 1	8 meters	Low ready, engage moving forward to 4 m fault line	3 hits body	T1-T3	9
String 2	4 meters	Low ready, engage moving backward to 8 m fault line	3 hits body	T1-T3	9
String 3	8 meters	Back to target, low ready, 9 round belt in weapon, 1-9 round magazine in ammo pouch. At start, turn & engage T1-T3, 3 rd burst each, magazine reload, engage T1-T3 3 rd burst each	6 hits body	T1-T3	18
String 4	8 meters	Low ready, weak shoulder	3 hits body	T1-T3	9
STAGE3	DISTANCE	START POSITION	SHOT PLACEMENT per Tgt	TARGET(S)	RDS
String 1	15 meters	Low ready, drop to knee, engage T1-T3, 3 round burst each from either side of 55-gal. barrel in tactical order, switch sides and engage T1-T3, 3 round burst each in tactical order.	6 hits body	T1-T3	18
String 2	20 meters	Low ready, drop to knee, engage T1-T3, 3rd burst each from either side of barricade, in tactical order, advance to 55-gal. barrel, drop to knee, engage T1-T3, 3 rd burst each either side of 55-gal. barrel, in tactical order.	6 hits body	T1-T3	18
String 3	15 meters	Low ready, drop to knee, engage T1-T3, 3 rd burst each from either side of 55-gal. barrel in tactical order.	3 hits body	T1-T3	9

FIGURE 7 — CQC INDIVIDUAL SCORING CLASSIFICATIONS

M4/MP5	VICKERS COUNT SCORE	CLASSIFICATION	M249	VICKERS COUNT SCORE	CLASSIFICATION
	80.41 OR LESS 80.42 - 99.57 99.58 - 129.18 129.19 - 181.00 181.01 OR MORE	MASTER EXPERT SHARPSHOOTER MARKSMAN NOVICE		91.76 OR LESS 91.77- 111.43 111.44 - 141.82 141.83 - 195.00 195.01 OR MORE	MASTER EXPERT SHARPSHOOTER MARKSMAN NOVICE
M9	VICKERS COUNT SCORE	CLASSIFICATION		<p>Captain Jay Shebuski is currently assigned to the 1-307th Infantry (TS), 5th Brigade, 87th Infantry at Fort Jackson, South Carolina. He received his commission in 1989 through the University of Wisconsin, Stevens Point. Past assignments include serving as a Bradley platoon leader during Operation Desert Storm and a company commander with the 10th Mountain Division's 2nd Battalion, 87th Infantry. Shebuski is a master-rated IDPA and GSSF shooter who competes regularly across the Southeastern United States.</p>	
	98.82 OR LESS 88.83 - 120.00 120.01 - 152.73 152.74 - 210.00 210.01 OR MORE	MASTER EXPERT SHARPSHOOTER MARKSMAN NOVICE			

The Soldier's Answer to Tactical Perimeter Security

The Battlefield Anti-Intrusion System

PHILLIP CHEATHAM

One of the most critical missions facing leaders at all levels today is that of providing security and protection for their personnel. During deployments or field training exercises, commanders are responsible for providing security for government property and personnel. The key element in solving this problem is the ability to receive early warning of an approaching threat.

The need to provide early warning is well documented and can be traced back as far as the Civil War and earlier. During the Civil War and especially in World Wars I and II, Soldiers would manufacture crude devices to assist in their protection and provide themselves with early warning of approaching danger. Some of these devices were as simple as tying empty tin cans on trip strings/wires located in front of their positions. A more sophisticated early warning device is the pyrotechnic trip flare that is still in use today.

The Army approved a requirements document for the Platoon Early Warning System (PEWS) on July 14, 1970. Development began of the PEWS (AN/TRS-2) and was later fielded in the late '70s and early '80s. The initial buy was for a total of 10,541 systems, but only 5,500 systems were ever delivered. In May 1991, orders for the PEWS were halted based on feedback from users in the field. Soldiers advised that the system consistently failed to detect targets or provided faulty alarms; transmitters would not provide infrared alarms at the required distance (1,500 meters); and the battery life was limited. Even though funding for this program was stopped, commanders continued to request that similar systems be developed as Soldiers continued to create makeshift devices to provide protection and early warning.

As a result of this demand, the U.S. Army Infantry Center (USAIC) began to develop requirements for a replacement system. In May of 1997, the Battlefield Anti-Intrusion System (BAIS) operational requirements document was approved by the Department of the Army and development began.

While it was the best the Army had at the time, PEWS is being retired after more than 20 years of service. The replacement system — BAIS — is a much lighter and more reliable system. Instead of worrying about a costly, unreliable system, Soldiers will soon be able to rest easier during deployments knowing there is an easily programmed, highly dependable, early warning system watching out for them.

As the overseer of the BAIS, the Product Manager, Force Protection Systems at Fort Belvoir, Virginia, continues to place emphasis on ease of deployment, operation, and recovery. Using the requirements outlined by USAIC, the basic BAIS will provide the capability for early detection of vehicles and personnel to enhance Soldier survivability during ambush and defensive operations. The sensors used by BAIS will possess sophisticated



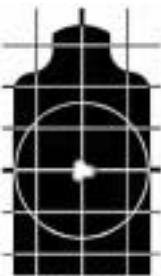
software algorithms that determine what type of potential threat is activating the sensor (people, wheeled vehicle, tracked vehicle), which will greatly enhance a Soldier's ability to use the appropriate tactical response.

The BAIS consists of a handheld monitor, sensors, and a communications subsystem. It will come in a durable, soft-sided carrying case with a system weight of less than 15 pounds. No single component will weigh more than 1.65 pounds, making it less burdensome for the Soldier. Detection range of the sensors provides frontage coverage for up to 450 meters with radio line of sight transmission range being up to two kilometers. It also can be linked to a notebook computer to provide increased situational awareness. Since the system's monitoring device can accommodate a large number of sensors, it makes the system ideal for conducting area security missions. The BAIS will be capable of being rapidly emplaced and retrieved by personnel minimally trained in the use of the system.

The Army expects to acquire almost 6,900 BAIS systems. The basis of issue for the new system is one per infantry platoon, two per military police platoon, one per reconnaissance platoon, and one per combat engineer platoon. The roll-out schedule includes initial fielding in the third quarter of fiscal year 2005. Currently, Company A, 1st Battalion, 505th Parachute Infantry Regiment, has deployed with two prototypes; and the 3rd Brigade, 2nd Infantry Division (Stryker Brigade Combat Team) has deployed with 30 of the production version of the system. This will be the first "real-world" test for the BAIS.

For more information, contact Lieutenant Colonel Gene Stockel via e-mail at eugene.stockel@belvoir.army.mil or call (703) 704-2416 or DSN 654-2416.

Phillip Cheatham currently serves as a security analyst with Computer Sciences Corp. in the Electronics and Special Developments Division, Directorate of Combat Developments.



Preliminary Rifle Instruction *BEFORE* the First Bullet Flies

SECOND LIEUTENANT BRIAN BASCOM

Shoot, move, and communicate are the three implied tasks for every drill or tactic an infantry unit performs. Every leader knows how important they are and schedules as much time practicing each of the three as possible. In the case of marksmanship, our focus tends to be on the time spent on the range; what we often miss is the opportunity to maximize the effectiveness of our range time with cheap, hands-on preliminary rifle instruction (PRI).

The payoff of prepared PRI sessions before any range or live-fire exercise is twofold. First, the Soldiers, and thus the unit, perform better and build confidence in their abilities. Second, teaching PRI is a great way for leaders at all levels to develop rapport with their Soldiers and establish their own credibility with the tools of the trade. Once a range gets underway or an exercise commences, there is little opportunity for one-on-one time with the Soldiers, and the coaching that takes place will be primarily between the Soldier and his squad leader or NCOIC. PRI lends itself to team building in a unique way.

This article discusses some techniques and considerations that will make your PRI sessions effective and efficient. The focus remains on the PRI instructor; the principles are the same for Soldiers from corporal to colonel.

Goals of the PRI Instructor

As a PRI instructor, you will be called on to assist your Soldiers in successfully qualifying with the M4 or M16A2 rifle by helping them develop, refine, or refresh their understanding of basic rifle marksmanship before they head to the range. This training guidance is intended to supplement the Army's field manuals by highlighting some commonly encountered problems in marksmanship training and presenting techniques to deal with those problems. The techniques provided are prescriptive, not directive — use them if they help, but ignore them if they don't.

Your goals should be to:

- (1) Teach proper rifle marksmanship fundamentals;
- (2) Help the Soldiers understand how to improve themselves;
- (3) Encourage and motivate the Soldiers to excel; and
- (4) Develop rapport with the Soldiers.

Your success in both motivating and understanding your Soldiers will directly affect how much you will be able to teach them, as it will determine how much they will be willing to learn from you. Bear that in mind as you approach this training and coaching on the range later, and you will find your patience rewarded with superior performance by the Soldiers you have trained.

The first goal is self-explanatory. The second goal, helping the Soldiers understand how to improve themselves, requires that you go beyond the simple teaching of "steady position, aiming, breath control, trigger squeeze" to explaining why these factors are important and training the Soldiers how to recognize signs of poor performance on their own and correct themselves. Most of the guidance provided here addresses this second goal.

Preparing For PRI Instruction

The first step is to do your homework. FM 23-9, *M16A1 and M16A2 Rifle Marksmanship*, lays out the fundamentals of teaching rifle marksmanship in Chapter 4 as well as provides a checklist for coaches. STP 21-1-SMCT, *Soldier's Manual of Common Tasks*, discusses the steps for zeroing and maintaining the M16A1, M16A2, and M4. Chapter 3 of FM 23-10, *Sniper Training*, addresses the same points of marksmanship as does FM 23-9, but in more depth. *Infantry Magazine* has run numerous articles on dealing with the logistics and scheduling from squad to battalion levels.

In addition to using these materials, consider photocopying or copying some of the diagrams or illustrations to a flip chart for use in your PRI. Showing how a bullet drops at various ranges makes a much better impression than simply waving your hands to simulate a bullet's flight.

The next step is to check yourself against someone else who has read the materials. In the eight-step training process, this is called "certifying the trainer." It is especially important in marksmanship training because every Soldier in the Army knows how to fire a rifle, regardless of their current level of skill. Form buddy teams and critique each other's dry-fire performance as well as knowledge of the book material. Be as receptive to constructive criticism as you would like your Soldiers to be. Even the best marksman loses his edge when he only qualifies with his rifle once or twice per year.

Conducting Preliminary Rifle Instruction

After you have squared yourself away, make sure you have all of the accessories necessary for successful training: rifles, a handful of dimes or washers to balance on the shooter's rifle barrel to test steadiness, a few diagrams of critical points (like the breath control diagram in FM 23-9), and a pocketful of patience.

At the range and during PRI, time is at a premium and everyone wants to get done quickly. Some Soldiers respond well to this and demonstrate proficiency immediately. Others' skills degrade under

TRAINING NOTES

stress or time pressure. These Soldiers will need your patience, and you must give it to them. The purpose of PRI isn't to simulate combat or introduce stress, but to lay the fundamentals of marksmanship so that the Soldier is more likely to act correctly when under stress.

During PRI instruction, what frequently happens is the Soldiers who are more current get checked first and begin to coach the ones who require more training. This is generally not acceptable since the proficient Soldiers don't get sustained attention on more advanced points that they need and then coach less-proficient Soldiers without certification or guidance.

A more balanced technique is to keep everyone doing the same task (dime/washer drill, dry fire) until the trainer has inspected all of the Soldiers. The trainer spends a few minutes with each Soldier, gives them specific feedback ("you're holding your breath – practice firing in your natural pause"), and allows them to practice while he makes the rounds. If a Soldier has mastered a particular drill, the trainer can pair him with another Soldier to observe a specific aspect of the practicing Soldier's technique (watch him to see if he holds his breath – nothing else).

When dealing with practicing Soldiers and instructing their coaches, you must ensure that everyone stays calm and helpful. A coach that belittles or embarrasses his shooter could spend his time more productively building his own upper-body strength until his attitude realigns with that of the PRI instructor. Remember, every Soldier loses if his buddy can't shoot well.

Tips and Techniques

Breath Control

One common error occurs when the shooter rests his body flat on the ground, where the rise and fall of his chest moves his sights up and down. Have the Soldier bring his elbows in towards his body and lift his chest off of the ground.

Not everyone recognizes their natural pause. "Breathing practice" sounds silly, but often gives Soldiers a better awareness of how long they have to get a shot off before they need to resume breathing. Incorporated with the dime/washer drill, the Soldier can see his sight picture start wavering after his natural pause expires. Especially when live-firing, Soldiers will try to align their sights well past their natural pause and must be reminded to breathe.

A quick way to liven up a PRI session and re-emphasize the importance of breath control and natural pauses is to sprint 20 meters, go prone, try to align the sights and dry fire. Watch the really fast shooters, as they are almost certainly ignoring their breathing.

There are two types of natural pauses. Encourage your Soldiers to try both, but emphasize the "plateau" method for rapid fire. It's what they will need to qualify and in combat.

Steady Position

We frequently ignore firing hand position, but it can play a large role in a consistent stock weld and good trigger pull. Hold the pistol grip

high with the web of the firing hand as high on the grip as is practical. The Soldier won't initially feel comfortable with this grip, but will soon become so. The raised grip places the arm more in line with the axis of the rifle, reducing apparent recoil and aligning the trigger finger with the trigger. It also facilitates a better cheek and stock weld by pulling the rifle back more directly into the shoulder pocket.

Some Soldiers will put a death grip on their pistol grip, which interferes with a smooth trigger pull, while others hold the grip loosely and don't return to the same position after every shot. One easy way to tell if the Soldier is gripping the rifle with the appropriate tightness is to look at their hand. Light tension shows in the hand but the knuckles aren't white or tight. Another way is to ask them if their hands are getting tired.

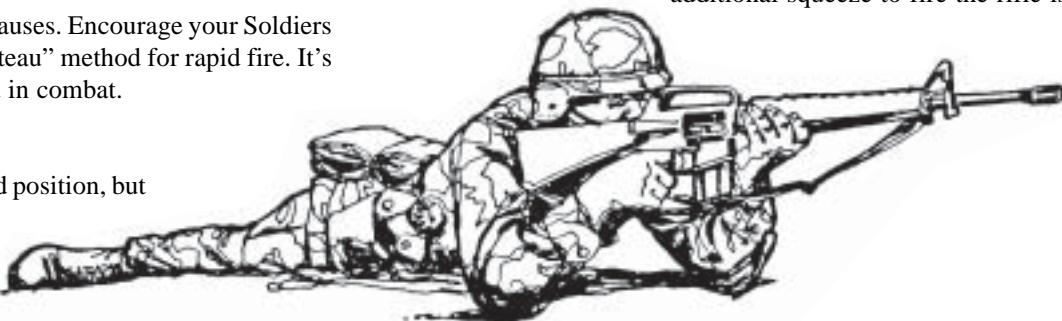
Natural point of aim can make a large difference. If you suspect a Soldier isn't aligned with his natural point of aim, have him relax his aim, close his eyes, then aim again without opening his eyes. When he opens his eyes, ask him what precisely he's pointing at. If he's a hard case with good muscle memory, let him simply hold an aim for awhile — it only causes fatigue if he's forcing his point of aim. Incidentally, once Soldiers go prone, they are often reluctant to squirm around to align to their natural point of aim. Encourage them and demonstrate moving your body, elbows, and feet to place everything in alignment so you can hold your position for extended periods.

The cheek weld is important for the same reason the shoulder/stock weld is important — both make it more likely that the next shot will be like the last shot (repeatability). Watch to see that your Soldiers are placing their rifles in the same spot, wherever it may be on their particular anatomy, every time. Consistency is the key.

The non-firing hand should be relaxed, cupping the rifle handguard, and as nearly vertical as possible (harder with an M203, however). The vertical alignment places the rifle's support on bone and not shaky muscle. For M203 gunners, the key is to have them hold farther forward on the handguard as opposed to letting their elbows creep away from their body's centerline. For all Soldiers, the elbows should be as tight into the body as possible without upsetting their natural point of aim.

Trigger Squeeze

One of the main tricks to teach is called "staging the trigger." The Soldier begins to take up slack on the trigger as soon as the rifle is pointed in the vicinity of the target. With multiple targets or pop-ups, that can be before the target even appears. Once the Soldier has taken all of the slack out of the trigger, his slight additional squeeze to fire the rifle is





Staff Sergeant Charles B. Johnson

Breath control, steady position, trigger squeeze, and aiming are all important fundamentals of marksmanship. It is also important to ensure Soldiers understand why these are so crucial. They should also be able to recognize signs of poor performance and correct themselves.

both quicker and less likely to move his point of aim. An added bonus is that the slight tension on the trigger virtually ensures that the Soldier's firing grip won't be too loose.

Dry firing is the best practice for dealing with two trigger-related problems: the flinch and the yank. By having the Soldier stage the trigger, then squeeze smoothly on command, the PRI instructor can minimize the flinch reflex some Soldiers have and develop muscle memory of a smooth pull essential to accuracy. Carefully observed group practice in this area can yield dramatic benefits for Soldiers of varying skill levels. Professional shooters do far more dry fire than live fire for precisely that reason. The drill is: "Charge. Point. Stage. Aim. Fire." Complete many repetitions. Five minutes of this is time well-spent, especially if you are diligent and walk around to see who keeps yanking their trigger when you say "Fire."

Do you use the knuckle or tip of the

finger to pull the trigger? Which do you teach? That's easy — teach whichever that particular Soldier was taught in his basic training. The Army has taught both methods over the years, often simultaneously in different basic training companies. Trying to "re-educate" a Soldier from one technique to the other is a plan for disaster. Both work well, and the only thing to watch for with the knuckle pull is that the first knuckle is used. Big-handed Soldiers might be more comfortable with the knuckle pull, and vice-versa for Soldiers with smaller hands, but the difference is rarely significant. If a Soldier can't hit his target, check everything else before worrying about changing this.

Don't yell at a flincher. They'll only get worse. Calm, supportive practice is the only remedy. Remember, we want this guy to shoot well when he's covering us some day.

Aiming

For all of the attention spent on aiming, it's really the least critical of the areas. If

you ensure that the Soldiers know what their sight picture should look like, and their rifle is zeroed properly, most of your aiming issues will go away.

Pick a point. When shooting, have your Soldiers specify exactly what they are aiming at. "Center mass" is imprecise and leads to imprecise groups. "The white dot on the zeroing target" is much clearer and will lead to tighter grouping. Remember, "aim big, miss big — aim small, miss small." If you aim at center mass, you might miss the target; if you aim at the belt buckle, you'll still hit center mass. For PRI, it is particularly important to provide targets that have specific, clearly visible small points to aim at.

Soldiers who need to re-zero often, or shoot tight groups that meander around the target, don't have aiming problems. They have problems with their firing position. PRI instruction enables them to correct their loose or inconsistent firing stance before they waste time and bullets at the range.

Eye fatigue is a factor in aiming. A Soldier who can't focus to aim needs to close his eyes and relax a few moments — his eyes haven't worked this hard in quite a while and they need to be conditioned gradually like every other muscle group. Encourage Soldiers to look with both eyes until they are aiming at a specific target to reduce fatigue and improve situation awareness.

Firing is an integrated act. For every drill you do, make sure the Soldiers are aiming at a particular, specific target before they pull the trigger — **every time**. Marksmanship skills learned in isolation are of limited use when firing "for real."

By watching and consistently emphasizing the perishable fundamentals of marksmanship in an atmosphere of continuous improvement, PRI can improve both marginal and excellent shooters while ensuring the time spent locked and loaded returns the highest payoff for the individual Soldier and his unit.

Second Lieutenant Brian Bascom is currently serving as a platoon leader with 2nd Battalion, 142nd Infantry (Mechanized) in Texas.



Courtesy photo

The Laser Marksmanship Training System's manufacturer now offers an indoor pop-up target engagement capability that allows shooters to complete a dry fire on an indoor, scaled version of the standard qualification course.

PREDICTING LIVE-FIRE MARKSMANSHIP: A Simulation-Based Tool for the RC Trainer

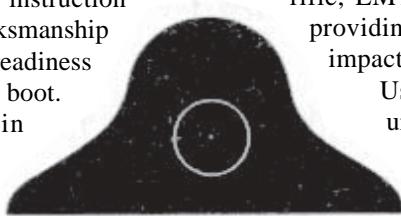
JOSEPH D. HAGMAN

Constraints on training time, ammunition, and access to live-fire ranges make it a real challenge for Reserve component (RC) trainers to sustain their Soldiers' marksmanship proficiency. To provide some relief, Master Sergeant Donald Riley and I published an article in the Summer 2002 issue of *Infantry Magazine* (pages 11-13), that describes a simulation-based, home-station program of instruction (POI). The POI is designed to produce rifle marksmanship proficiency levels that meet — or beat — unit readiness standards while saving time and ammunition to boot.

The U.S. Army Research Institute, in partnership with the U.S. Army Reserve Command's marksmanship executive agent, the 84th Division (Institutional Training), has enhanced this POI by placing another tool in its training and evaluation tool kit. This article describes what this tool looks like, how it works, and how it can help units meet the challenge of marksmanship sustainment training.

The POI

As described in Appendix C of FM 3-22.9 (*Rifle Marksmanship M16A1, M16A2/3, M16A4, and M4 Carbine*), the POI relies on the use of the Laser Marksmanship Training System (LMTS), a



laser-emitting device that allows Soldiers to engage targets without firing live ammunition. The device's major components include a battery-powered laser transmitter, a metal rod (mandrel) to which the transmitter is attached, a variety of laser-sensitive targets, and one or more laptop computers. With one end of the rod holding the transmitter and the other end slipped into the muzzle of the rifle, LMTS lets Soldiers fire their own weapons while providing feedback on both point of aim and point of impact.

Using LMTS, the POI calls for Soldiers to first undergo a series of three dry-fire training exercises designed to promote a firm grasp of marksmanship fundamentals (steady position, aiming, breath control, and trigger squeeze) followed by a fourth exercise where shooters get the opportunity to dry fire a simulated Alternative Qualification Course C (ALT-C) with an electronic replicate of the ALT-C paper target. LMTS ALT-C scores are then used for evaluation purposes to:

- Predict Soldiers' chances of first-run, live-fire ALT-C qualification, and
 - Separate shooters who need remediation (unlikely live-fire qualifiers) from those who don't (likely live-fire qualifiers).
- Until now, the POI's live-fire predictions have applied only to

ALT-C because an LMTS version of the Army's standard pop-up target qualification course has been unavailable. Recently, however, the LMTS' manufacturer (Beamhit, Inc.) has added a pop-up target engagement capability that now lets shooters dry fire an indoor, scaled version of the standard qualification course. The addition of this enhanced capability has made it possible to proceed with development of a tool that RC trainers can use to predict Soldiers' chances of first-run, live-fire qualification on the standard qualification course from scores fired on LMTS' simulated pop-up course.

The Tool

To develop the tool, we simply entered the first-run LMTS and live-fire target hit scores of 110 Idaho RC Soldiers into the prediction software program previously described in the September-December 2000 issue of *Infantry Magazine* (pages 10-12). Table 1 shows the resulting prediction tool created in the form of a look-up table.

The tool is easy to use. Once your Soldiers have fired the LMTS version of the standard qualification course, plug their individual hit scores into Column 1 of the table and read across to predict each Soldier's chances of first-run live-fire qualification. A Soldier firing an LMTS hit score of 28, for instance, would be predicted to have an 80-percent chance of qualifying "marksman" (Column 2), a 20-30 percent chance of qualifying "sharpshooter" (Column 3), and less than a 10-percent chance of qualifying "expert" (Column 4). It's that easy.

The Payoff

So how can this prediction tool help to better your rifle marksmanship sustainment training program? First, the tool's predictions can be used during pretesting to identify those Soldiers who have a reasonable chance, say 80 percent or better, of first-run qualification and those who don't. You can then maximize the payoff from your training resources by targeting the Soldiers in need of remediation before they fire for record on the range.

Second, the tool can be used during post-testing to determine when enough remedial training has been provided (that is, when the chances of a Soldier qualifying on the first try have been boosted to an acceptable level). Thus, time won't be spent overtraining those who have already regained their proficiency, thereby leaving time for you to concentrate on those who haven't.

Third, you can use the tool to ensure your unit meets or exceeds the live-fire marksmanship proficiency standard you select. Suppose you set the standard at 80-percent first-run qualification. If you then train Soldiers to a point where they can fire at least 28 hits on LMTS, then you can be reasonably confident that 80 percent of them will qualify the first time out on the range at marksman-level or better.

Fourth, and lastly, you can use the home station LMTS scores in place of scores fired on the range for purposes of yearly qualification or validation when outdoor facilities are not readily available. Of course, the notion of using simulation-based scores in place of live-fire scores for qualification purposes is still

Chances of a Live-Fire Score of ...

LMTS Score	23-29 Marksman	30-35 Sharpshooter	36-40 Expert
5 or less	10	--	--
6	20	--	--
10	30	--	--
14	40	--	--
17	50	--	--
19	--	10	--
21	60	--	--
24	70	20	--
28	80	--	--
29	--	30	--
32	--	40	--
34	90	--	10
35	--	50	--
39	--	60	--
40	--	--	20

Table 1 - Prediction Tool for the Standard Qualification Course

controversial, but when the time comes for its Army-wide acceptance, you'll be good to go without delay.

What Next?

We have yet to collect the marksmanship data necessary to determine if the predictions developed for the RC also apply to the Active component (AC). We'll let you know as soon as we have the answer. In the meantime, the RC now has two live-fire prediction tools in its LMTS tool kit:

- One for predicting the chances of first-run qualification on ALT-C, and
- One for predicting the chances of first-run success on the standard qualification course.

Use of either tool will enable the RC to take a giant step toward meeting the Total Army readiness challenge by enhancing the effectiveness of home-station, rifle marksmanship training and evaluation while saving precious time and ammunition in the process.

If you have any questions or comments about the research conducted to support prediction tool development, you can contact me at the U.S. Army Research Institute field office in Boise by calling (208) 334-9390 or e-mailing jhagman@boisestate.edu. Questions about LMTS fielding plans and instructor certification training should be directed to Master Sergeant Donald Riley at (404) 469-7195 or donald.riley@us.army.mil.

Dr. Joseph D. Hagman is a senior research psychologist at the U.S. Army Research Institute's field office at Gowen Field, Idaho. Since receiving a Ph.D. in engineering psychology from New Mexico State University in 1975, his research interests are in human learning and memory, and more recently, in Soldier/crew performance on marksmanship and armor-related simulation and training devices.

THE SPHINX TARGET

Marksman Training in Three Dimensions

MASTER SERGEANT MARC V. PALMER

Editor's Note: This article was first published in the January-April 1999 issue of *Infantry Magazine*.

No matter what you think about the state of Army marksmanship training, certain items are absolutely essential to conducting worthwhile training. The most basic of these items are weapons, ammunition, ranges, and targets.

Regardless of the location or the element conducting the training, targets are almost always two-dimensional. While two-dimensional targets are effective for training Soldiers in basic rifle marksmanship, they stifle a Soldier's further development and the trainer's ability to simulate battlefield targets.

During my tenure as the NCO of the Special Operations Target Interdiction Course at Fort Bragg, one of the instructors, Sergeant First Class John Simpson, came to me with a training problem. He wanted a target that presented a three-dimensional profile of an enemy soldier and that also afforded a scoring method.

In other sniper courses, rag-filled dummies were used on field fire ranges where they were laid out to represent enemy soldiers lying prone on the ground. Some dummies are made to simulate the head and shoulders of a soldier observing from a fighting position. Scoring hits on these dummies is very difficult, and SFC Simpson wanted to make it easier to evaluate the number of hits.

After a few minutes

of discussion, we went to the target shed and grabbed two E-type silhouettes and came up with a target that we call the Sphinx:

Cut the first silhouette (head target) across the chest 19 inches below the top of the head. Then cut one entire shoulder away and cut a slit from the bottom of the target halfway up toward the head. Score a line on the second (base) target across the chest 19 inches below the head and then fold along this line. Cut a three- or four-inch slit upward from the center of the target bottom for the tab on the "body" strip. Also slit the base target from the top of the head downward to accommodate the head target. Then cut the body strip from the remainder of the first target nine inches wide and have a small tab at one end to engage the slit in the bottom of the base target. To lock everything together, cut a two-by-four-inch strip as a locking piece for the head and body sections.

The target can be assembled very rapidly. Lay the body of the base target flat on the ground with the head raised vertically, and slide the head target down into the head of the base target. Insert the tab on the body into the slit in the bottom of the base target and fold it over. Then cut a notch for the locking piece in the rear shoulder of the head target and the body strip to lock everything together. Once the target is assembled, it can be thrown around without coming apart. See the accompanying sketches for construction and assembly.



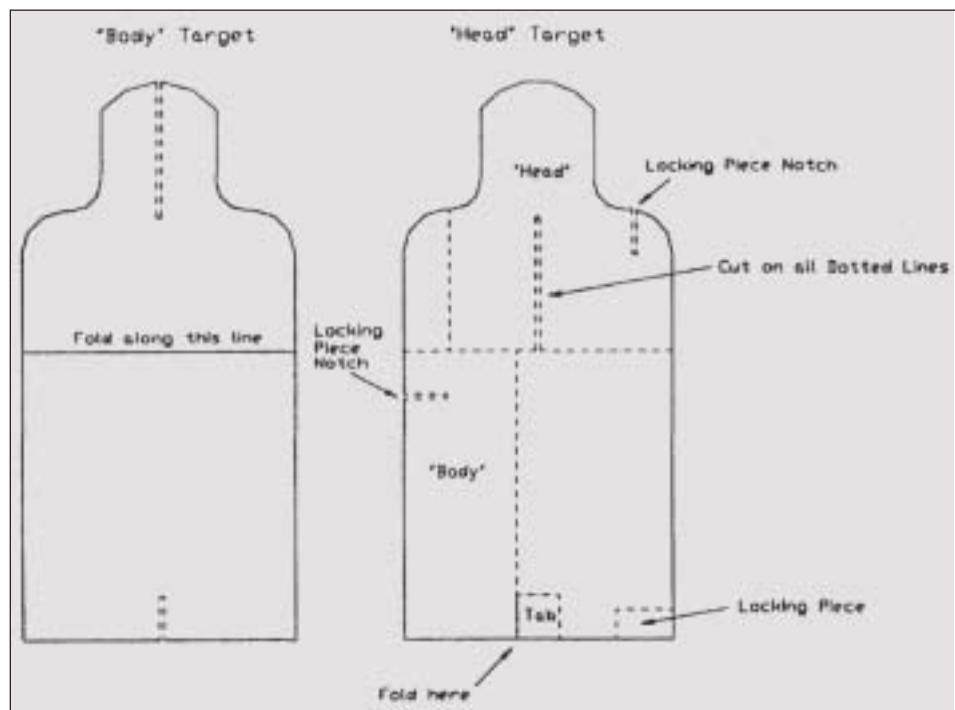
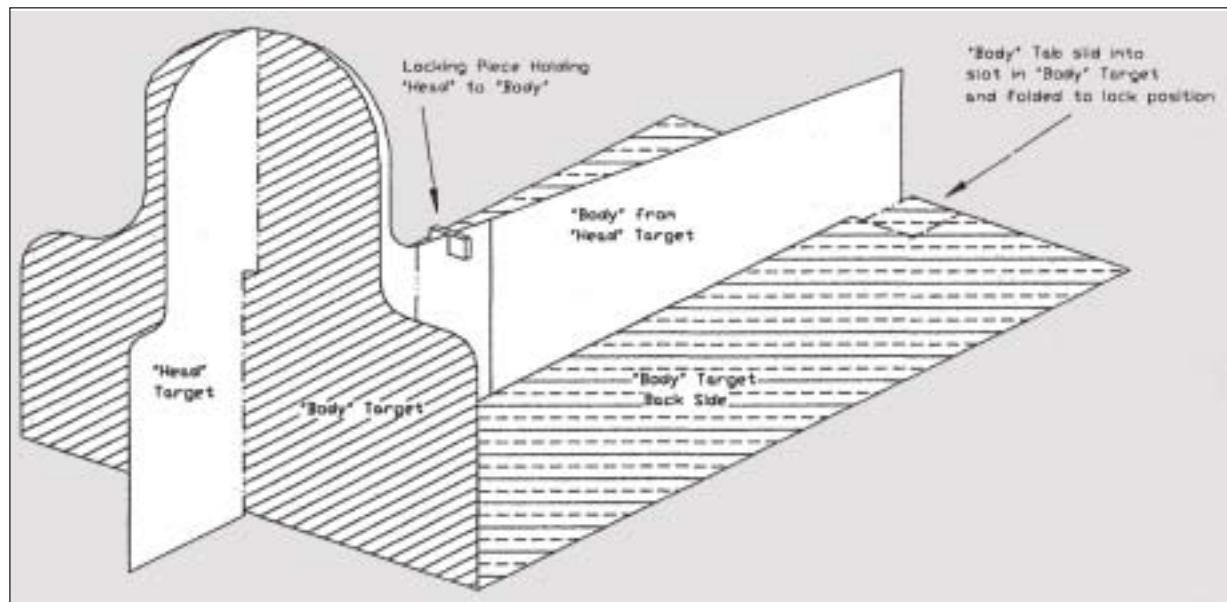
The options for using the Sphinx are almost limitless. Sphinx targets can be used on any terrain because they do not require stakes to emplace, are easily scored, can be patched with normal plasters, and afford lifelike positioning. The Sphinx target can be held in position during high winds by sandbags, dirt kicked onto the target, or a small piece of wood.

Sphinx targets can be used in structures during military operations on urban terrain (MOUT) training without creating specialized target stands. Additionally, three-dimensional standing targets can be made from two full-size E-type silhouettes for MOUT training:

Slit one target from the top of the head halfway down through the body and slit the other from the bottom halfway up toward the head. Then slide them together, forming the three-dimensional profile. These targets can be placed inside structures standing on the floor, tables, or boxes to create target height that simulate personnel in standing or kneeling positions. Furniture can be used to partially mask or completely hide the targets, and clothing can be draped over the shoulders of the Sphinx.

The Sphinx targets' greatest value is on an unknown distance range where they can be placed with varying levels of camouflage to challenge Soldiers to find and engage them within a specified period of time. The three-dimensional nature of a Sphinx gives it different appearances from different vantage points. The changing appearance causes Soldiers to observe the ground in front of them instead of simply looking for silhouettes. Of course, painting these targets in other colors or patterns contributes to the difficulty in finding and then engaging them, which adds still more to the training value.

The targets are easy to disassemble and



store for reuse later. The disassembled targets do not require a large amount of storage space because they can lie flat and occupy the same space as E-type silhouettes. Eliminating the requirement for wooden target stakes solves the problem of stake procurement, stake emplacement (hole digging), disposal of broken stakes and storage of serviceable stakes. Picks and shovels are not required, and range clean up is much faster.

The Sphinx is a training enhancement that any unit can use at virtually no cost. Give it a shot!

Master Sergeant Marc V. Palmer was assigned to Training Branch, 1st Special Warfare Training Group (Airborne) at Fort Bragg when this article was originally published. He has served in Special Forces assignments since 1977, including assignments as an instructor, gunsmith and NCOIC of the Special Operations Target Interdiction Course.

TACTICAL VIGNETTE

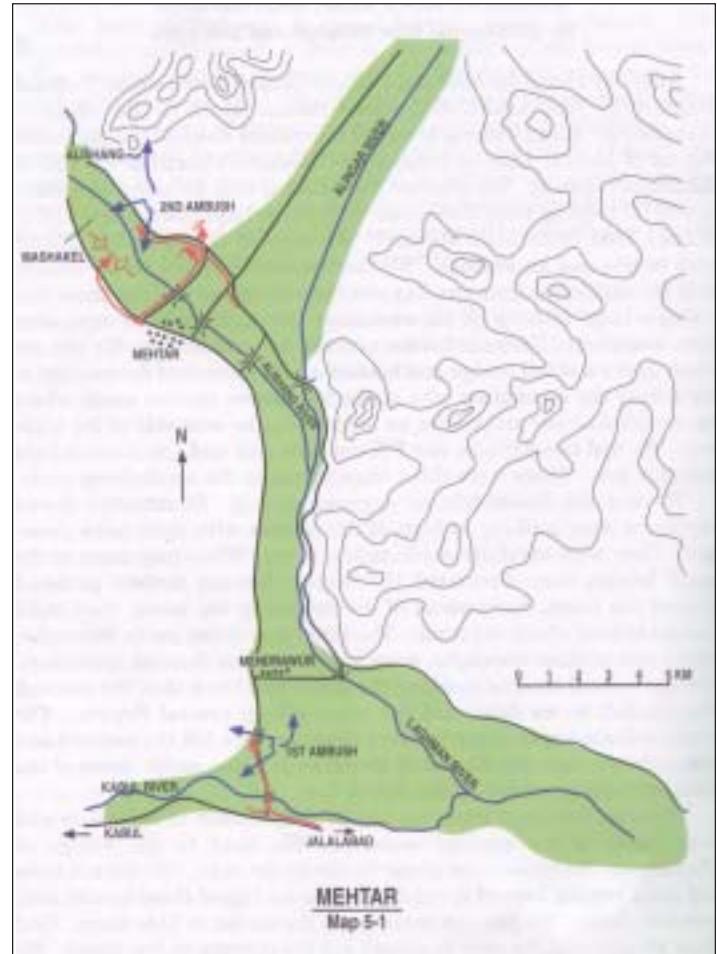
Mining Attacks Near Mehtar Lam

Editor's Note: This vignette was adapted from *The Other Side of the Mountain: Mujahideen Tactics in the Soviet-Afghan War*, which was written by Ali Ahmad Jalali and Lester Grau. The vignette was submitted by Commander Sher Padshah and another Afghan fighter named Sheragha, from Laghman Province. These actions took place in the region north of the Kabul-Jalalabad highway, and are significant because they were executed in the pattern followed by Afghan and Iraqi insurgents even today, and show the techniques still employed by irregulars in mine warfare. Examination of raids and ambushes against Coalition forces in Iraq and in Afghanistan today likewise reveal similar improvised explosive devices (IEDs) and methods commonly used by our own adversaries. By studying these and other attacks, we can better learn how our own opponents operate, and the types of materials they are likely to employ in carrying out mining operations against us and Coalition allies.

VIGNETTE

After the battle for Alishang District Center, Commander Padshah gathered 30 Mujahideen and moved further south to the village of Mendrawur. Mendrawur is about 11 kilometers south of the provincial capital of Mehtar Lam and about five kilometers north of the Kabul-Jalalabad highway. We received information that an armored column would be moving from Jalalabad to Mehtar Lam toward the end of August 1981 (Map 5-1 - Mehtar). We decided to attack the column with bombs and an ambush. We liked powerful mines, so we usually took the explosives from two Egyptian plastic mines and put these into a single large cooking oil tin container. We also used the explosives from unexploded Soviet ordnance to make our own bombs. We put one bomb under a small bridge and hooked a remote-control device onto it. We strung the detonating wire about 100 meters further south where we established our ambush in an orchard on the east side of the highway. We had two RPG-7s, one PK machine gun and one Bemau light machine gun. There were three Mujahideen in the bomb-firing party.

We saw the Soviet column approach slowly. Dismounted Soviet engineers were walking in front of the column with their mine detectors. They were carefully checking the route. When they came to the small bridge, they discovered the bomb. Several Soviets gathered around the bomb, but instead of disconnecting the wires, they stood around talking about the bomb. The three-man firing



party, Sheragha, Matin and another Sheragha, were watching them through binoculars. We saw several Soviets checking the bomb and knew that the ambush was spoiled, so we detonated the bomb, killing several Soviets. The Soviet column began firing in every direction. We left the orchard and withdrew through the Bazaar of Mendrawur going north. Some of the villagers were wounded by the Soviet fire.

Three or four days later, we had 40 Mujahideen in our group and were ready to try another ambush. We went to the village of Mashakhel. We buried two of our bombs in the road. We did not have any more remote-control firing devices, so we rigged these bombs with pressure fuses. We put cow manure on the mines to hide them. God bless Matin's soul; he used to always put the manure on the mines. We set up our ambush covering the mines.

We saw the column approach slowly. Soldiers with mine



detecting dogs were walking in front of the column. The dogs were running loose, and they promptly found and pointed out our bombs. Sheragha and Shawali moved forward when they saw the dogs. They watched as the dogs stood by the mine. Two soldiers got out of an APC (armored personnel carrier) with a long probe. The soldiers started probing the manure piles, and they found the mine in the third pile. Four Soviets, including an officer, crowded together looking at the mine. So Sheragha and Shawali opened fire killing the four Soviets. The remaining Soviets pulled back out of the ambush kill zone.

The Soviets began to return fire. Commander Padshah ordered four Mujahideen to move north onto Tarakhel hill to provide covering fire for the group's withdrawal. To confuse the enemy, he grabbed a megaphone and yelled, "Keep your positions. The reinforcements just arrived." A DRA (Democratic Republic of Afghanistan) column came from Mehtar Lam and took up defensive positions and started firing at us. Tanks also maneuvered against us on the Mehtar Lam plain west of the road. We withdrew under the cover of night. We know we killed four Soviets and many have killed or wounded up to 18 DRA and Soviets. We destroyed one of their tanks and two trucks.

DISCUSSION

In this and in other Mujahideen operations, detailed intelligence on the movement of the targeted units played a critical role. Because of the interdependence of Soviet and DRA forces, and

due in large part to the ubiquitous local population, it was possible to gain information on the movements and intentions of the Soviets and DRA. Additionally, as the Afghan War wore on, it was also possible for the guerrillas to infer likely Soviet responses to their attacks, as Soviet ground forces' enthusiasm for the war against a determined, resourceful, and courageous enemy began to wane.

Then, as today, we see an established tendency to fashion innovative and more powerful explosive devices that were command detonated instead of simply being time fuzed. The habit of keeping the IED under surveillance and at the same time covered by small arms both ensured that the device was unlikely to be disarmed and that anyone tampering with it could be shot, leaving the mine in place for the intended target.

We have learned a number of lessons from the Soviet experience in Afghanistan, and one of these is to disperse upon discovery of an IED. In these attacks, Soviet soldiers were lost — either through detonation of the mine by Afghans or by small arms fire — because they had not yet learned that lesson. The Soviets were, however, successful in their use of mine-detecting dogs, something they may have learned from the U.S. experience with war dogs in Vietnam.

If there is one trait common to our and the Soviets' adversaries, it is their resourcefulness. In 1981 the Afghans were gathering explosives from several mines to make a more powerful charge and covering buried mines with manure to avoid attracting attention. Today, Iraqi insurgents have concealed IEDs in everything from dead animals to inconspicuous, windblown trash piles, and are constantly attempting to strike in the least predictable manner. But we are meeting them at every turn and are defeating them apace. We are an Army at war, and we have taken the fight to the enemy on his own ground and defeated him by improving Soldiers' situational awareness, their reactions to a threat, and by demonstrating that our response to enemy actions will be swift, precise, and deadly.



INFANTRY CAREER NOTES



Army Gives AIP for Korea Assignments

The Army has a new incentive program to encourage Soldiers to extend their tours of duty in Korea for an additional year.

The program, titled the Assignment Incentive Pay (AIP) program, adds an additional \$300 per month to paychecks if Soldiers in or enroute to Korea sign up for an additional 12-month tour there.

The AIP is a one-year program that is being offered to all Soldiers - officer, warrant officer, and enlisted — to promote stability, predictability and improved readiness in Korea while reducing personnel turbulence Armywide, officials said.

"This is an outstanding, unprecedented opportunity for our Soldiers to extend their tours in this great country so they may continue to strengthen the warfighting abilities of their units, and to further experience the cultural opportunities available to them that they might otherwise miss on a shorter, 12-month tour," said Lieutenant General Charles Campbell, commander of 8th U.S. Army. "You only have to look at the benefits of this program to see how every Soldier and every unit can benefit."

"We want to keep more of our extremely well-trained Soldiers on the peninsula," said Campbell. "Our Soldiers and leaders are the cornerstone of our high readiness posture, and retaining more of that talent in theater for a longer period of time enhances our ability to deter aggression and support peace and stability on the peninsula."

With limited exceptions, all Soldiers, regardless of rank, currently stationed in Korea or on assignment instructions to Korea, can apply for the program. Soldiers currently serving in Korea have the opportunity to apply for the program for a 60-day period. All other Soldiers serving

outside of Korea will have the opportunity to volunteer for this program.

"I strongly encourage all Soldiers on the peninsula to take a hard look at this program before the opportunity is lost. As leaders, we know with certainty that this program is a benefit to the forces on this peninsula, but only our Soldiers can decide whether this is right for them individually and for their families," Campbell said.

"Eligibility for this program is a sweeping change to the benefits for extension currently available for Korea," said Colonel Rick Mustion, commander of 8th Personnel Command in Korea. "Under the existing programs, the chief beneficiary has historically been enlisted Soldiers. With the AIP, warrant and commissioned officers can also take full advantage of the program with the same extension benefits as our enlisted Soldiers."

Under the current program, Soldiers who elect to receive a monetary bonus may receive a lump sum or a monthly entitlement during their extension period.

Under the AIP, Soldiers will receive an extra \$300 in special pay each month, and this pay will continue until the end of their assignment in Korea.

"Soldiers should keep in mind that this incentive pay, like other extension incentives, is taxable income," said Mustion.

Soldiers can apply for AIP on the 8th Personnel Command Website at www-8perscom.korea.army.mil. Click on the "AIP" link, enter the Army Knowledge Online user ID and password.

After login is complete, view the pre-populated DA Form 4187, and accept or decline the terms and agreements by clicking on either the "Accept" or "Decline" buttons. Soldiers can obtain a copy of the documents by clicking on the "Print" button.

Soldiers should contact their unit personnel officers for additional assistance or contact Theater Army Replacement Operations at DSN 724-3150 or via e-mail at Aip@usfk.korea.army.mil for assistance.

OTHER ITEMS ...

- Need to access your Official Military Personnel File (OMPF), check your DA photo, or change your assignment preferences (ASK)? The Army Knowledge Online Website (www.us.army.mil) offers quick and easy links to these and many more helpful sites. Just click on "My Personnel."**
- The U.S. Army is looking for highly motivated Soldiers, Marines, Sailors, and Airman to fill its Warrant Officer ranks. Positions are open in all 45 specialties if you qualify. Applicants with less than 12 years active federal service (AFS) are encouraged to apply. For more information and all forms/documents required visit our web site at www.usarec.army.mil/warrant or (502)626-0484/0458**

BOOK REVIEWS



The War Within The Union High Command: Politics and Generalship During The Civil War. Thomas J. Goss. University Press of Kansas, 2003. 300 pages. \$34.95. Reviewed by Command Sergeant Major James Clifford.

Thomas J. Goss takes a fresh view of an old argument regarding the selection of Union generals in the Civil War. The traditional view is that Abraham Lincoln passed out general's stars liberally based on political considerations. The argument holds that these political generals were necessary in order to entice large ethnic and political groups to enlist, thereby turning the Civil War into a "peoples" war. Any other approach would have ensured a quick and certain end to the Civil War resulting in the permanent establishment of a Confederate States of America. An extension of the argument is that the political generals were mostly failures as military leaders, and as Lincoln's political position strengthened he began to jettison them in favor of the professional officers produced by West Point. The professionals from West Point, according to this line of reasoning, provided the battlefield victories that resulted in the restitution of the Union.

Goss has no quarrel with these conclusions, but he comes to them from a different perspective. His goal was not to revise any historical conclusions, only to lend some clarity on Lincoln's motivations regarding particular leaders. He finds that Lincoln appointed generals with individual mandates for each. While some historians judge generals by only their military accomplishments, Goss recognizes battlefield performance as just a part of the equation. The author's approach is indeed fresh, unlike any others found in Civil War literature. He departs slightly from the typical Jominian angle in favor of a more Clausewitzian view. While recognizing the military aspects of the war, Goss emphasizes Clausewitz' dictum that warfare is politics by other means.

It would be inaccurate to say that at the outset of the Civil War America had a professional officer class despite the existence of the Military Academy. It is more accurate to observe that Americans considered warfare the purview of any reasonable intelligent, hard-working man. Therefore, Americans expected its leading citizens to step into a military role when the situation called for such. Americans considered warfare to be no more complicated an endeavor as any other in society such as running railroads, engineering projects, banking or politics, and that the incumbents would be successfully inspired in battle. Given this pervasive attitude in American society it is not surprising that so many neophytes would confidently offer their services as generals and arrogantly expect to rise to high rank and responsibility even in the face of poor performance.

The War Within the Union High Command also analyzes West Point trained officers and breaks down the commonly held belief that as a group they were professionals. In reading this book, one will learn that although West Point at that time trained officers they hardly created a professional class, as we know it today. The author illustrates how most West Pointers played politics, using their contacts in Congress and the cabinet to secure positions of responsibility. He skillfully explains how many of these "professional" officers acted in decidedly unprofessional manners, failing to support Lincoln's strategy. They frequently undermined their own President by inserting their own political judgment while exercising their military responsibilities. He also points out how such behavior was hardly out of the ordinary; on the contrary, it was considered normal and expected. Under such conditions it seems to be splitting hairs to label some generals as professionals and others as politicians in uniform.

This book is part of the publishers

"Modern War Series" that has provided several other significant works of military history. The author is an active duty Army officer, former history professor at West Point, and current planner in the United States Northern Command. His thoroughly researched, well-written book is sure to elicit discussion and argument among students of the Civil War even though his ultimate conclusions agree with most others. However, no future analysis of Union general officer performance will be complete without considering the arguments found in *The War Within The Union High Command*.

Mao's Generals Remember Korea. Translated and edited by Ziaobing Li, Allan R. Millet and Bin Yu. University Press of Kansas, 2001. 303 pages. \$39.95. Reviewed by Lieutenant Colonel Mike Davino.

The intervention of the People's Republic of China (PRC) saved North Korea from total defeat in the Korean War. Despite its characterization as a "forgotten war," the strategy and tactics used by the United States and its United Nations Command allies have been well documented. General of the Army Douglas MacArthur and his successors published their memoirs, and numerous commanders at lower levels have done so as well. Most Americans interested in the Korean War have not however, had access to similar accounts from the Chinese commanders of the so-called Chinese People's Volunteer Force (CPVF). The editors of *Mao's Generals Remember Korea* have translated memoirs of key commanders to include those of Marshal Peng Dehuai, the CPVF commander and commander-in-chief of the Chinese-North Korean combined force.

To give some perspective to the first hand accounts of Mao's subordinate commanders, editor Bin Yu, a former

People's Liberation Army soldier and current professor of political science, provides an excellent short history of the war from the Chinese point of view. Using Chinese sources, Yu summarizes the pre-intervention preparations of the CPVF. He examines the planning and execution of the five campaigns the Chinese fought against UN forces in the first eight months of Chinese combat operations. More importantly, Yu details the lessons learned by the Chinese and how they applied those lessons as the CPVF adjusted its goal from pushing the UN forces off the peninsula to one of achieving a truce and defending China.

The accounts by the Chinese general officers are somewhat uneven and, as an American reader would expect, tend to exaggerate CPVF accomplishments and put their setbacks in the best possible light. In addition to Marshal Peng, the recollections include those of Marshal Nie Rongzhen, acting chief of the PLA general staff; General Hong Xuezhi, chief of the CPVF logistics; and General Yang Dezhi, who held a series of high-level commands within the CPVF. From a strategic standpoint, Marshal Nie's analysis of the decision to launch and prosecute the "War to Resist America and Aid Korea" provides some insight into Chinese thinking at the highest levels of government. General Hong describes how the CPVF met the challenge of supporting a war outside of Chinese territory and also provides details on the death of Mao Zedong's son in a UN Command air strike. General Yang provides a comprehensive account of the Battle of Shangganling (known to Americans as Triangle Hill). Chapters by leaders involved in political mobilization, Soviet arms purchases and the armistice negotiations round out the book.

Fifty years after the armistice that halted the war, the PRC still plays an integral role in the survival of the Democratic People's Republic of Korea. This book fills a void in the available English language literature about the Korean War from the Chinese perspective. It is relevant today because as the editors explain, the Chinese continue to draw upon lessons learned during the war and have a renewed interest in those lessons as they shift their strategy from one of preparing to fight a total war to the conduct of more limited conflicts.

The Challenge of Change: Military Institutions and New Realities 1918-1941.
Edited by Harold Winton and David Mets. University of Nebraska Press. Lincoln, Nebraska, 2000. 246 pages. Reviewed by Lieutenant Commander Youssef H. Aboul-Enein, U.S. Navy.

How nations adapt, confront, or deny change in military and political events is of vital interest to our own country. Secretary of Defense Mr. Donald Rumsfeld speaks a great deal about transformation. This is a concept in which the U.S. armed forces are shaped, funded, and molded not only from the fleet, brigade, or wing level but also the way we allocate and fund projects within the Defense Department to meet the rapid changes in the 21st century. Many nations have adapted or failed to see changes in the world environment in which they exist. This book has a collection of well-written essays on this subject. It focuses on how France, Germany, Russia, and the United States dealt with the realities of military and political change. As you read the chapters of the book, think about how our own force structure and doctrines are to change in light of the attacks of September 11th. The editors are prolific writers. Professor Harold Winton teaches military theory at the School of Advanced Airpower Studies at Maxwell Air Force Base, Alabama. David Mets has written several books with an emphasis on airpower on military doctrine.

The first chapter by Eugenia Kielsing, opens in France in the interwar years. Readers will understand more about why France was caught surprised and then defeated by the Germans in the spring of 1940. French military leaders were confident in how the Germans were defeated in World War I and invested heavily in a civilian army. The Third Republic feared a standing professional army, and there was hostility between politicians and army leaders over reform of the military. A few dissenters argued for mechanized armor like General Maurice Gamelin and a young Major Charles De Gaulle, but politicians refused, deciding to side with theorists of élan, that willpower would defeat any army. In essence, coming out of World War I a victor and not analyzing the dreadful cost of victory led

to France's defeat in World War II.

The second chapter is an intriguing look into the German army during the interwar period by James Corum. It is astonishing how a defeated nation can become so innovative in war. Typically most people associated the development of Blitzkrieg and new tank warfare methods to the Nazi army. But what is truly revolutionary is the reform of the German military education system. In 1920, the Germans required every officer to be university educated or undertake such advanced education. One-year cadet schools were extended to three and a half years that included several months duty as an enlisted soldier. Studying battles of World War I and other campaigns such as the Russo-Japanese War, they ascertained that the German military leadership did not have an appreciation for technology and failed to apply it properly. The Reichswehr made learning a foreign language mandatory and directed soldiers to study foreign military journals and observe other nation's military maneuvers. The result of all this education is concepts like maneuver warfare, air-ground cooperation, Blitzkrieg and Schwerpunkt (the decisive moment to strike an enemy weakness). The German air force was a separate arm of the military and enjoyed tight cooperation with the army. This is due to politics of favoring a separate air force that the German navy did not want, but that — ironically — served them well.

Jacob Kipp wrote an essay entitled, "Military Reform and the Red Army." From 1918 to 1941, several Russian military theorists emerged to become advocates of the tank and careful observers of using Russia's size and terrain to defeat an enemy. Mikhail Tukhachevsky resented arguments that a mass, mechanized force with artillery and air was the means to strike deep into Poland before Germany could reach Russia. V. K. Triandafillov argued for shock armies that would disrupt an adversary's logistical lines and mobilization sites. Had Stalin paid close attention to some of these thinkers instead of worrying about military coups, he would've been better prepared for Hitler's assault in Operation Barbarossa.

This is an excellent book which demonstrates the importance of constant innovation and thought about the business of warfare.

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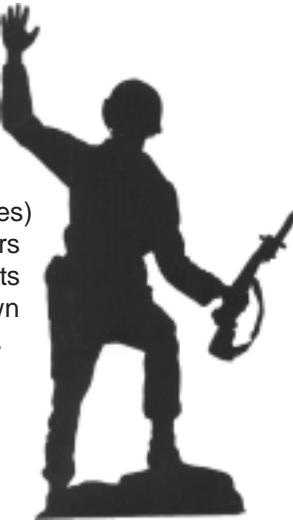
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