

# Infantry

May-June 2007



## **Combat Conditioning: Army Strong**

**Combatives and Conditioning: Winning the Close Fight (Page 1)**  
**Ranger-Athlete-Warrior:  
A Systematic Approach to Conditioning (Page 5)**

**MG WALTER WOJDAKOWSKI**  
Commandant, The Infantry School

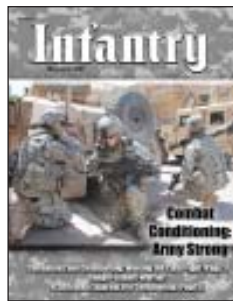
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**FRONT COVER:**

Soldiers from C Company, 1st Battalion, 26th Infantry Regiment, take cover during a firefight in Baghdad that ended with one insurgent dead and three captured. (Photo by Sergeant Michael Pryor)



**BACK COVER:**

Soldiers from A Company, 2nd Battalion, 508th Parachute Infantry Regiment, set up a vehicle patrol base in Afghanistan. (Photo by Staff Sergeant Michael L. Casteel)

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# Infantry

MAY-JUNE 2007

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## FEATURES

- 16 STRYKER UNIT DEPLOYS WITH LAND WARRIOR — GETTING DISMOUNTED SOLDIERS IN THE FUTURE NETWORK**  
Major Douglas Copeland
- 30 MAKING MITT WORK: INSIGHTS INTO ADVISING THE IRAQI ARMY**  
Major David Voorhies

## DEPARTMENTS

- 1 COMMANDANT'S NOTE**
- 2 INFANTRY NEWS**
- 5 PROFESSIONAL FORUM**
  - 5 RANGER-ATHLETE-WARRIOR: A SYSTEMATIC APPROACH TO CONDITIONING**  
Major Danny McMillian
  - 9 TEACHING THE LONG ARM SIGN LANGUAGE: COMPANY FIRE SUPPORT OFFICER CAPABILITIES IN LOW INTENSITY CONFLICT**  
Captain Michael Fogarty
  - 13 FROM BLACKHAWK TO BRADLEY: THE 101ST AIRBORNE IN A MECHANIZED ROLE**  
Captain Christopher Hume
- 41 TRAINING NOTES**
  - 41 COMBAT-FOCUSED COMBINED ARMS TRAINING**  
Captain William J. Dougherty and Staff Sergeant Reed Mathis
  - 45 L2I ANALYSTS ASSIST WITH INFORMATION REQUESTS**  
Robert A. Charles  
Gregory Valrie
  - 46 COMBATIVES: DO WE TRAIN AS WE FIGHT?**  
Captain Josh Collins
  - 49 HOW TO CHOOSE PROPER RUNNING SHOES**  
Chris Kusmiesz
- 51 BOOK REVIEWS**
- 53 SUBSCRIPTION INFORMATION**

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# Commandant's Note

MAJOR GENERAL WALTER WOJDAKOWSKI

## COMBATIVES AND CONDITIONING Winning the Close Fight

The infantry fight is close, violent, and intensely personal. In today's contemporary operational environment we locate and destroy the enemy one room, one house, one street at a time. The global war on terrorism demands the best of the entire maneuver force and the arms that support it, because the enemy can attack without warning, day or night, and we must be ready to destroy him whenever the opportunity presents itself. Mounted forces often fight as infantry when they dismount to secure their vehicles in built-up areas, when they provide security for refueling and rearming, or when they conduct sweeps to clear their immediate environment. Likewise, combat service support Soldiers and their leaders often find themselves fighting as infantry to secure and sustain the vital functions they perform all day, every day. The insurgent has chosen to take the fight to the urban battleground where engagement ranges are short, reaction times are limited, and split-second decisions literally mean life or death. This environment imposes constraints and limitations on our forces. This limits the tactics, techniques, and procedures we can employ. In the close quarters battle (CQB) all options for the use of force must be considered when Soldiers need to achieve control over a noncombatant. In this Commandant's Note I want to talk about combatives instruction, its purpose, and some of the initiatives we are pursuing in training for this key dimension of the close fight.

Although the Army has trained on close fighting since the Revolutionary War, the techniques of pure knife fighting first received serious attention during World War I, where trench raids and other night operations were common. What we called hand-to-hand combat was commonplace in World War II, in the Korean War, and in Vietnam, and it has been a part of Soldiers' training ever since. The basis for much of the training was Field Manual 21-150, *Unarmed Defense for the American Soldier*, which stressed defensive fighting to guard against an enemy's body and choke holds, his weapons, and his hand-to-hand combat techniques. Today the Modern Army Combatives Program is a proactive program to develop aggressiveness and self-confidence. Soldiers train to employ their combatives skills to seize the initiative to dominate, disable, or kill an opponent in the CQB. Personal protection techniques are a secondary purpose for our training, but these skills have their non-lethal applications as well. In crowd control situations, during removal of noncombatants from the area of operations, or when maintaining control over prisoners or detainees such skills enable Soldiers to efficiently seize and maintain control of a situation to accomplish the mission. A Soldier competent in combatives techniques is better equipped to approach a situation with confidence and appropriate aggressiveness, and to thus surprise an adversary

unprepared for the shock of sudden, violent confrontation.

In the past, training for unarmed combat took place with minimal equipment, aside from a weapon and basic items of clothing. This is not how we fight. While our enemy may travel light and be unencumbered by load-bearing and protective gear, we can find ourselves at a marked disadvantage unless we train to fight effectively under all conditions and without taking time to shed unneeded equipment. While units routinely adjust their Soldiers' combat load to the mission, they must be ready to go into action as soon as the opportunity presents itself, and we can only assure this happens by training as we will fight. No Soldier will be alone for long in the close fight; his teammates will be there, shoulder to shoulder, and the aggressiveness and momentum of a fire team or squad engaged in CQB are powerful combat multipliers. This is called team momentum and is a key part of our training.

Combatives training begins with physical conditioning, and performance-oriented strength training is an effective way to achieve it. Both the United States Marine Corps and the Army are working this concept, with considerable success. The 75th Ranger Regiment has gained over 21 months' experience with the planning and fielding of its Ranger-Athlete-Warrior (RAW) program which employs a phased approach to physical training. The RAW concept includes strength, endurance, and movement skills training, as well as movement preparation and recovery. It is a multidimensional approach to conditioning which offers scheduling guidance for both garrison and deployed units, a physical training menu, and guidance on adding battle focus to training.

Today's Infantry School students receive combatives instruction across virtually the entire spectrum of our courses, in the 198th Infantry Brigade's one station unit training and the 192nd Infantry Brigade's training of infantry and non-infantry MOSs, in our noncommissioned officer programs, in Officer Candidate School pre-commissioning instruction, and in the basic officer leadership course, infantry basic officer leader course and maneuver captains' career courses. The Ranger Training Brigade has stressed combatives from its earliest days in the 1950's. Combatives training can be an effective part of every leader's unit training plan, and will better prepare our Soldiers for their roles in the global war on terrorism. We don't know how tough the next enemy will be, but we can train to move fast, strike hard, and win in the close fight. Follow me!







## NOT JUST ANOTHER SPORTING EVENT: Best Ranger Competition is Training for Combat

COLONEL GREG HAGER

In July 1981, the Ranger Department was asked to design and conduct a “Ranger Olympics” in order to identify the best two-man Ranger team in the Army.



The guidance was clear from the start - the competition should place extreme demands on the team’s physical, mental and technical abilities as Rangers, and the standards of performance should vastly exceed those required of the average Soldier.

A group of prominent Florida businessmen, belonging to an organization called the “Chairborne Rangers,” stepped forward and offered to sponsor awards for the competitors. These patriotic citizens have long been avid supporters of the U.S. Army and Fort Benning in particular. The Best Ranger Competition was appropriately named in honor of Lieutenant General David E. Grange Jr., former Ranger instructor, Ranger Department director, and commanding general of Fort Benning.

*Command Sergeant Major Doug Greenway reports information on a simulated casualty during the second day of the competition.*

David K. Dismukes



In the 26 years since its inception, the competition has grown from a local Ranger community competition in which the best team of Ranger instructors was identified, to a nationally televised, Armywide event with more than 100 sponsors. The only requirement — participants must have successfully completed the Ranger Course.

This year’s field of competitors included more than 40 teams from force generating units and operational units, both active and Reserve.

Although initially referred to as an “Olympics,” the Best Ranger Competition is far from a sporting event. It’s training for combat. The three-day competition revolves around events that are derived from areas common to units training for combat. They include physical training, marksmanship, small unit drills, first aid and mobility.

In 60-plus hours, Ranger teams move approximately 60 miles by foot with a 70-pound load, fire 10,000 rounds, conduct a parachute drop, demonstrate an expertise of orienteering, and demonstrate life-saving skills along with 29 other combat-related individual Soldier skills.

**Colonel Greg Hager** is currently serving as the commander of the Ranger Training Brigade, Fort Benning, Georgia.

### 2007 Best Ranger Competition

This year’s competition was held April 20-22. Of the 42 teams that began the competition, only 21 finished the competition. The following are the results:

**1st place** — Major Liam Collins and Master Sergeant Walt Zajkowski, U.S. Army Special Operations Command

**2nd place** — Captains Andrew Farina and David Uthlaut, 25th Infantry Division

**3rd place** — Sergeants First Class Adam Nash and Billy Pouliot, 75th Ranger Regiment

**4th place** — Sergeant Luke McDowell and Staff Sergeant Michael Broussard, 75th Ranger Regiment

**5th place** — Sergeants Nathan Anderson and Andrew Wallace, 75th Ranger Regiment

(Additional results and information can be found on the Ranger Training Brigade’s Web site at <https://www.benning.army.mil/rtb>.)





David K. Dismukes

*A competitor takes on the rock climbing wall during the second day of competition.*

David K. Dismukes



*Master Sergeant Walt Zajkowski and Major Liam Collins of the U.S. Army Special Operations Command exit the water after the helocast event. The pair took first place in the competition.*



Captain Kamil Sztalkoper

*Staff Sergeant Michael Broussard of the 75th Ranger Regiment negotiates the Darby Queen obstacle course during the last day of competition.*



# PEO SOLDIER UNVEILS NEW COMBAT SHIRT

DEBI DAWSON

The Army Program Executive Office (PEO) Soldier will soon provide an improved Army combat shirt to Soldiers deploying to Iraq and Afghanistan.

The flame-resistant long-sleeved shirt, which retains the moisture-wicking capability, breathability, and durability of other components in the ACU, also has many of its other features, including cargo pockets, infrared identification tabs, and hook-and-loop fasteners for the American flag.

The new shirt has a foliage green torso and sleeves in the universal camouflage pattern, and sports seamless shoulders and side panels for comfort, along with integrated anti-abrasion elbow pads, and a small Army Strong logo centered on the chest.

The high performance shirt, designed to be a base layer, can be worn directly under the Interceptor Body Armor, according to Major Clay Williamson, assistant product manager for clothing and individual equipment.

The ACS is made of an antimicrobial cotton and rayon blend fabric treated with a new process that penetrates to the fiber level. It provides fire-resistance for the life of the garment. "It is completely safe, non-toxic, and allows us to treat fibers that were once not treatable," Williamson said.

The shirt integrates with other flame-resistant components, such as the Army combat pants, to provide head-to-toe protection against burns. The Army combat pants are the same as the ACU pants, except they are made of a flame-resistant material, according to the major. Soldiers' hands are protected by flame-resistant



Courtesy photo

***The new improved Army combat shirt will be issued to Soldiers deploying to Iraq and Afghanistan.***

gloves that have been a part of the Army's Rapid Fielding Initiative.

This ensemble further complements the Army's system-of-systems approach to force protection, which integrates layers of protection for Soldiers on the battlefield.

"I want to assure the American public, the Soldiers, and their Families that they have the best equipment when and where they need it. If there were something better, we would buy it; and we're always looking for something better," said Brigadier General R. Mark Brown, Program Executive Officer Soldier.

*(Debi Dawson serves with the Program Executive Office Soldier Strategic Communications Office)*

## Bonus, Incentives Available for Some Captains

ARMY NEWS SERVICE

A new Critical Skills Retention Bonus of \$20,000 is available to more than 7,000 regular-Army captains who agree to remain on active duty beyond their initial active-duty service obligation.

The bonus is part of a "menu of incentives" targeting officers nearing completion of their initial active-duty service obligation who are willing to remain on active duty an additional three years. Other incentives include graduate school, military school, transfer of branch or functional area, or post of choice.

The incentives will help the Army retain company-grade officers with valuable experience, said Colonel Paul Aswell, chief, Officer Division, Directorate of Military Personnel Management, Army G1. The Army is currently growing to increase capabilities and reduce stress over the long term. This has led to an increased need of nearly 6,000 captains and majors since 2004, according to Aswell.

The branches considered critical for the purposes of the CSRB include: Air Defense, Adjutant General, Armor, Chemical, Engineer, Field Artillery, Finance, Infantry, Military Intelligence, Military Police, Ordnance, Quartermaster, Signal Corps and Transportation Corps. Officers originally commissioned in these branches are eligible for all incentives on the menu. Officers commissioned into the Army nurse corps or medical science corps are also eligible for the CSRB.

Eligible captains must have a date of rank between March 1, 2005, and January 1, 2007. Similar incentives will be offered to captains in other year groups, Aswell said.

The CSRB and other incentives are just part of the Army's efforts at eliminating the officer shortage, Aswell said. The Army has moved up the promotion to major from 11 years to 10, and is considering moving it to the 9th year of service. Aswell noted that earlier promotion points and higher rates reflect the Army's recognition of the higher experience level among today's company grade officers, and the value of their service.



# RANGER ATHLETE WARRIOR



## A Systematic Approach to Conditioning

MAJOR DANNY MCMILLIAN

**Editor's Note:** *The Ranger-Athlete-Warrior Program offers a means of improving Soldiers' conditioning well beyond anything we have tried up to now, and it deserves close examination. For this reason, the program will appear in three issues of Infantry. This introductory article focuses on functional fitness and the following two will deal with performance nutrition and mental toughness. We recognize that the program is targeted on training U.S. Army Rangers, but non-Ranger units can benefit as well from the experience of the 75th Ranger Regiment.*



The training of combative techniques — like most of the Soldier skills we train — begins with conditioning. Functional, mission-relevant conditioning is the foundation of a warrior's readiness, and in this article I want to provide an overview of one comprehensive and unique initiative that is now well into its second year of assessment here at Fort Benning.

The Ranger-Athlete-Warrior (RAW) program is an initiative which the 75th Ranger Regiment has planned and fielded over the past two years. It includes one of the most comprehensive approaches to physical conditioning ever undertaken by an Army unit, and has relevance to both Ranger and non-Ranger units. Fundamental to this program is its holistic approach to optimizing physical performance. More than just a fitness program, the RAW model also recognizes the importance of nutrition, mental preparation, and the prevention and care of injuries. The Ranger-Athlete-Warrior philosophy (Figure 1) is plainly stated and underlies the program.

RAW draws upon four components to achieve its intended outcomes: functional fitness, performance nutrition, sports medicine, and mental toughness (Figure 2). The first of these systematically addresses broad-spectrum strength, endurance, and movement skills. Strength enables a Soldier to overcome resistance, improves his performance, and reduces his chance of injury. The RAW program uses three discrete modes of training to improve strength:

- Muscle Endurance
- Moderate-Heavy Resistance
- Power

The Muscular Endurance workout is performed without external resistance. A variety of pull-ups, push-ups, lunges, and core exercises are performed with the emphasis on form rather than maximizing repetitions. The workout can be conducted anywhere pull-up bars or ropes are available.

As the name implies, the Moderate-Heavy Resistance workout gets Rangers in the gym to meet external resistance. Within this workout, Rangers will perform a variety of lifts but must balance pushing/pulling movements as well as upper and lower body work. By following this principle, they will avoid the muscle imbalances that are so prevalent among Soldiers that concentrate on "beach muscles."

We train the power component of strength primarily with machines that permit rapid, rotational movements from an athletic stance (Hammer Strength's Ground Base line of machines is an example). Correct form, and adequate recovery, are essential because power training is more demanding on the neuromuscular and skeletal systems.

Figure 1

### RAW Philosophy

- ❑ The individual Ranger is our most lethal weapon.
- ❑ You don't know how tough your next enemy will be ... Assume he'll be very tough.
- ❑ You don't know exactly what the physical requirement will be on your next mission... Assume it will be extremely demanding.
- ❑ Ranger missions require strength, endurance, and movement skills. Excelling in only one or two leaves you vulnerable to poor performance and/or injuries.
- ❑ Training hard is not enough; you have to train smart
- ❑ As an individual/team/squad/platoon, you are only as strong as your weakest link. Don't have a weak link.
- ❑ Form matters. Master the exercise techniques and demand proper execution from your men.
- ❑ The body adapts to the stress you place upon it. This takes time. Be consistent, be patient, and think of improvement over weeks and months, not days.
- ❑ Don't crush yourself every day. Respect the need for recovery. Leaders must be attuned to their men and modify the training stress appropriately.
- ❑ Fuel the machine. Don't train well then blow it with a lousy diet. Have a plan for hydration and meals/snacks and stick to it.
- ❑ Take care of your injuries before they become chronic. Playing hurt is necessary on occasion, but do it too long and there may not be a therapy or surgery fix.



## Components of RAW



- **Functional Fitness**
  - Movement Skills
  - Strength
  - Endurance
- **Performance Nutrition**
  - Optimal Foods and Fluids
  - Body Composition Assessment
  - Supplement Guidance
- **Sports Medicine**
  - Injury Prevention
  - Early Intervention
  - Multi-disciplinary Team
- **Mental Toughness**
  - Ideal Performance State
  - Fatigue Counter-measures
  - Endurance Challenges

Figure 2

We cannot emphasize enough the importance of a systematic and comprehensive approach to strength training. Too often Soldiers assume that a high APFT score indicates adequate strength. In fact, the APFT does not even measure leg strength or pull strength, two potentially critical requirements for Soldiers. Ideally, strength training enhances a Soldier's ability to carry his combat load indefinitely, transport a wounded comrade, upload gear and ammunition, prepare fighting positions, and perform the many other Soldier tasks requiring broad-spectrum strength. In performance-oriented strength training, the emphasis is on the movement rather than the muscle. Unlike competitive bodybuilding, which emphasizes the appearance of the muscles, the focus in strength training is on the movements to be performed and the muscles that need to be developed to strengthen those movements.

The second element of functional fitness — endurance — is the ability to sustain physical activity, and includes both aerobic and anaerobic endurance. Aerobic endurance involves moderately intense tasks that require continuous, sustained movement such as road marches, while anaerobic endurance is needed to accomplish intense tasks that require quick,

powerful movements such as scaling a wall or the bursts of speed necessary in fire and maneuver against an enemy position. Several representative examples of these types of endurance and their demands on the body are shown in Figure 3. In the RAW program, aerobic endurance is trained primarily through running, foot marches, and swimming. Anaerobic endurance is trained primarily through interval running, agility/speed/plyometric drills, medicine ball drills, and ground based power training in the gym

The third element of functional fitness — movement skills — links the Soldier's strength and endurance to the actual task or challenge at hand. For example, negotiating obstacles requires not only strength and endurance, but movement skills that make execution of each obstacle safe and efficient. Movement skills can be grouped into three broad categories: agility, balance, coordination (ABCs). Agility is the ability to change direction, balance is maintaining your center of gravity in an effective position relative to your base of support, and coordination is the ability to effectively do more than one thing at a time. These skills are best developed in childhood, but improvements can be made through training at any age.

In the strength section, we talked about the type of strength a Ranger needs. For



Task	Strength	Muscular Endurance	Aerobic Endurance	Anaerobic Endurance	Flexibility	Motor Efficiency
Footmarch	X	XXX	XXX	X	x	X
Climbing	XXX	XX	X	XXX	XX	XXX
Sprints to Cover	XX	X	X	XX	XX	XXX
Crawl	XX	XXX	X	XXX	XX	XXX
Carrying	XXX	XX	X	XX	X	XX
Run	x	XX	XXX	X	X	X
<b>Total</b>	<b>12</b>	<b>13</b>	<b>10</b>	<b>12</b>	<b>9</b>	<b>13</b>

**X = Low Demand**  
**XX = Moderate Demand**  
**XXX = High Demand**

**Figure 3 — Infantry Task/Physical Component Matrix**

effective movement skill, strength means control of forces acting on the body. Muscles work either to move or prevent movement at the joints around which they live. Most often we focus on the movement that muscles create because that is what is most apparent. Less obvious though is the “braking” force that muscles apply to joint movement. This braking effect creates the stability that allows skillful movement. Without this braking effect, nearly all movement would be extremely sloppy and potentially dangerous. An astute observer has noted that attempting to manage heavy loads without a stable core is like firing a cannon from a canoe.

Around the body’s core, this braking action of the trunk muscles becomes extremely important for a couple reasons. First, the spine and pelvis are the base of attachment for many muscles that power the arms and legs. Secondly, the body’s center of gravity is within the core area. Keeping it there leads to balanced, skillful movement. This is the job of the core muscles and they do it primarily by putting on the brakes. For example, in agility training we create drills where momentum is taking the body in one direction, but the task requires change of direction. This requires a level of braking strength, but it also requires awareness of body position. This is very evident during cutting movements.

To turn a corner effectively, not only do you need braking strength to slow down your momentum, but you also need an

effective movement strategy. Generally, this means lowering the body, planting on the outside leg, and preventing the ankle and knee from rolling outward. You can be strong as an ox, but if your ankle and knee roll to the outside every time you try to cut, you won’t be very effective.

These movement strategies must eventually become subconscious. Think of them as your default settings. If your default settings aren’t appropriate, your movement will be inefficient. Some degree of conscious awareness of the correct movement, combined with repetitive, controlled drills will usually help. Such drills develop muscle memory, with the goal that the movement quickly becomes automatic — your default setting.

Keep in mind the following principles when training movement skills:

☐ Take time to learn the correct movement. When teaching, do the same. This means planning PT sessions to allow sufficient teaching time. You will have to sacrifice a conditioning effect on those days you teach new drills, but your men will be better in the long run.

☐ You need to be fresh to master complex movements. Don’t smoke your guys and then expect them to do well with agility/power drills or with obstacles. Within a given PT session, it’s best to place movement skills training right after movement prep.

If the schedule dictates agility/power drills after other activities, the men will be

somewhat fatigued. In such cases, the squad leader should take a little extra time before beginning agility/power drills and avoid pushing the intensity/duration of the session too hard.

### **Understanding Movement Prep and Recovery**

Movement preparation and recovery are vital pieces of the RAW PT program. In the past, they’ve been known as warm-up and cooldown. In keeping with the terms used by most top trainers, the names have been changed to reflect the intent of the drills.

Movement preparation is a better term than warm-up. Preparing the body to move well is precisely the goal. Warming the body is part of movement prep, but it is no more important than the other two objectives of movement prep: loosening the joints/muscles, and priming the nerve to muscle messages. If warming were the only objective, you could sit in a sauna and call it warm-up. After movement prep, Rangers should be prepared to run, lift, negotiate obstacles, play a sport, execute a raid...

The movement prep recommended for Rangers is very similar to that used by top strength and conditioning coaches. It is somewhat different than the 5-step warm-up described in the Army’s Physical Fitness Training FM (circa 1980s). While that warm-up was based on sound principles at the time, in the past decade research has shown that static stretching during warm-up is not necessary for injury prevention or performance.

The term recovery is used instead of cooldown. Similar to the idea of warm-up as only a component of movement prep, cooling down is only a small part of recovery. The objectives of recovery are:

- 1) Safely decrease heart-rate, respiratory rate, and body temperature;
- 2) Improve functional flexibility;
- 3) Replace nutrients; and
- 4) Rest enough so that the body is ready for subsequent PT or missions.

Only the first two objectives are met on the PT field. This means that meeting objectives three and four are a personal responsibility. Leaders must educate and motivate their men to follow the nutritional and sleep guidelines put forth in the RAW classes.

It is clear that many individuals blow off cooldown and go straight to the shower without any obvious ill effects. Leaders should discourage this practice. Performing the functional flexibility exercises in the recovery drill will identify areas of tightness that might eventually lead to injury or limit performance. Those exercises were in fact designed to do just that. Obviously not everyone will need every stretch. However, those Rangers that do find areas of tightness or restriction during recovery stretches should be encouraged to repeat the stretches throughout the day.

Performing an organized recovery session offers squad leaders at least two other benefits:

- 1) The opportunity to provide the men with immediate feedback on the performance of the PT session, and
- 2) The opportunity to remind the men to rehydrate and get the proper nutrients at the proper time.

### A Phased Approach to Training

RAW physical training uses a phased approach similar to that used by athletes. Over the years, researchers and trainers have learned that athletes maximize their potential by dedicating a given period of time to a particular aspect of physical development, then changing the focus at regular intervals. For example, runners might first develop an aerobic base through progressive distance runs, then later add hill training and interval workouts. Lifters might first focus on mass-producing workouts, then later emphasize power training.

This phased approach has been successful because regular changes to workouts force the body to continue adapting. If you stay with the same routine, the body becomes accustomed to it and development stops. Another benefit of phased training is the effect on recovery. Attempting to maintain maximal workouts for several months runs the risk of overtraining. By incorporating relatively less training intensity and volume during a portion of the training cycle, the body is much less likely to breakdown.

The RAW PT program uses four phases over a nine-month period:

**Phase I** - In the current operational cycle, this phase begins upon return from deployment and ends after six weeks of PT (block leave, etc. does not count). The emphasis is on recovery from deployment. Rangers should get therapy for any nagging injuries that linger from deployment. The physical training stress is relatively light during this phase. Squad leaders should use this phase to make sure their men achieve mastery of all the drills. The Functional Movement Screen (FMS), a battery of assessments that gauge the quality of functional movements (described further in a future article), is best conducted during this phase. Initial performance tests may be performed during this phase and repeated in phase three.

**Phase II** - This phase begins immediately after the first phase and runs for eight weeks. Leaders should gradually demand more of their men during this phase. More demanding workouts are added at this time on the assumption that phase one laid a good foundation of core strength, movement skills, and endurance.

**Phase III** - This phase links the second phase and deployment. It will generally be about 3-4 weeks in length.

During this time, leaders must ensure their men are ready for deployment. The RP AT and other performance tests should be done during this phase. While training should be tough and realistic, leaders must also take steps to reduce the risk of injury or overtraining.

**Phase IV** - In the current operational cycle, this is the deployed phase. While on deployment, the goal is to maintain peak physical performance without compromising mission readiness (for example, an exhaustive workout performed before a physically demanding mission). Depending on the location of deployment and the missions, Rangers might be able to use Phase IV as an opportunity to develop general strength through gym-based resistance training.

Other units will benefit from a phased approach to physical training, but might need to adjust the length of each phase based on their operational cycle, or to repeat the entire cycle between deployments. For example, a unit with 12-24 months to prepare for their next deployment could repeat Phase 1-3 once or even twice while in garrison. Another option is to add two to four weeks to Phase I and/or four to six weeks to Phase II.

The training of U.S. Army Rangers and those vast numbers of Soldiers who make up the majority of the Army — and who are sharing the burden of the global war on terrorism — cannot be left to chance. We owe it to them to ensure that they are completely prepared to take the fight to the enemy, deliver the decisive blow, and return home safely. Physical conditioning is the first step in that preparation, and the RAW program offers the opportunity and the methodology that we cannot afford to ignore.

---

**Major Danny McMillian** is the senior physical therapist for the 75th Ranger Regiment and is OIC of the Ranger-Athlete-Warrior program. McMillian, who was recently selected for promotion to lieutenant colonel, received a direct commission. He has served as the chief of physical therapy at the U.S. medical facility in Mannheim, Germany, and as chief of Rehabilitative Services for the 31st Combat Support Hospital in Baghdad, Iraq. He was also a sports medicine resident at the United States Military Academy, at West Point, New York.

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Courtesy photo

*The RAW Program includes one of the most comprehensive approaches to physical conditioning ever undertaken by the Army, and has great deal of relevance because of its holistic nature and its contribution to the development of skills and toughness directly related to the demands of combat.*





*Captain Michael Fogarty, a company fire support officer, and his fire support NCO complete a mission.*

Sergeant First Class Reginald Holmes

# TEACHING THE LONG ARM SIGN LANGUAGE

## Company Fire Support Officer Capabilities in Low Intensity Conflict

CAPTAIN MICHAEL FOGARTY

### **Congratulations, Commander**

The day a company commander takes the guidon there will be much to think about. How to employ the company fire support officer (FSO) will probably not make the top of the list. Not long ago the answer would have been simple:

*“The primary duty of the company FSO is being the FSCOORD (fire support coordinator) at company level. He is a full-time fire support advisor to the maneuver company commander, planner, and coordinator. The company FSO advises the commander on the capabilities, limitations, and employment of all fire support assets available to support his operation.”*

— FM 6-30, *Tactics, Techniques and Procedures for Observed Fire*

However, given the near certainty of an impending combat deployment and the

nature of the counterinsurgency (COIN) fight that awaits, there is no easy answer available. Fortunately, a commander need not reinvent the wheel. There may be a blueprint that suits his needs.

This is a study of a few different ways FSOs functioned in low intensity conflict (LIC). These were actual unit solutions from Task Force 1-30 Infantry during Operation Iraqi Freedom III while stationed in Diyala Province. No approach profiled is completely effective or completely ineffective. They are a product of the environment in which they were created. That being said, there are lessons to be learned. A careful reading may yield useful insight to the astute future commander.

### **A Note on Fires**

Regardless of whatever additional missions the FSO takes on, he is, first and foremost, a fire supporter. His primary

mission is always to provide timely and accurate fires to support the maneuver plan. He is the commander’s “long arm,” a means of influencing the fight beyond direct fire. Even with the best of intentions it is possible to set the FSO up for failure. Trying to do many things well can result in doing everything poorly. The commander simply needs to maintain perspective. A busy FSO is like a juggler with many balls in the air, and fire support is the glass ball. Even if he drops everything else, it had better not be that one.

### **What Else Can My FSO Do for Me?**

Limitless potential exists for variation in the employment of the FSO. Many more concentrations exist than are represented here. The duties described below demanded special consideration for two reasons. First, they are assigned to many FSOs deployed to OIF and OEF. This is a reflection of the



importance of these missions and the lack of resources at the company level to execute them. Secondly, most of these duties, particularly Information Operations (IO), civil-military operations (CMO), and intelligence operations (S2), dovetail very well with the effects-based operations (EBO) model that has become the organizing concept for fire support at all levels.

The EBO concept is often referenced but poorly understood. This working definition offers a concise description. (Please note that emerging doctrine is replacing the term stability and support operations [SASO] with stability and reconstruction operations [SARO]).

**Effects-Based Operations:** *Offensive, defensive, stability, and support operations planned and executed to achieve the commander's desired effect on a threat element, civil leader (tribal, ethnic, or governmental), or population group. EBO achieves the commander's desired effect through the synchronized, sequential, or simultaneous application of leadership, maneuver, firepower, and information.*

— **Center for Army Lessons Learned Handbook 04-14, Effects-Based Operations: Brigade to Company Level**

The EBO concept applies to all Army operations, but it is especially applicable to fire support. A maneuver commander should not need to describe what assets are needed to put effects on a target. The commander gives the intent and the FSO translates that intent into effects. This applies to lethal and non-lethal methods. As fire support coordinators continue to evolve into effects coordinators (ECOORDs), it will be incumbent upon FSOs to apply non-lethal effects to give their commander that additional dimension.

**Information Operations Officer:** COIN operations achieve objectives rooted in the populace rather than territory. Placing a key leader in charge of IO keeps big picture goals in focus and a finger on the pulse of the society.

**Civil-Military Operations Officer:** Civil governance,

reconstruction, elections, and other CMO efforts are instrumental in building sustainable societies and are decisive in SARO.

**Company S2:** The COIN battlefield is intelligence driven, and integrating collection, analysis, and targeting at the company level is crucial to success. Many military strategists are arguing for more emphasis here.

**Headquarters Platoon Leader:** As a force provider or support provider, a headquarters platoon has a variety of capabilities that require effective management, though no platoon leader is provided by the modified table of organization and equipment (MTOE).

**Maneuver Platoon Leader:** Many companies find themselves requiring another maneuver element. Under some circumstances, the company FSO can provide leadership and accountability for a maneuver platoon.

Clearly, a brand new FSO straight from the Field Artillery Officer Basic Course at Fort Sill does not arrive as a subject matter expert on all of the duties described here. There are courses to train these concepts. Timing and availability constrain the commander as in any training situation. Where the institutional learning comes up short some apprenticeship and individual learning may have to fill in the gaps. It is critical with all of these missions that commanders evaluate the potential and training level of the FSO to execute any of these missions.

**How Might This Work?**

The following are several vignettes that demonstrate some possibilities for the FSO position in-country. This section also shows some dynamics of the company commander-company FSO relationship. To reflect these purposes, commanders and FSOs who worked together have been grouped together as “teams.”

Task Force 1-30 IN had several different commander-FSO teams throughout OIF III. Each profile in this section consists of one of those teams. Without exception, each commander-FSO dynamic produced a different approach. The following segment reviews some salient characteristics of each case study.

**Team 1: Fires**

Team 1 was a company of mechanized infantry. Because of its lethal effects focus, it was a control for the rest of this study. It originated from the same task force as the rest of the teams. However, it did not share the same battlespace or mission. At the beginning of the deployment, the company was detached from the battalion and placed under brigade control to act as a quick reaction force (QRF). The company then moved from Diyala to ar Ramadi in the Al Anbar Province to augment one of the brigade's task forces.

While used as a brigade QRF, the team responded to several incidents where coalition troops were in contact with insurgent forces. By nature, the QRF role is reactive. Therefore, the FSO's focus was on bringing lethal assets to bear in situations that were already ongoing. In one incident, the FSO was able to bring artillery fires on an insurgent position and cut off enemy egress routes that infantry couldn't reach in time. In other cases, he was able to control



2nd Lieutenant David Sinclair

*The author, Captain Michael Fogarty, briefs the mayors and city councils of Muqdadiyah and Wadjihyah on civil-military cooperation.*

close combat attack (CCA) aviation to provide additional firepower to ground forces. While fighting from Ramadi, he was able to develop fire plans to support company operations and likely contingencies.

Throughout its deployment this team's focus was lethal effects. As a QRF force, it owned no battlespace, projects, or sphere of influence (SOI) contacts. While in Anbar, defeating insurgent maneuver attacks consumed the bulk of its efforts. The result was that the FSO was principally concerned with fires from beginning to end. That emphasis, and the nature of the security environment, precluded a heavy CMO, IO, or intelligence effort.

Team 1's situation highlights important lessons. A more intense maneuver fight generally decreases opportunities to pursue non-lethal effects. Fire support becomes the top priority. Another closely related point is that the enemy has a vote. The operational environment in the commander's battlespace may provide constraints that limit options in employing the FSO.

#### **Team 2: IO Heavy**

Team 2 was a commander-FSO pairing from a task-organized mechanized infantry company team. Its AO was typical of many in Diyala during OIF III. Insurgents attacked frequently but with less commitment than the enemy faced by Team 1. Reconstruction efforts were in full swing, as were efforts to win the trust and cooperation of the populace.

Team 2's FSO spent a great deal of time identifying the key stakeholders in his company AO. At every meeting he attended, he ensured that he knew who everyone was and what interest each represented. Armed with this knowledge, he created unique products with a sharp focus on the concerns represented. He also spent a great deal of time interacting with average Iraqis who were not in positions of influence. Consistent interaction with these people gave him a measure of how well the local leadership represented the thoughts of the average citizen. CMO, interpreter management, and headquarters platoon administration rounded out the



Sergeant First Class Reginald Holmes

*Private First Class Brandon Bramblett operates the Fire Support Sensor System (FS3).*

remainder of the FSO's duties.

At this stage in the deployment, the battalion fire support element (FSE) supported most fires. Maneuver leadership was firmly in place. The commander and FSO had trained together for some time prior to the deployment. They shared a confidence in the power of non-lethal effects to shape the fight. Furthermore, the commander assessed that the FSO had an aptitude for IO.

Team 2 demonstrated that a committed commander and FSO can make non-lethal effects a priority. The commander's focus freed the FSO from areas that entangled others. The endstate was a strong IO focus at the company level.

#### **Team 3: Maneuver**

The AO that Team 3 worked in was similar to that of Team 2. The approach, however, was very different. Although it was a mechanized infantry company like the others, a platoon was detached, leaving it somewhat short on combat power.

This commander elected to realign elements of his two remaining platoons to create a third, smaller platoon. He chose the FSO to lead this element. This platoon differed from the other two. It was motorized while the other two were mechanized. It also carried a primary role as the QRF platoon while the company was in cycle as the task force's QRF. His element responded to improvised explosive devices (IEDs), direct fire contact, emergencies with Iraqi Security Forces, and any other

situation for which the task force commander required additional combat power. In this role, the FSO functioned similarly to the infantry platoon leaders, but was largely separated from his company fire support team (FIST). In this company, the FIST was primarily in charge of the company's operations center.

Eventually, the task organization changed and the detached platoon returned. The FSO then redirected focus on fires, IO, and administration but retained some duties as a maneuver patrol leader. During this stage, the FSO would patrol regularly with infantry elements. When one dismounted patrol

made contact without its vehicles nearby, he was able to call in fires on an insurgent element from the FOB's direct support 155mm howitzers.

This option was born out of the needs of the maneuver force. The commander believed that the company retained strong fire support capabilities with the FSO forward. By necessity, this option precluded a more in-depth, non-lethal approach. The opportunity cost was justified by added maneuver flexibility.

#### **Team 4: Jack-of-All-Trades, Master of None**

This company was also composed of mechanized infantry in an AO similar to Teams 2 and 3. As in all cases, the operational backdrop included a national constitution referendum and a national election.

To address the importance of the constitutional referendum and the national election, the company commander designated the FSO as the point man for election issues. This led to action in several areas: the FSO read and disseminated election materials, attended local and provincial government meetings to synchronize efforts, and conducted patrols to establish security measures at polling sites in the company AO. In other arenas, he developed fire plans for company missions, briefed the commander on intelligence findings of the S-2 and tactical human intelligence (HUMINT) team (THT), and conducted IO meetings with key communicators on the company SOI



list. He also patrolled with the commander wherever he traveled.

As a former S-5 (CMO), the commander was keen to bring non-lethal effects to the company level. The FSO had also served on staff, working closely with enablers such as the THT, the Civil Affairs (CA) team, and the tactical psychological operations (PSYOP) Team (TPT). Both parties were eager to incorporate situational awareness that was frequently ignored or unavailable at the company level. This included intelligence, societal atmospherics, and reconstruction efforts. Civil governance became a pillar due to the ongoing election efforts. The commander also sought a headquarters platoon that could conduct its own patrols.

The result of the wide net cast by this team was breadth rather than depth. The commander was satisfied that he maintained awareness of many aspects of his AO. The apparent tradeoff for this strategy is the difficulty of attaining excellence in any area.

**Team 5: Intelligence**

Team 5 represents another outlier for structural reasons. The armor company represented by Team 5 was an attachment to TF 1-30 IN from Task Force 2-34 Armor, which had in turn been task organized to the 3rd Brigade Combat Team, 3rd Infantry Division. FSOs in TF 2-34 AR had specific guidance to focus on intelligence-related matters. Though it had part of the same AO as Teams 2-4, this team had a different approach.

To achieve his intelligence focus, the FSO tied in frequently with the battalion S-2 and the THT. Whenever possible, he attended meetings in the company's AO to try to mate the intelligence picture painted by the intelligence summaries with ground truth. He interviewed local government officials and community leaders under different pretexts to draw out information he saw in the intelligence reporting. He also used all available opportunities to visit reconstruction projects in the company's AO to restore essential services and better understand the link between reconstruction and the insurgency.

Constant updates brought detail to the picture of insurgents, allies, and fence-sitters living in the towns and villages assigned to the company. The commander also directed the FSO to act as a primary liaison with all host nation personnel, to include interpreters, Iraqi Army (IA), Iraqi Police (IP), and civil government officials.

The efforts to develop the intelligence and CMO picture

provided insight, but the team wasn't always on the same page. The commander was frequently tied up in the lethal aspects of the fight. Consequently, although the information was available, lethal and non-lethal operations were somewhat out of synch.

**What Kind of FSO Do I Need?**

Every company finds itself with a different situation. Therefore, no two commanders will use their FSO in exactly the same way. The following ideas are considerations and recommendations that may help you, a new company commander, employ that FSO to the maximum potential.

**What is my mission?** The importance of a thorough mission analysis should not be new to anyone. What may seem new is the idea that this could shape a key leader's job description. This would apply more directly to a deployed unit. In garrison, METL (mission essential task list) training tends to crowd out new missions. A deployed commander has more freedom to innovate. Consider the battalion commander's intent and how you plan to execute it. That may drive your requirements for the FSO. Are lethal fires the decisive operation in your AO, or is it IO?

**What kind of hand was I dealt?** Mission is a key component of METT-TC, but so is troops available. The commander will need to assess what kind of FSO he was given. Ability to pull his own weight should be a given, but does he have any important strengths or weaknesses? Is this an IO savant or a born leader of Soldiers? How can I use those abilities to best accomplish my mission?

**Be proactive.** Although the operational environment will influence how your company fights, you will also have opportunities to exercise influence. Knowing your environment does not mean being passive. If you want to make CMO a priority, providing the FSO with that guidance may help realize that vision.

**Integrate lethal and non-lethal operations.** This is EBO in a nutshell. It should also be one of your FSO's primary duties. The commander is responsible for the intent, but you should be able to count on the FSO to help you synchronize efforts and coordinate assets. COIN operations require company grade officers to grasp the civil dimension of operations in detail. If it suits your mission, make the FSO responsible for keeping you abreast of developments and concerns.

**Stay engaged.** You may have a capable FSO, a solid mission analysis, and detailed guidance. That alone will not accomplish your mission. Just as no plan survives first contact, the FSO will not operate at maximum effectiveness without your feedback and involvement. Likewise, if the FSO is providing you information, use it. It is useless to perform IO, CMO, and intelligence analysis if you don't incorporate them into your plans.

Although it may not occur to you the day you take the guidon, don't forget about the role of the FSO. Company commanders in high intensity conflicts learn to love what their FSO can do for them. With the proper guidance and feedback, you can learn to love what your FSO can do for you in any operational environment.

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Captain Rob Peterson

*First Lieutenant Kein Brunner works with Iraqi soldiers while serving as the task force quick reaction force platoon leader.*





# FROM BLACKHAWK TO BRADLEY

## The 101st Airborne in a Mechanized Role

CAPTAIN CHRISTOPHER HUME

The versatility of the modern American infantryman is evident in almost every report coming out of Iraq and Afghanistan. Examples abound of young fighting men that adapt and persevere to overcome incredible difficulties, whether through intelligent problem solving or sheer determination. These acts are worth remembering so that the lessons learned can be passed to future war fighters. As the platoon leader for 1st Platoon, C Company, 1st Squadron, 32nd Cavalry Regiment (Reconnaissance, Surveillance, and Target Acquisition [RSTA]), 101st Airborne Division, I was fortunate enough to witness one particular example that occurred over a period of several months.

On Christmas Day 2005, three months into their tour, the Soldiers of 1st Platoon, Charlie Company were adjusting to their new forward operating base (FOB) in Muqdadiyah, Iraq, a few dozen kilometers from the provincial capital of Baqubah. The men from Fort Campbell were used to change after undergoing transformation from an infantry battalion to a RSTA

squadron in less than six months. They had already adapted well to the use of armored trucks in daily operations and were keen on the ever-shifting shape of the enemy. Flexibility and versatility were in their best interest since everyone knew that the evolving battlefield did not look kindly upon those who resisted change in the name of tradition. Despite the change that defined their short history, no one could have predicted the next challenge they would face. It did not come in the form of a new deadly enemy tactic, technique or procedure (TTP) or a serious loss of leadership but with the introduction of a new tool: the M2A2 Bradley fighting vehicle (BFV). These air assault infantrymen, accustomed to helicopter insertions and the occasional truck ride, soon learned to operate, maintain, and fight in a fully tracked armored vehicle typically found in mechanized infantry formations. It was a painful transition that many greeted with resistance and doubt, but it did not take long for everyone to realize the advantages of the protection and firepower that the BFV brought to the table. The strengths could

not be ignored, and all became disciples of this unfamiliar beast.

The platoon's story began a year and a half earlier on the Tennessee-Kentucky border. Charlie Company had a tumultuous birth and history, considering its short existence. As a result of Army transformation, the former 3rd Battalion, 327th Infantry Regiment, was reduced to one infantry reconnaissance company, consisting of two platoons and a mortar and sniper section. The remaining two companies became cavalry troops, composed entirely of cavalry scouts (military occupational specialty [MOS] 19D of the Armor branch). For various reasons, the infantrymen did not work well with the 19Ds, and this became a huge training hurdle. The officers were more understanding, but friction defined the first several months. There was also a shortage of vehicles and equipment since the modified table of organization and



*Soldiers with the 1st Squadron, 32nd Cavalry Regiment conduct a cordon and search operation in Diyala, Iraq, in July 2006.*

Tech. Sergeant Ken Bergmann, USAF

equipment (MTOE) had changed. The platoons were constantly sharing the few trucks the unit owned. On a positive note, because of the mass downsizing of MOS 11B, the best Soldiers from 3rd Battalion were kept in Charlie Company, so a large majority of the men were physically fit and extremely competent in their technical and tactical expertise. Unfortunately, the importance of that infantry and reconnaissance expertise was up for debate since the purpose and employment of the Charlie platoons were in question. They initially trained as a line battalion scout platoon, focusing on dismounted reconnaissance and surveillance, hide sites, and long range movement by foot. This was fitting since many came from the now disbanded 3rd Battalion, 327th Infantry Regiment scouts. However, the battalion commander, Lieutenant Colonel Arthur Kandarian, who was acutely aware of his unit's reduced manpower, considered them as rifle platoons minus machine guns. The debate was only accelerated when battalion live-fire exercises began, and all platoons in the battalion were expected to execute convoy operations. The infantrymen accepted the challenge and performed superbly, yet they still did not know their role. Finally, one month prior to deployment, the two platoons became three by detaching one team from each and placing the fire support officer (FSO) in the platoon leader position. All platoons in the squadron, as the battalion was now called following re-flagging, would be manned and equipped the same.

The infantrymen's expected resistance to more change was overshadowed by their satisfaction in finally having clear guidance. Of course, the nature of deployments made this comfort short-lived as change would once again define the experience of 1st Platoon, Charlie Company and all the members of 1-32nd Cavalry Squadron.

The first few months of the deployment found 1st Platoon at a small forward operating base near the Iranian border, temporarily attached to the squadron's A Troop. The men were happy to be away from the main body and found comfort in the leadership of A Troop's commander, Captain Sean Brown, a tanker and a solid officer, who took care of his infantrymen. The enlisted men also learned to respect and work with the 19Ds as their knowledge of vehicles exceeded the average rifleman's. Operations at the first FOB were routine and without great incident. The fall elections of 2005 were the greatest priority, and everything went smoothly as a result of solid coordination with the local Iraqi Security Forces. Things were going so smoothly, in fact, that the troop handed operations over to the Iraqis, with military transition team (MiTT) supervision, and headed to their new home an hour's drive down the road in Muqdadiyah. What would be waiting for its Soldiers surprised everyone, most of all the men of 1st Platoon. They would relieve a mechanized infantry battalion, the 1st Battalion, 30th Infantry Regiment, Battle Boars, of the 3rd Brigade, 3rd Infantry Division, and keep a few of their toys — M2A2 Bradley fighting vehicles.

After the jump from foot to trucks, the next leap to tracked vehicles did not come to anyone as a complete surprise. The rumor



Courtesy photo

*Despite being new to the Bradley fighting vehicle, the Soldiers of 1st Platoon, Charlie Company quickly learned how to navigate in restricted terrain.*

had surfaced prior to deployment, and a few of the 19Ds who had Bradley experience had conducted driver's training at Fort Campbell. Despite this now obvious indicator, none of the men in 1st Platoon ever thought it would be they who rode in such a vehicle. Most of them couldn't tell the difference between the Bradley and an M1 Abrams tank, referring to anything with tracks as a "tank." However, the commander could not afford to exclude any of the small force currently posted in Muqdadiyah and demanded that each platoon of A Troop attend the train-up. So, in between left seat and right seat rides for the area of operations orientation, the 101st men went to Bradley school, courtesy of the Battle Boars. During four days of training, the Soldiers learned everything from loading and unloading the weapons systems to changing track. The designated drivers drove, the designated gunners fired, and the platoon leadership soaked up as much as they could. The 3rd ID Soldiers were excellent teachers and answered a fair share of what must have been ridiculous questions. The training culminated in a condensed gunnery and "road test" out in sector. Some in the platoon received extra training on their road test thanks to a well-concealed 155mm artillery shell that exploded off the right side of the platoon leader's vehicle. It was a scenario that would repeat itself two dozen more times in the platoon's eight-month relationship with the Bradley, yet this first incident was most remembered as the one that sold the infantrymen on the advantages of armor. The Bradley performed as advertised.

Once the Bandits of 1-32 took over their new battlespace, they lost no time in getting the Bradleys into the fight. Route clearance became an obsession of the commanders, and as a result, the men of A Troop (1-C included) spent many long hours out on the roads. The vehicles also proved an excellent conveyance for sniper teams and other dismounted assets that needed insertion in sector. As the men's experience grew and they became comfortable with the vehicles, the missions became more complex and coordinated. Many times, the Bradleys were used to support patrol bases in sector, dismounted surveillance platforms, raids, and cordon and searches. The vehicles proved to be excellent for insertion of small dismounted patrols. The survivability and the carrying capacity allowed a complete element to ride together and get on the ground quickly without compromise. These techniques, of course, did not come right away, and the lessons learned by the men of 1st Platoon could fill volumes. Fortunately, the platoon sergeant, Sergeant



First Class Ricky Elza, made sure the lessons were implemented, and his relentless pursuit of Bradley knowledge only further inspired the men to learn as much as they could.

Maintenance was a vertical learning curve. As stated before, every man in 1st Platoon had a light infantry background. Most had never even seen a Bradley. The few A Troop 19Ds with mechanized experience helped tremendously, and a mechanic was attached to the troop. However, this did not prevent the inquisitive infantrymen from breaking, and then learning how to fix, just about everything that bolted onto the vehicle. The most comedic incident involved the lug nuts for the road wheels. The Soldiers soon discovered that when the wheels came loose, they would shoot off the side of the vehicle at high velocity. Several wheels later, they finally learned that the lug nuts were to blame. They were onetime use only and could not be reused as on a truck: another problem solved by experience.

Since each piece of equipment in the Army has its own specific characteristics, it requires its own standard operating procedures, load plans, and crew drills. The platoon devised contingency plans for vehicle recovery, casualty evacuation, modified fuel loads, and down-weapon drills. Additionally, the gunners learned how to implement the Integrated Sight Unit, which was a very useful optic, and incorporate its thermal capabilities into

route clearance. The drivers learned how to maneuver in restricted terrain, but not before several painful yet useful lessons were taught, which included: ground that looks dry isn't necessarily so, bridges that support trucks don't always support Bradleys, and house walls are closer than they appear. Despite all the mistakes and challenges, the men of 1st Platoon, more than any, became masters of their new trade. Through a tireless commitment to learning mechanized operations, they brought a valuable weapon to the fight. In mission after mission, the skills of the light infantry were combined with the skills of the Bradley crewmen to accomplish tasks otherwise beyond the normal capabilities of either a purely mechanized force or a purely light force.

In late spring of 2006, the remainder of Charlie Company finally linked up with 1st Platoon in Muqdadiyah. Thanks to a close relationship among its young leaders, due in part to the fact that many of the Soldiers were previously in 1st Platoon, the 3rd Platoon was given some rudimentary instruction on Bradley operations and successfully incorporated the vehicles into their own patrols. Once again infantrymen proved their ability to master new skills and demonstrate their undying flexibility.

The integration of mechanized and light infantry operations came to a head during the last month of the deployment. Tireless

intelligence gathering through patrols, interrogations, surveillance and informants finally produced a mature target list for an IED cell in a nearby village. The number of objectives demanded that all of Charlie Company would participate. The plan called for a mounted Bradley insertion followed by foot infiltration. Coordination among all the units was imperative to avoid compromise. If anyone in the village suspected anything besides a normal route clearance mission, the targets would flee. Once all three platoons were set in their respective assault positions, the Bradleys withdrew to the FOB for quick reaction force duties. At H hour, all three dismounted elements moved across the large canal encircling the village and hit three objectives simultaneously. The local nationals were caught by surprise, and the targets were quickly detained after only a brief fight. Once the initial assault occurred, the Bradleys returned to provide security and prisoner transport. The integration was flawless and the mission a success. The firepower and speed provided by the Bradleys and the stealth and situational awareness of the dismounted Soldiers combined to form a lethal and versatile team.

Flexibility is a virtue of all Soldiers, especially infantrymen. Some units learn how to adapt early, and others drag their feet and resist the very mention of change. Initially, the men of 1st Platoon were reluctant to veer from their predestined path. Yet as their training and then their deployment progressed, versatility came to define the very nature of their identity. From dismounted infantry battle drills, reconnaissance work, and foot patrols; to truck maneuver and finally mechanized operations, their willingness to learn and adapt was ever-present. It was a privilege to witness.



Courtesy photo

*Soldiers with the 1st Platoon, C Company, 1st Squadron, 32nd Cavalry Regiment, gather for a unit photograph in front of one of platoon's Bradley fighting vehicles.*

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# Stryker Unit Deploys with Land Warrior

## Getting Dismounted Soldiers in the Future Network

MAJOR DOUGLAS COPELAND

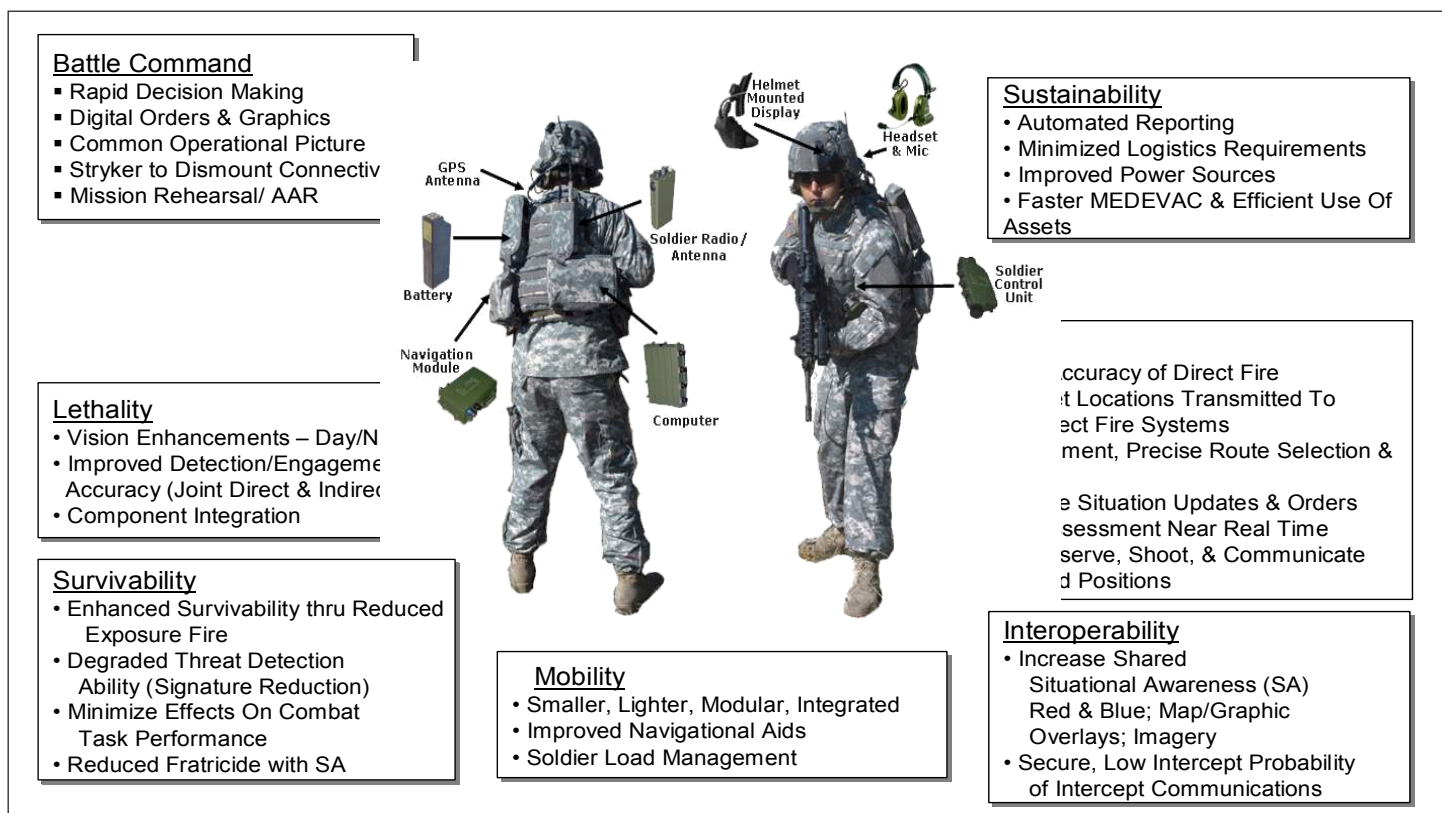
*“Wars may be fought with weapons, but they are won by men.”*  
**— General George Patton, Jr.**

General Patton’s quote rings true today and probably will as long as we have to fight our nation’s wars. Warfighting is tough business and gets tougher as our enemy adapts. As technology evolves, the U.S. Army Soldier is expected to do more, absorb more information, and control more than ever before. I submit that this expectation will not decrease, but only increase as we infuse better technology and faster paced operations into our future force structure. The necessity for increased communications, situational awareness and situational understanding capabilities is intuitive to those who have had to operate dismounted in the current enemy environment; it is complicated and mistakes are unforgiving. As our current force leverages its technological edge to overmatch its enemies, the current enemy is negating the standoff of our weapons and technology by “hugging” our forces in tight urban terrain. This

fact has once again brought the close fight to our small combat units. They have to know more about their immediate battlespace, both friendly and enemy, and apply that knowledge quickly. This kind of tactical decision making has always been at the tip of the spear. However, our sergeants and lieutenants are now making strategic impacts when they make decisions during the conduct of this dynamic, fluid and always changing “three block war.” We must arm these leaders with the capabilities to allow them to fight and win in the current environment and on the battlefields of the future.

The capability to communicate by voice and data and the ability to receive and display maneuver graphics is essential for Army leaders. Dismounted leaders must be able to do these tasks in order to receive and issue orders, receive and manipulate digital information, direct fire and maneuver, report information, call for fire and conduct troop leading procedures. Army leaders have been doing these things on battlefields of the past and continue to do so today in Iraq, Afghanistan, and elsewhere. For years,

Figure 1 — Land Warrior Capabilities



dismounted leaders have relied on radios to communicate. If they were lucky, they had a map, a picture or other form of imagery, alcohol pen, protractor and pencil, coupled with acetate, to wage both deep and close battles. Plans were made under poncho liners with a red lens flashlight or on a HMMWV top and disseminated to subordinates by runner, radio, or in person. As technology evolved, friendly locations were tracked leveraging global positioning systems (GPS). Digital networks proliferated throughout mounted formations.

Leveraging Force XXI Battle Command Brigade and Below (FBCB2) and Blue Force Tracker systems, leaders at all levels developed tactics, techniques and procedures (TTPs) that built upon these abilities. Leaders not only saw themselves and their buddies, but also enemy positions and other battlefield entities in real time. Static and mobile command posts were empowered by collaborative planning and battle-tracking tools. Commanders concentrated on combat system effects rather than combat forces, enabling units to be both more survivable and more lethal. Our Army evolved into a digitally connected, platform-centric force, but our leaders, once dismounted, have continued to fight in nearly the same manner as we did before a digital, GPS-empowered network. Not any more. The Land Warrior Soldier system is the first step to get the leader into the digital battlefield. Currently, Land Warrior systems are deployed to the Central Command area of responsibility (AOR) with the 4th Battalion, 9th Infantry Regiment, 4th Stryker Brigade Combat Team, 2nd Infantry Division.

Land Warrior is a fully integrated and modular close combat fighting system that connects the dismounted leader to the digital battlefield. Land Warrior enhances the lethality, battle command and control (C2), mobility, survivability, and sustainability of dismounted combat leaders, enabling them to accomplish their mission. Land Warrior facilitates command, control, and information sharing. It integrates dismounted Soldiers down to the team leader level into the digitized battlefield. The Land Warrior system includes a multifunction laser rangefinder, helmet-mounted visual



**Figure 2** — Views from the Land Warrior common operational picture as seen by the Soldier through the helmet-mounted display. Graphical control measures highlighting a scheme of maneuver (left) and zoom in view of the objective area (right).

displays, integrated load-carrying equipment with ballistic protection (Improved Outer Tactical Vest), Advanced Combat Helmet, Peltor headset with speaker and microphone, computer subsystem, navigation module, combat net radio system (CNRS), Soldier control unit, weapon user interface and a power source. Land Warrior interfaces with the M4 carbine, the M203, and the M249 weapon systems. Integrated components reduce the net weight gain to the Soldier to approximately 9 pounds. Land Warrior modularity permits tailoring for mission requirements, and has the flexibility for expanded capabilities. The 4th Battalion, 9th Infantry equipped its leaders down to the team leader level. The unit also equipped its medics, joint tactical air controllers (JTACs) and slice elements with Land Warrior systems. We have seen additional equipping of Cavalry Soldiers in response to the nontraditional roles in which many Soldiers find themselves operating in Iraq.

Land Warrior supports the tenets of current infantry doctrine. It enhances a unit's ability to perform its Army warfighting functions. Land Warrior allows the unit to shape the battlefield and set the conditions that permit the equipped force to close with and destroy the enemy. The Land Warrior Mission Needs Statement, dated September 8, 1993, identified the need for improvements in five capabilities for dismounted Soldiers and leaders. These capabilities are: lethality, command and control, survivability, mobility, and sustainment. The Land Warrior system was developed to overcome these deficiencies based on the requirements in the Land Warrior

Capability Production Document approved by the Department of the Army on December 19, 2005. Equipping a small unit with Land Warrior enhances its ability to perform combat mission tasks by providing improvements in these areas. Impacts to current techniques and procedures are primarily in the areas of movement, reconnaissance and surveillance, attack, consolidate and reorganize, defense, military operations in urban terrain, command and control, as well as supporting individual and collective tasks. Land Warrior provides the means to enhance combat power across the full spectrum of tactical actions, missions, and operations. Infantry unit design enables the force to achieve dominance across the full scale of contingencies from stability and reconstruction operations, small scale contingency to a major theater of war. Tasks associated with these mission areas require a system that enables success in the planning, shaping, and execution of close combat.

Land Warrior provides units critically needed capabilities to accomplish assigned combat tasks and overcome existing capability gaps. Land Warrior, beginning at the small unit level, provides:

- A common operational picture of the close fight (operational levels); enhanced leader control in the close fight between maneuver and support elements, and between dismounted and mounted elements; accurate and timely sharing of voice, data, and graphical information, and mutual tracking of individual locations, enabling tactical understanding at all levels, which in turn, enables full synchronization of maneuver and fires, intra-small unit cooperative



engagements, fire distribution, and fire control.

□ Increased survivability of units through enhanced situational understanding, individual (body armor) and collective force protection (unit dispersion in the close fight, protected or reduced exposure engagement, individual locations and tracking), and reduced incidences of fratricide.

□ The ability to generate and maintain reliable combat power through engineering design of a robust electronics system. Built-in diagnostics and fault isolation reduces the need to evacuate total systems but focuses on fault identification at the small unit level enhanced by rapid reporting of repair needs; providing the means to detect and repair problems at the lowest level, increasing the availability to the end user.

□ Increased small unit lethality through controlled, efficient maneuver combined with a greater ability to mass combat power (direct and indirect) at the proper point and time.

□ Increased movement efficiency through accurate visualization of the battlespace at all levels, integrated navigation, load reduction, and thermal and image intensification sensors, which enables units to move farther, faster, and fight longer.

□ Increased leadership and command enhancements at the small tactical level, by providing leaders the means to fully understand the situation and to better control the maneuver of his unit and deliver all forms of effects.

□ Integrated Soldier systems that use one and/or two batteries to run all components for 8-16 hours.

Land Warrior employment enables two critical conditions that influence success in close combat. The first is the dismounted

force's ability to set the conditions of the fight to friendly advantage. The second is the ability to strike the enemy with decisive maneuver while limiting the enemy's ability to effectively engage friendly forces.

**Setting the Conditions of the Fight.** Friendly forces must be able to develop the situation out of contact prior to making physical or visual contact with the enemy. To do so, Soldiers must have access to real-time tactical information on terrain, obstacles, and the composition, disposition, and intentions of relevant enemy and friendly units. The Land Warrior system enables squads, platoons, and companies to synchronize effects through an enhanced ability to acquire and distribute knowledge. Enemy disposition is derived via Soldier reporting (every Soldier is a sensor) and leader synchronization. Land Warrior-equipped leaders are provided the means to establish and maintain a common operating picture that assists in rapid adjustments to the tactical plan, more robust combat power synchronization, and an overall higher unit operational tempo.

**Maintaining Situational Awareness (SA).** While out of contact, Land Warrior-equipped forces continue to have access to timely information. This is enabled through efficiently receiving and disseminating critical information at the appropriate level of command. Land Warrior-equipped units maintain freedom of action and rapid tempo by receiving and displaying information

*Soldiers from C Company, 4th Battalion, 9th Infantry, take part in urban training during assessments of Land Warrior equipment at Fort Lewis, Washington.*

U.S. Army photo



in such a manner that allows leaders to rapidly make adjustments to the maneuver plan. Sensor equipment (day, thermal sights, lasers, etc.) integrated onto a Soldier's primary weapon provides the ability to generate and distribute SA within small units. The Land Warrior system, supported by selected battalion command and staff personnel equipped with Land Warrior, enables more accurate assessments of enemy dispositions and is better enabled to support the commander's intent in the close fight by maneuvering to a position of advantage out of contact.

#### **Strike the Enemy with Decisive Maneuver.**

The infantry battalion applies its combat power to produce overmatching effects at the decisive time and place to defeat the enemy and accomplish its mission. Subordinate units are employed as the primary elements of the battalion's combat power against specific decisive points, key forces, and capabilities within the battalion. Within the scope of battalion operations, companies, platoons, and squads must maximize their ability to choose decisive engagement locations from positions of advantage, synchronizing fire and maneuver culminating in tactical assault followed by a rapid transition to exploitation and pursuit. Land Warrior-equipped units still execute the traditional forms of maneuver. However, a Land Warrior-equipped small unit will be better enabled to rely on forms of maneuver requiring greater precision while avoiding engagements such as the frontal attack that are characterized by minimal maneuver precision and marginal situational understanding of enemy disposition and intent. As a component of a higher command achieving superior knowledge, the Land Warrior unit chooses the time and location of decisive engagement. These attacks are originated by continuing maneuver from established positions of advantage. Once forces are decisively engaged, the primary purpose of any infantry-based force is to close with and destroy the enemy. Land Warrior enables units to leverage information to more rapidly seize and retain the initiative. Leaders make better informed decisions, increasing agility and threat overmatch.

**Offensive Operations.** Offensive operations seek to seize, retain, and exploit the initiative to defeat the enemy decisively. Battles may be linear or nonlinear and conducted in contiguous or noncontiguous areas of operations. Infantry forces (companies, platoons, and squads) utilize Land Warrior to reduce reactive battle drills to more deliberate tactical operations. For example, units will gain greater situational awareness on enemy positions vice conducting operations to find the enemy. Units develop the situation largely out of contact instead of reacting to contact. Units maneuver to positions of advantage out of contact while retaining freedom of maneuver, and conducting decisive combat at the time and place of friendly force choosing. Units also have the ability to re-task organize "on the fly," attach and detach platoons and cross-attach companies, when required to support the commander's intent.

**Develop Situation Out Of Contact.** Land Warrior-equipped units are more capable of developing the situation out of contact through access to timely information and thus greater situational



Courtesy photo

*The 4th Battalion, 9th Infantry Regiment spent nine months testing and training with the Land Warrior system before deploying to Iraq.*

awareness. A common operational picture provides the information required in a tactical unit to ensure Soldiers in the force know where they are, know where their unit members are, and as information is acquired or disseminated from a higher command, where the enemy is located. The primary requirements that will drive enhanced capabilities are a networked small unit information infrastructure that generates and routes critical information to Soldiers, combined with a near real-time visual friendly and enemy common operating picture that provides key leaders the means to determine required adjustments to the tactical plan. Land Warrior key leaders located at the battalion command and staff level review and update the enemy common operating picture. Land Warrior leaders will also update a friendly common picture scaled to their area of operations. Initially, Soldiers not equipped with Land Warrior will continue to observe their sectors and provide verbal reports. Subsequent increments will evolve system capability towards greater battle command interoperability across the force structure and eventually evolve into the Ground Soldier System.

**Maneuver To Positions Of Advantage.** Land Warrior-equipped forces are better enabled to maneuver to positions of advantage out of contact while retaining freedom of maneuver through the enhanced capability of Soldiers having near real-time access to a tailored friendly and enemy common operating picture. An enemy location either becomes known prior to contact or once contact is made. Leaders can choose alternative schemes of maneuver (e.g. direct and/or indirect fires) that do not rely on significant forces to fix an enemy prior to unit movement to destroy the enemy. Given a broader tactical perspective that generates situational understanding, leaders have the option of retaining freedom of maneuver and protecting the force to attack more dangerous targets first rather than simply react to contact enroute to an ultimate objective. Maneuver units are able to more effectively identify assailable flanks and positions of advantage through knowledge of the enemy's dispositions and posture. Commanders have greater insight into (and control over) the most



effective time to conduct maneuver. Better knowledge further permits commanders to choose the best routes to the objective area with respect to stealth, speed, and momentum. Through the confidence built by knowing the locations of friendly forces, day or night, and/or limited visibility, small unit agility is enhanced. More complex movements are accomplished to gain positions of advantage with distinct force protection improvements of being able to rapidly synchronize shifts in the maneuver plan with adjustments to supporting fires.

**Decisive Operations.** Decisive operations are ultimately based on tactical success in close combat. Land Warrior-equipped units must be effective in closing with and destroying the enemy and seizing and controlling key terrain. The key aspect of close combat tactical actions is the ability of units to integrate firepower, maneuver, and assault to win the close combat fight wherever the enemy is found. During contact, Land Warrior-equipped small units maneuver to positions of advantage, initiate decisive contact at the chosen time and place while integrating fire and maneuver. Through the integrated capabilities provided to Land Warrior-equipped Soldiers in the close fight, small units are able to employ speed, stealth, and deception to avoid detection, protect movement, retain freedom of action, engage enemy forces while en route, and build momentum. The Land Warrior-equipped unit adapts on the move, adjusting routes and objectives based on changes to the situation, fighting the enemy, not the plan. The Land Warrior tactical assault is characterized by highly precise and synchronized fires and maneuver. Support-by-fire elements have exact personnel locations and can place effective suppressive fire on distinct locations. Indirect fire assets are more precisely synchronized due to a clear

*A Soldier with C Company, 4th Battalion, 9th Infantry Regiment takes part in urban training during assessments of Land Warrior equipment at Fort Lewis, Washington, in June 2006.*

Courtesy photo



visualization of all equipped Soldiers in the assault and knowledge of the enemy disposition and intent. The Land Warrior-equipped unit seeks to engage the enemy one time, denying him the opportunity to retreat and reconstitute. This goal requires both close assault and finishing actions that continue contact with retreating forces to destroy them in detail.

**Defensive Operations.** The purpose of defensive operations is to defeat enemy attacks with the desired end state to buy time, economize forces, and develop conditions favorable for resuming offensive operations. Defending forces await the attacker's blow and defeat the attack by successfully deflecting it. All phases of defensive operations are enhanced through tactical awareness, providing a common tactical picture throughout the entire defense. Land Warrior enables focused concentration of fires, fire control and distribution, proper commitment of reserves for execution of the counterattack, and execution of alternate and primary battle plans. Capability is enhanced in defensive preparation through collaborative planning and coordination of available fires, intelligence, surveillance, and reconnaissance. Land Warrior capabilities provide a combat multiplier in the defense, enabling early detection of the enemy force and rapid reporting and dissemination of information. The threat is attacked with precision from protected positions, through maneuver and indirect fire support, in support of the close fight. The result is the disruption of the attacker's tempo and synchronization with actions designed to prevent them from massing combat power. Tactical awareness and understanding enhances the Land Warrior-equipped force's ability to mass effects of overwhelming combat power across a wide variety of battlefield conditions. A characteristic of defensive operations is that commanders accept risk in some areas to mass effects elsewhere. The common operating picture containing both friendly and enemy situational awareness information enables commanders to mitigate risk given the ability to better discern enemy disposition and intent. Ultimately, Land Warrior enables concentration of forces with enhanced C2 for fire control and distribution, commitment of reserves, timely occupation of battle positions and counterattacks.

**Stability and Support Operations (SASO).** In accordance with U.S. national military strategy and as evidenced by current and recent military operations, the Army will continue to be involved in SASO. Stability operations promote and protect U.S. national interests by influencing the threat, political, and information dimensions of the operational environment. Support operations are usually nonlinear and noncontiguous. Commanders designate the decisive, shaping, and sustaining operations necessary for mission success. In stability and support operations, the enemy is often disease, hunger, or the consequences of disaster. Although the Land Warrior system was designed primarily as a combat system to provide infantry maneuver battalions, companies,

small units, and individual combatants an overmatch capability against enemy forces, it also provides flexibility for employment across the full spectrum of military operations.

### **Soldier as a System:**

Land Warrior is one of the first steps that align Soldier capabilities in accordance with the Soldier as a System (SaaS) concept. The Soldier as a System concept provides an integrated system's approach to modernizing and increasing Soldier and small unit capabilities to support current and future joint operations. In addition, the SaaS concept views the Soldier as the centerpiece and ensures Soldier-related DOTMLPF issues are addressed. Land Warrior is the initial effort in the development of an integrated, modular Soldier system. It initially focused on Stryker brigade combat teams, small units within Stryker infantry battalions, and selected Soldiers in direct support of infantry battalions. Land Warrior is the evolutionary base for the Ground Soldier Systems' (GSS) capabilities. Land Warrior-equipped Soldiers perform missions that require connectivity to their supporting platforms, but must have survivability and communications that are independent of Soldier platforms. The GSS will improve upon Land Warrior capabilities, and when combined with the core Soldier system will meet the needs of all Soldiers who conduct ground close combat in the future force. The GSS enables Soldiers to efficiently interoperate with, and better exploit, all capabilities by providing continuous connectivity to sensors and effectively linking warfighters to both mounted and dismounted crews and local security elements. The GSS supports UJTL (Universal Joint Task List) tasks at all levels, specifically the tasks at the tactical level of war. The GSS will enhance mission performance of the following tactical level tasks: Tactical 1 — Deploy/Conduct Maneuver; Tactical 2 — Develop Intelligence; Tactical 3 and 4 — Employ Firepower; and Tactical 5 — Perform Logistics and Combat Service Support. Capabilities include lighter weight, enhanced power sources and sensors. GSS will also add FCS interoperability. The user-defined operational picture (UDOP) will add greater fidelity to friendly location tracking and adds enemy tracking. Collaborative SA improves information exchange to enhance

**Ultimately, Land Warrior enables concentration of forces with enhanced C2 for fire control and distribution, commitment of reserves, timely occupation of battle positions and counterattacks.**

Soldier-to-Soldier interactions, especially for networked lethality, and mission rehearsal. The user interface requires greater hands free efficiency. Embedded training (ET) will enable more learning and retention in less time and provides just-in-time refresher training or emergency initial training. Networking of Soldiers, weapons, sensors and external assets enables geographically dispersed small units to collaboratively influence larger areas with greater precision, speed and a broader variety of lethal and less-than-lethal effects. The UDOP will provide Soldiers the actionable information they need to sustain collaborative initiative.

While Land Warrior is truly the baseline for the GSS, the Future Force Warrior (FFW) Advanced Technology Demonstration (ATD) has worked diligently for the last five years on testing, evaluating and integrating best in class technologies to further inform the GSS. Focus areas have been in reducing size, weight, power consumption while increasing integrated, modular capabilities available to the Soldier. The FFW ATD will meet its exit criteria this fall at Air Assault Expeditionary Force (AAEF), Spiral D, at Fort Benning, Georgia.

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## **LAND WARRIOR SYSTEM COMPONENTS**

■ **Integrated Body Subsystem (IBS)** — Consists of the Computer/Master Hub Subsystem, Soldier Control Unit Subsystem, Communications Net Radio Subsystem, Navigation Subsystem, Power Subsystem, and Personal Area Network.

■ **Computer/Master Hub Subsystem** — Primary device for integrating data from the other sensors, components, and subsystems and displaying this information in the Soldier's helmet-mounted display (HMD). The computer and software allows the Soldier to access and process situational awareness information received in mission operation orders and messages. It also prepares mission reports to higher echelons, and processes and sends stillframe video or thermal images from sensors and compresses them for transmission via the radio subsystem.

■ **Soldier Control Unit (SCU) Subsystem** — Allows the Soldier to interface with the system, through a thumb stick for cursor mouse controls, mouse buttons, radio talk control buttons to control volume and video selection. The SCU is designed for right or left-handed Soldiers; and has a zeroize button that allows the Soldier to delete sensitive data. The SCU contains a Soldier Access Module (SAM) card reader that allows Soldier log-on. The SAM card contains the unit reference number (URN) and Soldier's personal identification number (PIN); it is unique for each Soldier and made for the Soldier on the Mission Data Support Equipment (MDSE).

■ **Communications Network Radio Subsystem (CNRS)** — Provides the voice and data transmission/communication capabilities of Land Warrior.

■ **Navigation Subsystem (NSS)** — Provides position and navigation information. NSS consists of the GPS and antenna and the Dead Reckoning Device (DRD). GPS provides a position solution that is accurate to within 3-5 meters. The DRD augments GPS and maintains a position solution when the Soldier is operating in restrictive terrain (e.g., urban or thick tree canopy) and GPS may be degraded or unavailable. The DRD also provides a heading reference indication to assist in navigation. Algorithms process information from the GPS and DRD to provide a position solution that is more accurate than either sensor alone.



■ **Personal Area Network and Power Subsystem** — A distributed Universal Serial Bus (USB) network that directs information between the subsystems and the Computer/Master Hub. Dependent upon duration desired, the system is powered by 1 – 2 Lithium Ion rechargeable batteries. One of these lasts approximately eight hours during continuous use.

■ **Software Subsystem** — Integrates subsystems which provide lethality, survivability, mobility, command, control, communications, and situational awareness.

■ **Helmet Subsystem (HSS)** — Integrated on the Advanced Combat Helmet (ACH), HMD, and image intensifier (I<sup>2</sup>). The HSS has a Helmet Interface Assembly (HIA) which interfaces with the HMD, headset with speakers/microphone, and the IBS. The HSS is compatible with the manual aiming and firing of the modular weapon, with chemical/biological (CB) and environmental protective clothing, and with the M45 CB mask that are provided as government-furnished equipment (GFE).

\* **Advanced Combat Helmet** — Provided as GFE. In addition to the HMD and PVS-14 described below, a Peltor headset with microphone and speaker is worn with the helmet to receive and transmit voice communications and receive audio from the computer and radio

\* **Helmet-Mounted Display** — Is a color display that, when viewed, replicates a 17 inch color monitor. The HMD is hands-free and can be positioned over either eye. It has an integrated on/off switch so that it can be turned off when not in use. The HMD is not constantly over the user's eye. It swings up and out of the way of the eye when not needed.

\* **Image Intensifier** — The PVS-14 is provided as GFE and connects to the ACH.

\* **Headset** — The Peltor headset provides high-quality hearing protection while allowing small-sound recognition and includes speakers and a microphone. The Peltor headset is a commercial off-the-shelf (COTS) item.

■ **Weapon Subsystem** — Consists of the Modular Weapon System (MWS), Close Combat Optic (CCO), Thermal Weapons Sight (TWS), Daylight Video Sight (DVS), and Multifunction Laser (MFL). The TWS, DVS, and MFL are integrated to the system through a single cable wiring harness. Land Warrior interfaces with the M4, M249 Squad Automatic Weapon (SAW) and M203 grenade launcher.

\* **Modular Weapons System** — Consists of mounting rails and adapters that can be attached to the presently-fielded M4 5.56mm weapon, M249 SAW, and M16A4/M203. The MWS rails provide additional mounting surfaces that allow components such as the CCO, DVS, and MFL to be attached.

\* **Thermal Weapons Sight (AN-PAS 13)** — Provides the capability to detect man-sized targets in daylight, darkness, and through obscurants. The TWS image can be viewed directly on the sight, displayed in the HMD for indirect viewing, or captured (single frame only) for transmission via radio.

\* **Daylight Video Sight** — For daylight use and provides the Soldier with video images that can be displayed on the HMD. The DVS has the capability to magnify images at 1.5 X, 6 X and 12 X. Soldiers can also capture and store digital images.

\* **STORM Multifunction Laser** — Incorporates laser range-finding, digital compass, visible and infrared (IR) pointing, and IR illumination capabilities. The MFL replaces functionality of the existing stand-alone PEQ-2 and PAQ-4 devices into a combined device that is controlled through Land Warrior software.

\* **Close Combat Optic** — A reflex or telescopic sight. Has a red aiming reference (collimated dot) and is designed for “two eyes open” method of sighting. The dot follows the horizontal and vertical movement of the eye while remaining fixed on the target. No centering or focusing is required.

■ **Protective Clothing and Individual Equipment Subsystem (PCIES)** — Includes existing GFE and new clothing and individual equipment items. Components include: Modular Load-Carrying Equipment, IOTV, Joint Services Lightweight Integrated Suit Technology (JSLIST), M45 CB Mask, Military Eye Protection System (MEPS), and other existing organizational clothing and individual equipment (CIE).

#### **Land Warrior Support Equipment:**

**Mission Data Support Equipment (MDSE)** — Primary source of digital mission information used by system. The MDSE is resident on a dedicated laptop computer (toughbook). It allows the user to generate, maintain, and transfer the Mission Data Packages (MDPs) that contain critical information required to enable conduct of missions. MDPs include digital maps, overlays, operations orders, Unit Task Organization (UTO) data, and images. The MDSE also prepares and edit SAM cards. (GFE)

**Network Manager** — A rugged laptop based software program used to provide automated network management and control of the communications network. Assigns and maintains configuration parameters of the communications devices. The network manager is provided as GFE and is resident at the battalion level S6. Allows the battalion signal shop to configure radios, remote zeroize and monitor network.

**Multi-Battery Charger** — Recharges system rechargeable batteries both in the vehicle and out of the vehicle. The chargers are configured for a three-battery charger (vehicle) and a 12-battery charger (unit resupply area).

**Keying Device** — A hand-held device capable of securely receiving, storing, and transferring data between compatible cryptographic and communications equipment. The keying device will be used to load communications security (COMSEC) keys and is provided as GFE to the Land Warrior-equipped unit.

**Vehicle Interface Kits (VIK)** — Provided for the following Stryker vehicle variants: Infantry Combat Vehicle, Reconnaissance Vehicle, Commander's Vehicle, Engineer Squad Vehicle, Mortar Carrier, Fire Support Vehicle, Medical Evacuation Vehicle, and the NBC Reconnaissance Vehicle. The VIK expands system capability to interoperate with the Army Battle Command System by interfacing through FBCB2, AN/VIC-3, and the Land Warrior radio network system, to provide the Army-wide capability to conduct operations with battlefield information distributed in digital voice and data format.

# LAND WARRIOR DOTMLPF AND LUT RESULTS

MAJOR DOUGLAS COPELAND

**T**RADOC Capability Manager (TCM) Soldier conducted a DOTMLPF (doctrine, organization, training, materiel, leadership, education, personnel, and facilities) assessment of the Land Warrior system with 4-9 Infantry at Fort Lewis, Washington, over the past 18 months. In conjunction with the TCM-Soldier assessments, the Army Test and Evaluation Command conducted an independent limited user test (LUT) in September and October of 2006. Land Warrior proved to mitigate 13 of the 19 identified U.S. Army Small Unit Capability Gaps. Land Warrior proved to provide increased capabilities to small units and their leaders. The most significant impacts were in the areas of lethality, battle command, voice communications, and situational awareness.

**Lethality.** Day and night vision enhancements are integrated through thermal imagery, image intensification, and daylight video. Land Warrior provides the capability to engage targets by viewing through the helmet-mounted display while exposing hands and arms only (reduced exposure firing technique). This integrated capability is not found on the battlefield today. This technique has proven to reduce Soldier exposure to hostile fire by up to 82 percent.

The Land Warrior-integrated Multi-Function Laser (MFL) also allows Soldiers to quickly determine the accurate location of targets as well as their own location and send accurate, digital calls for fire or target descriptions (e.g. sniper or improvised explosive device locations). Land Warrior was not used as a sole source for clearance of fires, but was another tool for the fires clearance authority to use to verify the situation and help alleviate fratricide.

Land Warrior provided increased small unit lethality through controlled, efficient maneuver combined with a greater ability to mass combat power (direct and indirect)

1.	Perform voice communications	G*			
2.	Leaders gain and maintain situational understanding	G			
3.	Receive and issue orders and instructions with overlays to include Rules Of Engagement (ROE) and Rules Of Interaction (ROI)	G			
4.	Receive, process, and report tactical information	G			
5.	Coordinate movements and fires of subordinate elements	G			
6.	Coordinate with adjacent units	G			
7.	Navigate as a small unit	G			
8.	Kill or suppress enemy personnel and vehicles using direct fire weapon	G*			
9.	Kill or suppress enemy personnel and vehicles using indirect fire assets	G			
10.	Move under direct fire	R			
11.	Direct dismount from an armored vehicle	G			
12.	Fight dismounted in conjunction with armored vehicles	G			
13.	Enter a building during an urban operation	G			
14.	Conduct vehicle/personnel checkpoints	R			
15.	Request and adjust fires from a Joint source (Naval Gunfire; USMC Cannon and Mortar Fire; USMC Rotary Wing Fire; USMC, USN, and USAF Fixed Wing Fires)	G			
16.	Direct employment of smoke	R			
17.	Conduct engagement with precision munitions	O			
18.	Locate mine and booby trap indicators by visual means	R			
19.	React to man-to-man contact (Combatives)				
<b>R</b>	<b>Does not fill gap</b>	<b>O</b> <b>Potentially fills gap w/TTPs</b>	<b>G</b> <b>Fills gap</b>	<b>Gap not filled by material solution</b>	<b>* Gap filled if ROI goes to every Soldier</b>

Figure 1 — Land Warrior/Mounted Warrior DOTMLPF Assessment Study Director Small Unit Capability Gap Assessment

at the proper point and time. Similar to the effect FBCB2 has on mounted warfare, Land Warrior provided added situational awareness to dismounted and mounted personnel. Mounted personnel have enhanced situational understanding of where dismounted Soldiers are located and how they are arrayed on the battlefield. Dismounted personnel have increased situational understanding of where other dismounted and mounted elements are located and how they are supporting their maneuver. Digital, real-time reporting creates a common, easily accessible medium for all to monitor enemy and friendly situational updates. This combination of information enhances situational awareness and fosters greater understanding for mounted and dismounted leaders, which enables efficient, coordinated maneuver to the decisive point. The MFL provides the user with the ability to call for fire by using its integrated functionality of lazy, auto fill, call for fire, or terrain association and verification on the helmet-mounted display using a host of maps and imagery. This capability

provides a bridge to controlling precision fires, another current capability gap for the small combat unit. Call-for-fire missions using the MFL have proven to provide more responsive and accurate fire missions. Clearance of fires procedures are reduced due to two factors: increased situational awareness and enhanced communications between initiator and clearance-level authority with the additional capability to interface with digital call-for-fire procedures. These additional procedures support the “see first, understand first, and act first” philosophy. The combination of these capabilities in a unit equipped with Land Warrior results in a more agile and responsive unit that leverages all enablers available to the force.

**Battle Command.** Command and control is greatly enhanced by the ability to communicate orders to all elements simultaneously. Precise unit locations on the digital map that show the relationship of friendly and known hostile elements on the battlefield help reduce the fog of war created by voice-only situation reports. Situational awareness allows leaders to



track the progress of subordinate elements as they maneuver, allowing them to make corrections or changes as necessary. Warning orders, fragmentary orders, and operations orders are digitally transmitted to higher, subordinate, attached, and supporting units and greatly reduce the time and error associated with an otherwise lengthy analog process. Land Warrior provides the user with a greater degree of situational awareness than ever before available. Land Warrior situational awareness provides every Soldier the capability to view his position on the digital map and show his relationship to other friendly and known hostile elements on the battlefield. This enhanced SA capability also allows the leader to track the progress of subordinate elements as they maneuver allowing for on-the-move corrections as necessary. Situations that previously could take considerable time and effort to overcome are now streamlined to a common, accurate medium that facilitates informed individual and collective synergy. Real-time communications and employment of accurate supporting fires give forces the ability to maintain an unprecedented operational tempo.

**Voice Communications.** Land Warrior provides voice communications between mounted and dismounted leaders and Soldiers. Land Warrior-equipped users are able to monitor up to three nets simultaneously, a feature that currently only resides in mounted forces. Mounted Soldiers are able to monitor internal and external communications within their vehicle and have the additional capability to monitor Land Warrior communications through a gateway. The Land Warrior Vehicle Integration Kit creates this gateway and allows GPS tracking and normal radio communication between mounted and dismounted forces on the move. This eliminates the need for an intercom headset and the associated communication lapse prior to dismounting. The Land Warrior Soldier radio and noise-reducing headsets facilitate briefing all Soldiers prior to dismounting. Each Soldier's ability to refer to his own helmet-mounted display and map products further enhances comprehension of the leader's plan. Real-time, secure voice communications bolster efficient vertical and horizontal digital communications. The coupling of these two mediums allows users to report quickly, exchange critical information between mounted and dismounted forces and discuss the situation while looking at a real-time depiction of the operational environment (friendly and enemy). A more holistic individual and collective understanding allows collaboration. This results in faster maneuvering and accurate, coordinated supporting and organic fires with less risk of fratricide. This ability to collaborate creates momentum within an organization. Coordination can be made on a common waveform for pick-up, drop-off, supporting fires, maneuver, etc., without having to repeat orders or change frequencies. Fifty percent of mounted leaders reported an increased ability to coordinate with mounted squads before they dismount (35 percent report "about the same" and 15 percent report a decreased ability).

When mounted, leaders are generally limited to monitoring

**"The Land Warrior system provides near real-time knowledge of where I am and where all my units are. That gives me a better ability to command and control the movement of the unit in the field, prevent fratricide, and determine what force I want to bring to bear on known or suspected enemy locations at a given time."**

**— Captain Patrick Roddy,  
Commander of C Company, 4th  
Battalion, 9th Infantry Regiment  
(Army News Service, January 2007)**

radio traffic through a dedicated headset because current squad radios are incapable of receiving or transmitting through armored vehicle hulls. Monitored radio traffic provides leaders with a general understanding of the larger scale tactical situation, but provides little information on their immediate surroundings upon dismounting. When available, FBCB2 displays provide additional detail and terrain products, allowing general analysis of the terrain near the dismount point. This allows the leader to identify enemy positions and plan a tentative route for his assault. Currently, mounted leaders prepare their units for dismount by providing a

verbal briefing of the expected situation upon dismounting. This can be difficult in the loud, dark, and cramped confines of a moving armored vehicle, and Soldier comprehension of detailed briefings in this environment can be limited. Squad leaders receive a general description of the situation and a direction to move when they are ordered to dismount, but this can still be insufficient to overcome the disorientation that accompanies exiting an armored vehicle in unfamiliar terrain. Immediately prior to dismounting, the leader must also remove his vehicle intercom headset. This prevents communication between the leader and the remainder of the platoon (including the vehicle crew) until the leader is outside of the vehicle. This can be particularly dangerous when dismounting in contact, as the leader has no means to receive reports of changes in the enemy situation. During dismount, the squad leader must rapidly assess his surroundings, identify terrain references for orientation, and find a covered position for his unit. He must accomplish all of these tasks before he can begin any offensive action. In a Land Warrior-equipped unit, this can all be accomplished before dismount.

**Digital Communications.** Land Warrior connects the dismounted leader and Soldier to the digital battlefield. Users send and receive digital messages (SALUTE reports, situational reports [SITREPs], unit position reports, known and suspected enemy positions, calls for fire, medical evacuations [MEDEVAC]), which are fully interoperable with FBCB2 and the entire suite of the ABCS. Digital graphics that are created, shared and leveraged are extremely beneficial. A picture is worth a thousand words to users and can be shared instantly to all members of a unit without having to print and distribute manually. Using mission data support equipment, units can distribute black, grey and white list pictures to checkpoints and patrols in a digital package that can be quickly referenced. In addition, Soldiers and leaders can send messages in a free text or preformatted message format. These messages streamline otherwise busy verbal radio communications. While inputting free text messages can be a lengthy process, they are effective. Radio silence can be maintained and purely digital messages can take their place. Creating preformatted digital messages prior to a mission has proven to speed up the process of reporting during movement. Phase lines, rally points, operational schedules and call-for-fire messages that are preformatted prior

to crossing the line of departure can be sent much like an instant message on e-mail. This method accelerates operational tempo during mission execution. Land Warrior-equipped units have proven that when voice communications fail, digital communications are still possible. Lastly, users can send an automated call for medic digital message, depicting their exact location on the battlefield. Medics equipped with Land Warrior can maneuver directly to the location of the injured Soldier. This streamlines the process if the Soldier is incapacitated and in a hard-to-find location.

**Situational Awareness.** Soldiers and leaders can view the current location of all Land Warrior-equipped personnel in the helmet-mounted display. The display allows the user to view a digital map, imagery, position location information, as well as view sight picture in thermal and daylight modes. The Soldier or leader views his common operating picture on a screen that replicates a 17-inch monitor. The helmet-mounted display allows the user to view information while maintaining light discipline during hours of limited visibility. He can move the display out of the way when he doesn't want to view it and rotate it in front of his eye when he needs to check his position or his unit's friendly and/or enemy situation. The user checks his situation in a similar manner to conducting a map check; however, unlike using a protractor and map, he can get digital updates while on the move. Real-time position location information provides improved, accurate and efficient knowledge of locations of all mounted and dismounted personnel. The shared common picture of geo-referenced maps and images enhances battle tracking, streamlines reporting and drives efficient application of combat power. Small units have greater maneuverability and can cover greater distances due to shared, accurate position location information. Accurate situational awareness allows all users to efficiently control fire and maneuver with increased dispersion. Shared, accurate fire control, position location information and real-time enemy situation updates facilitate efficient battlespace management. Users better understand and execute plans and orders because of collaborative understanding of the total picture. Leaders can mass and prioritize fires with less risk of fratricide while retaining the flexibility of better informed maneuver. Land Warrior's automatic execution of these reports enables more consistent reporting. Based on questionnaire data collected from the Land Warrior experimental unit, 60 percent of leaders reported a "better" or "much better" ability to monitor the activity of their own unit, and 63 percent reported "better" or "much better" ability to monitor the activity of adjacent units when using Land Warrior. Land Warrior is continuously updated and its use as a common reference mitigates the effects of adverse conditions or geographic dispersion on the unit's situational awareness. Sixty-six percent of leaders and 48 percent of non-leaders surveyed reported a "better" or "much better" understanding of other unit members' position. In addition, 38 percent of leaders and 26 percent of non-leaders reported that Land Warrior provided a "better" or "much better" ability to avoid situations of fratricide. The greater perceived benefit reported by leaders is likely due to their greater awareness of this issue and their application of greater significance to it.

**Digital Mapping and Topographic Capability.** Land Warrior-equipped Soldiers and leaders fight using recent, relevant imagery, rather than outdated maps, rough sketches, piles of acetate and/or

#### **4-2 Mission Rehearsal Exercise 12 Feb 07**

*The battalion commander and command sergeant major were in a meeting in the commander's tent inside the forward operating base, discussing operations with their Joint Readiness Training Center observer/controllers (OCs). During their discussions the battalion commander continued to track ongoing operations via his helmet-mounted display, and at one point a red chemlight icon appeared on his display. He noticed this and told his command sergeant major to check his Land Warrior ensemble for verification. Both had the same icon, and within seconds this icon changed to denote an enemy improvised explosive device. The situation unfolding on the ground was relayed to all Land Warrior-equipped leaders and Soldiers and noticed by the OCs. The battalion commander was informed by the OCs that the enemy IED was meant for him when he was to go to an upcoming meeting with local town leaders. The battalion commander was able to change his meeting location, secure the device, and accomplish the mission without incident.*

memorization. Users can choose the map, map scale and imagery to use in current operations and have the ability to store these products for reference in the future. Land Warrior-equipped leaders can manipulate digital maps during the conduct of an operation to facilitate FRAGOs and/or follow-on OPORDs while on the move. Common graphic formats such as Falcon View, geo-referenced satellite images, Microsoft Office products, pictures and FCB2 overlays can be loaded through the Land Warrior mission data support equipment. Land Warrior-equipped mounted personnel are also able to view all of these products.

**Survivability.** Land Warrior aids overall unit survivability. When leveraged by a unit, Land Warrior functionalities increase speed and accuracy of collective maneuver and allow greater tactical dispersion during a variety of dismounted and mounted missions. Land Warrior-equipped squads demonstrate enhanced movement and more accurate navigation as compared to Rapid Fielding Initiative-equipped units. Opposition forces and subject matter experts' observations concluded that the Land Warrior-equipped unit was less detectable than a standard modified table of organization and equipment (MTOE) unit. These same observers concluded that the observed unit could do extremely difficult, dispersed missions during hours of limited visibility and in difficult terrain with unprecedented success, while other observed non-equipped units took hours longer to conduct the same missions. The combination of these effects increases unit survivability because the unit can get the job done faster with total unit understanding and reduced tactical confusion. This constitutes a decrease in massed unit exposure to enemy direct and indirect fires during deliberate offensive operations. Land Warrior-equipped personnel survivability is enhanced by increased situational awareness, call-for medic function, reduced exposure fire and observation capabilities.

Land Warrior allows for better situational awareness through the common operating picture displayed in the helmet-mounted display. The COP shows mounted and dismounted friendly locations, known and suspected enemy forces and known and suspected friendly and enemy obstacles and hazards. In addition,





*Soldiers with the 4th Brigade, 2nd Infantry Division from Fort Lewis, Washington, search the palm groves in the Taji area for insurgents May 15.*

*A Soldier with Company B, 4th Battalion, 9th Infantry Regiment, pulls security as an Iraqi man speaks with an interpreter on the outskirts of Baqubah.*



*Lieutenant General Raymond T. Odierno, as Staff Sergeants Ndifreke Aanam-Ndu Warrior systems May 24.*





Photos by Staff Sergeant Antonietta Rico

*A Soldier with the 4th Brigade, 2nd Infantry Division checks the position of his Soldiers through his Land Warrior helmet-mounted display during a raid near Baghdad.*



*commander of Multi-National Corps-Iraq, listens and James Young talk to him about their Land*

the ability to manipulate situation reports and geo-referenced graphics, pictures and overlays allows for real time situational understanding on current visual products. Land Warrior-equipped personnel can avoid potential hazards, such as known or suspected IEDs. Known or suspected enemy locations can be taken into consideration during planning and execution. Updates to the situation are reported digitally and are not relayed by grid and plotted on the map using a protractor. Land Warrior-equipped personnel conducting operations over large areas do not have to carry around large sets of maps. Land Warrior-equipped leaders do not have to copy several sets of graphics that may or may not lose accuracy in translation that in the past has contributed to confusion and in some cases fratricide. Multiple maps, overlays and paper documents can fall into the hands of the enemy and may be used against friendly forces. This creates a substantial operational security issue for our forces. Instead, Land Warrior data is stored digitally in the Soldier's computer subsystem. Operational security is enhanced because Land Warrior-equipped personnel can purge their data if they feel imminent compromise. In addition, Land Warrior systems can be remotely purged by others. All equipped users have instant access to all materials that are relevant (because of messaging filters), accurate (real time) and tailorable (leaders can distill higher level graphics and make their part of the plan without loss of accuracy of the overarching order). The synergistic effect of having these materials has the potential to decrease fratricide and increase survivability and overall force effectiveness.

Land Warrior-equipped Soldiers also have the ability to remotely call for medical assistance using a digital message. This message can either be sent by pressing the call-for-medical button on the Soldier Control Unit or by text message. If a Soldier is wounded, he can press his call-for-medical button and send an instantaneous report to his leadership and medical personnel. If his buddy is incapacitated, he can send a preformatted call for medic. This streamlines the casualty evacuation process which takes up precious time and radio messages over the command net. A Soldier that is wounded and unable to move can be located more quickly on the battlefield by the aid and litter teams, medics or the platoon sergeant since the wounded's position is instantly available to all on the common operating picture. These support personnel are better



informed as to the situation around the casualty thereby setting the conditions for safe extraction.

Land Warrior-equipped Soldiers in covered and concealed positions utilizing the Daylight Video Sight (with image displayed in the helmet-mounted display) for observation have a considerable reduction (40-80 percent) in individual vulnerability or exposure to direct fire survivability. The Daylight Video Sight can magnify 1.5x, 6x, and 12x. This capability has shown utility when scanning for snipers, obstacles, improvised explosive devices and other battlefield hazards by both infantrymen and sniper teams. Land Warrior-equipped personnel can conduct detailed reconnaissance of the surrounding terrain using the reduced exposure observation capability, only exposing their hands and a portion of their arms. Soldiers using their naked eyes or binoculars in the current fight must expose their heads, upper torso, hands and arms to the enemy. While reduced exposure observation improves Soldier survivability during stationary reconnaissance, he is still subject to detection due to the additional time required to scan a comparable area. This

is due to the limited Daylight Video Sight field of view. This could increase scanning times and the enemy's chances of visually detecting the Soldier. Land Warrior also offers improved survivability while conducting reconnaissance before beginning individual movement under direct fire, but, again this advantage may be partially negated by a possible increase in likelihood of detection by the enemy.

**Mobility.** Mobility, as relayed by a 4-9 IN company first sergeant, is the balance between added capability to the Soldier/Unit and added weight to the Soldier/Unit. The Land Warrior Capabilities Production Document threshold for Soldier fighting load is 77 pounds. Recent additions to Soldier-worn body armor have increased the Soldier fighting load to 80.8 pounds. The total Manchu configuration ensemble fighting load is 96.6 pounds, 19.6 pounds over the threshold. The currently configured Land Warrior system has reduced weight from 34 pounds (FY 1998) to 15.8 pounds (FY 2007). A future weight reduction of 3 pounds is planned for FY 2008. This would equate to a total reduction in weight of 150 percent. At the same time, Individual Body Armor (IBA)

has gone from 12.5 to 33.2 pounds — a 145-percent increase. The Land Warrior system offsets current Soldier equipment. The 15.8 pounds of added Land Warrior equipment offsets the need to carry a GPS, binoculars, separate aiming light (PAQ 2 or PEQ 4) and almost half of 22 separate batteries. The functionalities of Land Warrior replace the need to carry these items. This integration of functionalities renders a net gain of 9.3 pounds of equipment for the Soldier. Soldiers and leaders all agree the 15.8 pounds of Land Warrior equipment increases weight and degrades mobility. They also agree that 31 pounds of body armor increases weight and is restrictive when it comes to mobility.

The Soldiers load issue is an Army issue and not just a Land Warrior issue. Modularity changes to the Land Warrior ensemble have shown improvements in weight reduction, distribution and an overall increase to Soldier acceptance. Initial findings

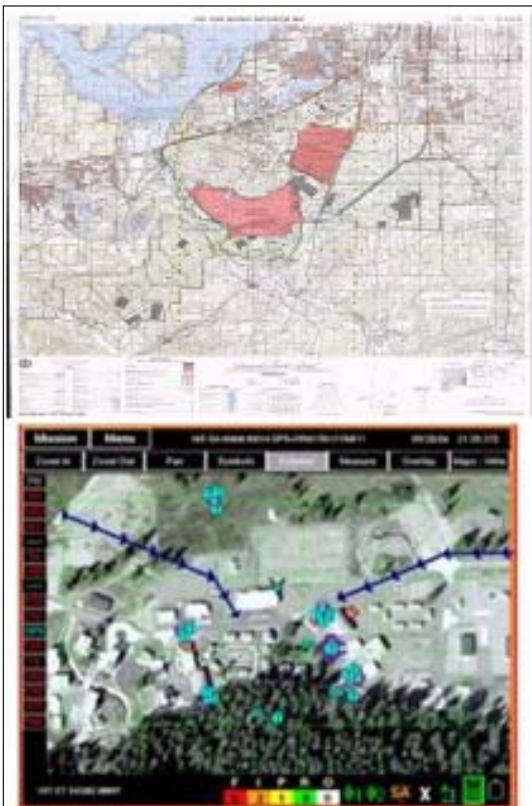
#### (4-9 IN, Mission Rehearsal Exercise Feb 07)

*Discussion between Brigadier General Daniel P. Bolger (JRTC commander) and some of his senior observer controllers: OCs relayed observations related to the battalion's high value target (HVT) mission during the 4-9 IN MRE conducted at Fort Lewis, Washington. The unit executed a dismounted infiltration without being detected by the Joint Readiness Training Center opposing forces. The battalion was able to infiltrate so quickly and efficiently that the opposing forces in the area of operations were unable to react in time to prevent capture of the HVT. This mission is rarely accomplished successfully. The senior observer controllers observed that the same type of unit would not have been able to execute the mission as successfully without the capabilities provided by Land Warrior.*

indicated Soldiers associated Individual Body Armor and Land Warrior weight as one. The unit was fielded both at the same time therefore no differentiation was made between the two. As Soldiers became more accustomed to the Land Warrior ensemble and more reliant upon its added capabilities, the added weight became tolerable. During the land navigation experiment, Land Warrior-equipped units maneuvered more rapidly and accurately than units without Land Warrior. It should be noted that every other Soldier system has increased Soldiers' load in a modular fashion with little regard to integration. Land Warrior has provided an integrated Soldier system that has decreased in weight and volume over time. See weight comparatives chart (Figure 3).

As stated, the Land Warrior system replaces approximately 8 pounds of current equipment, generating a net gain of 9.3 pounds. This represents a 14-percent increase in equipment weight compared to the average RFI-equipped Soldier's fighting load. This is an increase when one considers that it equates to degradation in Soldier agility of 10-15 percent and a 20-percent increase in energy required for movement. Sixty-two percent of Soldiers surveyed reported that Land Warrior made their ability to move tactically under direct

**Figure 2 — At top, the view without Land Warrior (1/50,000), and bottom is the view with Land Warrior**



Weight Comparatives	2002	2004	2006	2008
Land Warrior	26.12 lbs	16.62 lbs	15.83 lbs	*12.83 lbs
IBA	9 lbs	25.70 lbs	31.00 lbs	TBD

\* Subject to General Dynamic Fusion efforts: CSC, NAV Box, HIA and SCU in one LRU.

**Figure 3 — Weight Comparatives Chart**

fire “worse” or “much worse.” Land Warrior will affect the individual Soldier’s ability to move under direct fire under some circumstances. The increase in the weight of Land Warrior-equipped Soldiers’ basic fighting load will have the most significant consequences. While Soldier conditioning will compensate for this weight increase during limited-duration missions, current operations have shown that Soldiers’ mobility will suffer greatly when their fighting load is excessive. Soldiers engaging in extended operations are likely to find the increased weight of Land Warrior to be an encumbrance.

During the equipping and conduct of the DOTMLPF assessment, dismounted Soldiers were fighting within task organized infantry companies, selected battalion command and staff personnel, and selected Soldiers in direct support of maneuver elements employed Land Warrior systems. Upon completion of the DOTMLPF assessment (September 06) and following subsequent program decisions, 4-9 Infantry asked to take the system with them to combat. The unit is currently conducting offensive, defensive, and stability and support missions across the full spectrum of military operations in theater now. Some of 4-9 Infantry’s key likes and dislikes of the system:

**Likes**

- Friendly, enemy and environment SA when dismounted;
- Multi Functional Laser (MFL);
- Graphics on the move; and
- Stryker integration to the dismounted Soldier.

**Dislikes**

- Daylight Video Sight (DVS) as a weapon sight;
- Cables; and
- Space requirement on IBA (Units now have IOTV).

Fundamental principles of doctrine form the basis upon which Army forces guide their actions in support of national objectives. Throughout past analysis events and the Land Warrior DOTMLPF assessments there has been no indication that the capabilities provided by these systems will have any impact on these principles. The observations and analysis conducted during the Land Warrior DOTMLPF assessment indicate that there will be little or no impact on the basic way the Army conducts its missions. These systems’ capabilities have the greatest doctrinal impact in the areas of techniques and procedures. Doctrinal impacts to terms and symbols are minimal. Two symbols were added to depict areas of interest and Soldier locations. These symbols are recognized by FBCB2 and are subject to further development by units as they incorporate them into their own standard operating procedures. All other Land Warrior symbols are doctrinally accurate and all Land Warrior messages are in compliance with Joint Variable Format Message standards and architecture.

Land Warrior Soldier systems have evolved over time and are

continuing to evolve based on the current fight and current technology. These systems are not revolutionary, but evolutionary in their approach to answering evolving Soldier capability gaps based upon an asymmetrical and fluid threat. How the Army intends to conduct operations in the future, and the capabilities required to execute those operations, may determine the need for further doctrinal review, design, and/or development. Draft recommendations for techniques and procedures have

been developed, but require validation through their use in an operational environment. To accomplish this, TRADOC Capabilities Manager-Soldier is conducting further assessment during combat operations in Iraq with 4-9 IN. This portion of the assessment will determine Land Warrior’s impact to small units in combat, with a particular focus on fightability, lethality, survivability, battle command and situational awareness from squad to company-level operations. All unit leaders (from team leaders through battalion commander) are equipped with Land Warrior. TCM-Soldier teamed with the Computer Science & Information Assurance Department of the Samuel Ginn College of Engineering at Auburn University to create a dynamic, “change-on-the-fly” database for this operation. This database is a compilation effort from input received from TCM-Soldier, the U.S. Army Infantry Center Directorate of Combat Developments, TRAC WSMR, TRAC-Monterey, Army Research Institute (ARI), Program Manager Soldier Warrior and Product Manager Land Warrior. This information will provide valuable DOTMLPF insights regarding dismounted Soldier requirements, will inform future Army procurement decisions, as well as inform the Ground Soldier System and FCS.

**Major Douglas Copeland** is currently attending the Naval Postgraduate School in Monterey, California. He previously served as the Assistant TRADOC Capability Manager - Soldier at Fort Benning, Georgia, and was the Ground Soldier System/Future Force Warrior lead. He has also served as the deputy brigade S3 for the 3rd Brigade, 1st Cavalry Division and as a company commander for B Company, 2nd Battalion, 7th Cavalry (Mechanized).



Staff Sergeant Antonietta Rico

*A Soldier with the 4th Stryker Brigade Combat Team, 2nd Infantry Division, sends a message using the helmet-mounted display.*



# MAKING MiTT WORK

## INSIGHTS INTO ADVISING THE IRAQI ARMY

MAJOR DAVID VOORHIES

**M**y military transition team (MiTT) experience began in November 2005. I was a junior major in the Combined Arms and Tactics Directorate (CATD) at Fort Benning, Georgia, and was selected to serve as a battalion MiTT chief to fulfill a request-for-forces (RFF) 510. The following article will be a brief description and synopsis of what I learned in my 12 months as a military advisor in Iraq. I intend to describe the environment of where I operated and hope to develop suggestions to educate infantry leaders at all levels regarding military transition teams. This article focuses on my experiences while operating in western Baghdad from February 2006 to February 2007.

Though there are too many to articulate here, I will focus around specific lessons learned regarding the employment, integration, and conduct of the counterinsurgency fought by the 4th Battalion, 1st Brigade, 6th Iraqi Division, during that time. I worked with four separate coalition brigade combat teams, seven different coalition battalions, several different units of the Iraqi Police and Iraqi Special Police, and a Special Forces Operational Detachment-A (ODA) team or two. I have seen combat from the perspective of someone seemingly caught in the middle: I was assigned to the Iraq Assistance Group and was the link between the coalition forces and the Iraqi battalion I advised. I was held accountable by both coalition partner units and my Iraqi counterpart to produce results. Initially, I was on the receiving end of what first appeared to be a Sunni insurgency. Over time it would evolve into a “low-boil” civil war along the Sunni and Shia divide. In a December 28, 2006, *New York Times* article written by Marc Santora, I said that my MiTT was “caught in the middle trying to protect both sides, while getting attacked by both sides, trying not to take a side.”



Courtesy photos

*The author, Major David Voorhies (left) and Lieutenant Colonel Sabah Gati Kadim Al-Fadily receive guidance from Lieutenant Colonel Van Smiley, commander of the 1st Battalion, 23rd Infantry Regiment, during a combined cordon and search mission.*

I hope military professionals reading this will come to understand not only the complex nature of the advisory mission, but also empathize with the particular situation of advising a foreign army embroiled in a fight that transcends military, religious, and cultural lines. The Iraqi battalion I advised was fighting enemy insurgents and foreign terrorists that supported the ousted Sunni religious Islamic sect. All the while, it was getting infiltrated by a large militia force of the rival Shia sect that formed to foment the Shia assumption of Iraqi political power. Those in the Iraqi Security Forces (ISF) who would not cooperate with these Shia militias were threatened, targeted, and eventually killed. The pitfall of getting lost in this chaos was very real. Focusing on what my team and I were sent there to accomplish, and working to make positive change for the things we could in fact change, is what ultimately made us successful. In this manner, we kept our focus, challenged our Iraqi counterparts to

do better, and ultimately kept our sanity.

### Background

As a MiTT advisor, my principal duties entailed leading an 11-man transition team to advise and train an Iraqi infantry battalion commander and maintain tactical overwatch of a 750-man Iraqi Army battalion in combat. I am not a Special Forces officer. I don't speak Arabic. My cultural understanding of the Middle East was restricted to cultural briefings by the Army and what I read in professional journals and books. At the time, I had not yet even deployed to fight the global war on terrorism, having spent the previous two and a half years as a small group instructor for the Infantry Captains Career Course. Since I was a supposed “expert” on tactics and small unit leadership, I suspect on the surface I looked like a perfect choice for this new initiative that would evolve to become America's strategic exit strategy from Iraq. However, in my heart, I believed that I was woefully unqualified to assume this important mission.

I would later discover that I, in fact, possessed all the necessary knowledge to perform my duties. What I lacked in knowledge of the Arabic language, I made up for by being a quick study of the Iraqi people. I found that I gained as much insight into the Iraqi/Arab culture by watching the movie *The Godfather* as I did reading *The 27 Articles* by T.E. Lawrence. My impression of working with my Iraqi battalion commander, Lieutenant Colonel Sabah Gati Kadim Al-Fadily, was somewhat akin to being in a militarized version of the TV drama *The Sopranos*. Tribal loyalties; religious alliances; and the aspects of prestige, influence, power, money, and revenge played heavily on the motives of those I advised. The aspect of corruption was never so much a notion of “if,” but rather, “to what degree.” I also discovered my natural lack of patience only became exacerbated by this environment. However, I found that my sense of humor, my ability to joke about myself and joke with the Iraqi soldiers, enabled me to get my points across to the Iraqi leadership with an emphasis of “pressured humor.” I used levity to get their attention and make them laugh, but I always had an underlying principle and motive for making the joke. The unique ability to be indirect while communicating ideas and stories enabled them to get the point rather quickly when I used this technique.

I also became pretty adept at deception. My team and I lived on the same small forward operating base (FOB) with three other battalion transition teams, their Iraqi battalions, a brigade national police team (NPTT) and its Iraqi headquarters, and the 1-6 Iraqi Army Brigade HQ and its MiTT. Infiltration into the Iraqi Army by the Shia militias, most notably the Cleric Moktada Al Sadr’s Jaysh al-Mahdi (JAM) and the Iranian Islamic Supreme Council in Iraq (SCIRI)-influenced Badr Corps, was very common in our area of operations. Though never explicitly stated, the Iranian influence in both of these militias seemed readily apparent if one looked hard enough. Parts of the Iraqi Army, and seemingly much of the National Police and regular Iraqi Police, were openly sympathetic to and supported these Shia militias. Murders, kidnappings, and coercion by these militias, most notably JAM, were commonplace, and my team and I had to walk a tight rope of trust, security, and fear with the 4/1-6 IA Battalion. I learned to tell my local national interpreters only what they needed to know. I learned to believe only half of what the Iraqi leadership would tell me. I alternated my visits with the Iraqis every day and varied my patrol schedule. Planning for missions got pretty creative and telling the 4th Battalion about a sensitive mission, particularly in a Shia area requiring their participation, forced me to inform them two to three hours before “hit” time. My team and I had to exercise the art of misinformation with operations security (OPSEC) regarding the Iraqi Army: we had to tell enough of the truth to be believed and to motivate action on the Iraqis’ part but could not divulge specifics about times, unit actions, or upcoming operations. “Inshallah,” the Arabic phrase for “God-willing,” so often used by the Iraqis when responding to my requests and to my team’s desires, similarly became our responses to many Iraqi Army requests for information concerning equipment and upcoming missions.

I never thought being a good con-artist was a useful quality until I became an advisor. I developed an ability to communicate

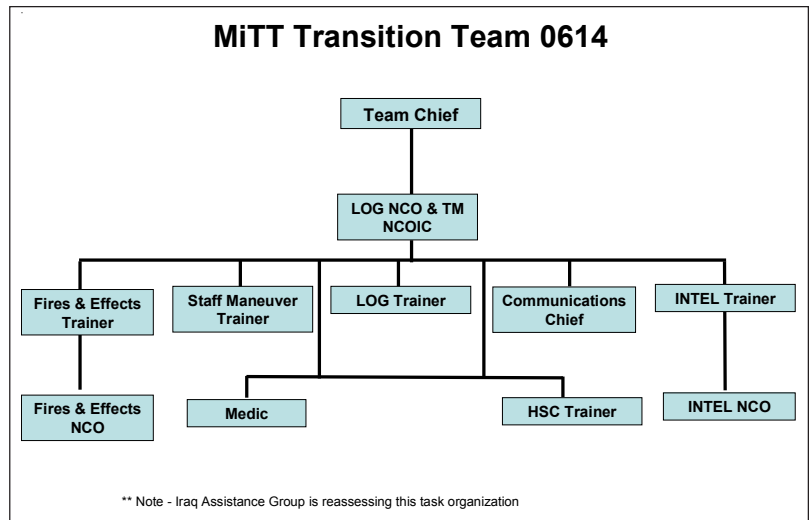


Figure 1

ideas and concepts I desired my Iraqi counterparts to adopt by convincing them it would be personally, professionally, and politically in their best interests to do. I did my best to make my counterpart look good in all endeavors. My team’s best efforts and ideas became the Iraqi’s best efforts and “their” ideas. My team and I introduced the art of information operations. We taught our Iraqi battalion how to use an S9 and create flyers, advertising the 4/1-6 IA’s recent actions and military successes and providing phone numbers to the locals to call to report enemy and criminal activity. Instead of viewing the attendance to neighborhood and district action councils (NACs and DACs) as obligatory events, my team and I taught the Iraqi leadership a different way of viewing these events. Concerned Iraqi people chose to attend these neighborhood meetings to help solve problems, but sadly, many lacked any confidence in their own security forces to secure them. The action councils, over time, became vehicles for positive change regarding the perception of Iraqi Security Forces by their own citizens. We made them look good to their army and to their communities. They needed to be perceived as heroes to their people, heroes their country so desperately needed and which are still in demand today.

I was further blessed to have perhaps the most talented MiTT that was assembled as part of the RFF 510 tasking. Compared with many other MiTTs, this was an exception to the rule, rather than the rule itself. Thrown together from across the Army, many transition teams contained men who lacked the training, aptitude, and discipline to serve in these autonomous roles. However, my team was a composite of specialists in their fields. I had four officers and three NCOs of my required 11-man team, all differing MOS-types and tailored for their job-specific advisory roles. These specific roles were in the intelligence, maneuver, logistics, transportation, maintenance and communications fields (see Figure 1). Men like Sergeant First Class Terry Shaw, Captain Jeremy Gettig, Chief Warrant Officer 3 Paul Algarin, Captain Ken Frank, Sergeant First Class Jeremy Lerette, and Sergeant First Class Joseph Grimes really made my job easy and enabled the team to excel in almost every area of endeavor. I pushed them hard, held them to high standards, abused them sufficiently, and did not praise them enough. They did their best to work in roles to which they weren’t accustomed. Aside from working as advisors to a foreign



army, none of them had ever done mounted or dismounted patrols before, and certainly, none of them had ever worked for a demanding and impatient infantry officer such as me. Both my team and I developed profound respect for each other and learned a great deal about each other in the process. I believe they, more than any of my efforts, were directly responsible for the outstanding success enjoyed by MiTT 0614.

I was, however, missing a medic, a fires and effects officer, and a fires and effects NCO. I was informed that my dedicated U.S. coalition unit would provide these individuals once I got into theater. In reality, I received four, sometimes five augmentees from every partnered battalion I worked with in my year's time. Most were lower enlisted and lacked the necessary experience and training to adequately advise their Iraqi counterparts. That being said, I played the cards I was dealt and used these augmentees in not only a force protection role for the MiTT, but also in an advisory role to their Iraqi counterparts. This was challenging at first, but most Soldiers jumped at the chance to execute these new and interesting roles. Many found it rewarding, and most didn't want to return to their parent unit, where their roles in daily patrols really wore them down. I was personally surprised at how many of these Soldiers and junior NCOs excelled at these advisory roles. I did my best to make these guys a part of my team and rewarded them for great work accordingly. If challenged and expected to

do so, it's amazing what the American Soldier can and will accomplish outside of their skill set. I found that the old adage, "people rise to a level you expect them to" is very true. I did not receive any additional infantrymen for force protection and remained the only infantry officer on my team.

### **From Here to There**

In January 2006, I departed for north Fort Hood, Texas, for the 45-day transition team pre-deployment training. (This training is now 90 days long and is held at Fort Riley, Kansas). The training I received as a MiTT advisor was rudimentary. We were treated like mobilized National Guardsmen, and very little of the training dealt with training Iraqis specifically. Most of it was mandatory pre-deployment training and force protection tactics, techniques, and procedures (TTPs). As I understand it, Fort Riley now has a more comprehensive program that treats the transition team mission in much the same way that the old Vietnam-era Special Forces advisors had been treated. This training now includes robust language training and instruction steeped in the newly-codified counterinsurgency (COIN) doctrine. After training stops at Camp Buehring, Kuwait,

and Camp Taji, Iraq, my team and I started our journey with urban combat in the tumultuous West Baghdad area of operations.

The neighborhoods of Baghdad are highly secularized. Shia neighborhoods were, at first glance, calm and relatively peaceful. Hallmarked by cheap real estate encrusted with large amounts of garbage and livestock, the Shia neighborhoods contained large masses of outwardly friendly poor people. This surprised me, because they were living on top of each other and lacked even the basics in human services. It was amazing to witness the stunning poverty. It was sometimes ironic: one guy lived in a corrugated steel and sod house but also owned a satellite dish! These neighborhoods contained weapons caches in sensitive sites such as mosques, political offices, and schools. They typically harbored robust numbers of the Shia militias. Sunnis were forced to flee their homes under the penalty of death, and Shia militiamen and sympathizers took refuge in these properties. The Iraqi Police and Special Police were able to move with impunity in these areas. They often protected Jaysh al Mahdi's lines of communication and served as

*U.S. and Iraqi Army Soldiers conduct a cordon and search mission in a west Baghdad neighborhood.*



reconnaissance for JAM death squads. The Iraqi Army usually enjoyed a neutral reception here. Typical violence in this area included explosively formed projectile (EFP), improvised explosive devices (IEDs), small ambushes, and kidnappings. Vehicle-borne IEDs were often a threat to mass groups of Shias, as well as coalition forces in these areas.

The Sunni neighborhoods included larger, more extravagant, gated houses; nicer streets; better automobiles; and a subdued population that was very distrustful of coalition and Iraqi forces. Many Sunnis became displaced persons over time from the encroaching Shia militias. The Sunnis, the old regime's favored class, now lived life as the "ousted" and hated minority. They passionately distrusted the government of Iraq. Their neighborhoods usually held large arms caches for Sunni extremists. Oftentimes, these muhallas (or neighborhoods) were support zones for Sunni terrorists as well as Sunni insurgents from outside Baghdad. Insurgent groups like the 1920 Revolutionary Brigade, Jaysh al-Iraqia, Ansar al-Sunna, and Jama al-Tawid (Al Qaeda) exerted strong influence in many Sunni neighborhoods. The Iraqi Police, being nearly 90-percent Shia in composition, kept clear of the heavily populated Sunni areas. I never saw too much police presence in Sunni muhallas, and the Sunni insurgents often attacked the Iraqi Army with more vigor than they did the coalition forces. Snipers were a particularly serious concern in these Sunni areas. Sophistication in training and equipment made them particularly lethal. A foreign Sunni terrorist group, Juba or "Ghost," spouted rhetoric that it had infiltrated two battalions of trained snipers to operate in Baghdad. This group advertised the shootings of U.S. and Iraqi Soldiers on their Web site and were largely responsible for the introduction of armor-defeating ammunition infiltrated into Baghdad.

Both the Sunni and Shia people routinely blocked their roads with whatever materials were available. Over time, mixed-populated areas created what became battlegrounds for sectarian violence. My team viewed western Baghdad as a series of small cities within a city. As time wore on, these sectarian divides became like fault lines in an earthquake, where sectarian violence would flare up for weeks at a time. Multitudes of displaced persons either moved into an area of like religious ethnicity or fled the country altogether. Ethnic cleansing, murder, and kidnapping became the norm along these fault lines. At one point, upwards of about 30 bodies were discovered "dumped" in the streets daily in west Baghdad. I found myself not necessarily focusing on how many bodies would be discovered and reported on a daily basis; rather, I would wonder about the number of bodies and criminal activities that went undiscovered and unreported.



*Lieutenant Colonel Sabah Gati Kadim Al-Fadily, Major David Voorhies, and Major Ryad gather to discuss a mission.*

## **The 4th Battalion, 1-6 Iraqi Army**

The 4th Battalion, 1-6 IA, was 75-percent Shia, and most of its Soldiers lived in the Baghdad area. LTC Sabah was a Shia and lived in a predominantly Shia neighborhood in the 1-6 IA area of operations (AO). Because of his successes with us in his battlespace fighting both Shia militia and Sunni insurgents, he himself eventually became targeted by Jaysh al-Mahdi. During the time my team and I worked with him, his brother and his executive officer were murdered by JAM, and he and his family were routinely threatened by the group in attempts to influence him to do

its bidding. Over the year I served with him, LTC Sabah would have five of his officers assassinated and several wounded in murder attempts. One of my interpreters was kidnapped, held for ransom, and eventually murdered. Largely seen as the driving force behind Sabah, I would eventually be targeted with death from Jaysh al-Mahdi. A price was placed on my head, and I became a lucrative target to anyone looking to gain profit from JAM. One attempt on my life resulted in the death of my gunner in an IED strike that turned out to be an EFP. The actual ambush occurred on a joint night patrol with a platoon from the 4/1-6 IA and members of the Iraqi Police. Later, U.S. intelligence reports confirmed that we had been betrayed by the Iraqi Police: an organization that is heavily infiltrated by the secretive Shia militias. Even with little forewarning, the insurgents were able to set up this complex ambush in the JAM-sympathetic neighborhood of Hurryia within 30 minutes of my patrol brief to both IA and IP leadership. The battlespace got to be so dangerous that my boss, the brigade MiTT chief, would also be killed by an IED strike that many attributed to JAM.

LTC Sabah and the 4th Battalion were known throughout Baghdad. LTC Sabah was seen as a hero in many Shia neighborhoods and a villain in some Sunni neighborhoods. He was one of the few dependable Iraqi battalion commanders in the 6th IA Division. He would aggressively seek contact with the enemy and routinely checked on his jundi (soldiers). He, at least, exhibited these qualities when we were watching him, and he was backed with U.S. support. Once I gained rapport with LTC Sabah, I enjoyed support from his battalion, and my advisors were able to institute positive changes in their respective areas.

## **Know Their History, Build Rapport ... But Be Yourself**

Gaining and maintaining rapport is the most important aspect of being a successful advisor. It might be true that you are a military prodigy. You may also be competent with the Arab language and an expert with the Arab culture. You might be all these things; however, you will not be successful advising the Iraqis



without first gaining both personal and professional rapport with your Iraqi counterparts. This important aspect also applies to coalition commanders partnered with Iraqi forces. I gained rapport by accomplishing three things: I understood the motivations of the people I advised, I demonstrated a desire to help them in word and deed, and I did my best to act like myself in all situations.

If you want to take any military organization somewhere, you first have to know where it has been. The 4/1-6 IA Battalion was going on its third year of development, and my MiTT team was the fourth one it had worked with during that same time period. Its officer corps was roughly a 30-percent mix of former regime officers. Their jundi were largely locally hired from the Taji and Baghdad areas. Most were under-equipped, underpaid, and poorly-led and lived in almost unimaginable fear. I have never seen such traumatized people before. Seemingly, fear and mistrust of everything and everyone was part of being an Iraqi. After 15 days of consecutive work, the jundi would receive five days off to go home, pay their families, and see to their family and tribal obligations. When going home, all jundi infiltrated home at night, and in civilian clothing, for fear of being followed, targeted, and killed by both Sunni and Shia

extremists. The Sunni terrorists wanted the jundi dead because they believed the Shia-dominated government was specifically targeting Sunni population centers. By killing ISF forces, the Sunni could eliminate their perceived enemies and discredit the Shia-dominated government of Iraq. The Shia extremists would want certain jundi killed because many had refused to join or cooperate with the Shia militia, Jaysh al-Mahdi. Many Iraqi officers and NCOs quit because of threats they and their families received from JAM. It was not uncommon for a jundi to move his family three or four times in a period of six months!

The ingrained psychological distrust of each other, which many attribute to Saddam Hussein's 30-year reign of fear, profoundly impacted the psyche of all the Iraqi people. The paternalistic nature of their culture, coupled with the strong top-down hierarchical structure of their military and police, often led to extreme micromanagement. LTC Sabah, for example, directed EVERYTHING his commanders and staff did or failed to do. Commanders had zero initiative. I had to personally engage the IA battalion commander if I thought a machine gun required repositioning!

To gain LTC Sabah's loyalty, I had to demonstrate I was there to serve his best

interests. This meant spending long hours into the night "socializing" with him and his staff in his office. We talked about family, hobbies, and interests and watched a lot of Arab TV. I drank chai tea, smoked cigarettes, and tried hard to adjust my western internal clock to a more amicable Iraqi clock: they normally socialize from 2100 hrs at night to about 0300 hrs in the morning. Paying homage to the tradition of Arab hospitality is huge. I came to understand that to eat a meal with them was akin to demonstrating loyalty, respect, and brotherhood — all at the same time. As such, official business and plans took place after a meal — not before. As many coalition leaders are fond of saying, "it ain't official until you pull goat." I listened mostly and observed my surroundings. I paid attention to the various cliques inside the battalion and inside the officer corps. My other advisors did the same with their counterparts, and we developed a fairly healthy understanding of the human dynamics within the organization itself. I developed a mental list of needs and wants regarding the 4th Battalion, and I later was able to leverage these needs and wants with money to get LTC Sabah to agree with my list of changes to make the organization better. The \$2,500 per month Transition Force Fund (TFF) fund, available to transition team advisors, allowed us to buy the Iraqis needed office equipment, furniture, automation equipment, and repair parts. It also became my financial leverage to influence LTC Sabah. Previous MiTT teams failed to use this available resource. We used our TFF funds to make their lives easier and to show that we cared about them. It also provided further evidence of our desire to make our Iraqis better at soldiering.

To gain LTC Sabah's trust and confidence, I went on combat missions nearly daily with his platoons. My MiTT and I traveled in three-vehicle, 11-man patrols. We did a lot of unilateral missions where we inspected traffic control points (TCPs) and company combat outposts (COPs), attended NAC meetings, and conducted human atmospherics. We also would take Iraqi platoons out on daily reconnaissance foot patrols, handing out flyers and executing snap tactical vehicle inspections. We went on combined night patrols to conduct targeted raids or ambush known insurgent areas. I tried to show that



*Members of the 1-6th Iraqi Army Brigade gather during a combined cordon and search mission.*

at the battalion level, LTC Sabah's presence was needed with his platoons. Just as it works within our doctrine, effective battalions are defined by trained and lethal platoons. The infantrymen must get out on foot and engage the population, as well as the enemy. Before my team and I arrived, the 4th Battalion merely manned TCPs and not much else. The IA jundi grew to love us: at times, we checked on them more than their own leadership did.

For the first few months, we did not even have a partnered U.S. battalion. The MiTT became the few Americans to be seen operating in the 4/1-6 IA AO. Moreover, we got pretty creative working with U.S. special operations forces (SOF). I pressured both the local ODA team and LTC Sabah to work together and execute a lot of joint raids with the SF-trained 4/1-6 IA Strike/Recon Platoon. The ODA team needed Iraqi Army participation for legitimacy to execute any mission, and I needed my Iraqis trained with close target reconnaissance and raids. During the months of May and June 2006, we executed well over 20 combined/joint raids all over our AO with the ODA and their Iraqi disciples. After three months of steady patrols and targeted missions, I had soundly burned out my MiTT. All of them, not being infantry, thought I was nuts. However, what I had, in fact, done was establish rapport with LTC Sabah and his leaders. LTC Sabah and his commanders saw a U.S. MiTT team willing to share their hardships, get out on the "Arab street," and support their soldiers. We demonstrated our willingness to risk our lives with them, to help them and their people. In doing so, we earned their loyalty and their trust. My MiTT and I were paid a rare compliment when LTC Sabah informed his subordinates that my advisors and I "speak with his voice" three months into our tour with him.

To gain an understanding of the Arab culture and establish rapport, it was crucial to gain insight into what FM 3-24 calls "cultural intelligence." Being politically correct and culturally sensitive is great if you're merely visiting an Arab country for a short period of time on a diplomatic visit, but if you want to train them and advise them in combat — you have got to get them to do things they ordinarily would not do. To understand them to the point of being able to influence them to motivate action, you must know how they think, know what motivates them, and know how they react to both danger and incentives. T.E. Lawrence, the famed British officer who assisted the Arab Revolution with the Ottoman Turks back in WWI, wrote a compelling book about his experiences known as the *Seven Pillars of Wisdom*. He also codified a list of recommendations regarding the advisory role of Arabs specifically, known as the *27 Articles of T.E. Lawrence*. I highly recommend both of these works. Read as much as you can regarding the Arab culture. *The Crisis of Islam* and the *Arab Mind* were also tremendously useful. I also recommend you ascertain some insight into how criminal organizations operate. This is why my fascination with studying the American La Cosa Nostra, as alarming as it sounds, assisted me in understanding the motivations of many Iraqi commanders. Watching Mafia movies assisted me in my ability to understand underlying motivations of the Iraqi leadership. Their Army, insurgent networks, and militias seemingly mimic each other along the lines of a La Cosa Nostra concept.

As much as I had read about "Lawrence of Arabia," studied Arab history and culture and even watched my fill of *The*

*Godfather*, I found that the most compelling way to train the Iraqis was to be myself. At first I tried the subdued approach: stay quiet, put the Iraqi commander in the lead, never talk badly to the Arabs, never insult them intentionally, and try not to do it unintentionally. I found that by adhering to all these things, I personally was getting little accomplished. At first, LTC Sabah, walked all over me because he perceived that I was weak and uninterested. My team also became frustrated: without Sabah's approval, my MiTT could accomplish nothing with its counterparts.

About the same time I began exercising combined patrols with the Iraqis, I began to lose the subdued approach and take the direct, "in-your-face" approach. I basically became the adorable infantry leader I know I can be. I got visibly angry when I was ignored. I talked as much with my hands as I did with my mouth. I scolded excuses when I heard them and demanded results. I told the Iraqi leaders what they needed to hear instead of what they wanted to hear. I used a lot of dry humor through my interpreters. I challenged their professional convictions and their courage when they balked at doing things my team and I wanted them to accomplish. I often cursed freely in English and Arabic to get my points across to them. My own team members were a little surprised by my theatrics, and they likened me to a puppet master when working with the Iraqis. Most of my team felt I had evolved into a pretty good manipulator. I also used the TFF funds to reward good Iraqi behavior when they listened to our advice.

Pretty soon, the Iraqis learned to achieve results: they detained more insurgents; engendered more cooperation with the community; and established effective systems regarding accountability, maintenance, and logistics. The 4/1-6 IA Battalion went from one of the worst battalions in western Baghdad to one of the best. My technique may not have made me popular with its Soldiers, but it gained respect from them. They knew that every action I did was for them. They knew I shared their hardships on patrol. It was in their best interests to listen to me, no matter how crazy, disagreeable, and cantankerous I may have appeared. I made their commander look good to both his chain of command and to the coalition leadership. I understand that this technique doesn't work for everyone, but it worked for me. The personality that had made me a successful company commander also made me a successful advisor. Pretending I was something I wasn't only got me and those around me frustrated. Temper what you may know regarding military operations and a foreign culture with aspects of your own personality. Your results will surprise you.

### **Lead by Example**

The basic concept of leadership through example resonates as strongly with Iraqi jundi as it does with U.S. Soldiers. MiTTs and coalition leadership that dictate action from secure FOBs and only make the obligatory battlefield circulation patrols of their areas of operation will see few results in a COIN environment. To have a shot at success in combat, you must take tactical risks. To effectively lead, you must demonstrate that you are willing to share that risk with those in your charge.

Compelling Iraqi leadership to execute patrols with me was a continuous challenge. Many Iraqi company commanders, as well as the battalion commander, enjoyed the tributes of command





*A platoon of jundi from the 4th Battalion, 1-6th Iraqi Army graduate from a combat skills school. The program was a collaboration between U.S. MiTT and ODA team personnel.*

without ever having to earn their right to command. Sitting behind their extravagant desks and chatting on their cell phones appeared to be “the right way to lead” to these officers. Unfortunately, this was another bad habit of the old Saddam-regime army. Moreover, some coalition commanders, while doing patrols with their own Soldiers regularly, worked less with the Iraqi soldiers. Though this is recently changing for the better, at the time, many U.S. battalions viewed the fight as America’s war to win in Iraq, rather than Iraq’s internal war the Iraqis must win for themselves. As an enlightened philosopher once said, “if you change the way you look at things, the things you look at change.” U.S. commanders who correctly identified they were fighting an insurgency that was quickly escalating to a subtle civil war were able to shift their tactics to COIN and focus correctly on training the ISF to fight and secure their own people. On the other hand, the U.S. commanders who chose to view the war as theirs to win in American terms with American resources only, certainly saw a lot of action, but they didn’t solve any significant problems associated with the insurgency, and they certainly didn’t enable the Iraqi units that replaced them to succeed when they departed the battlespace.

As a MiTT leader, I provided the proverbial “microscope” into the lives and actions of the Iraqi unit operating with coalition forces. I found that my role in the fight was ignored by some coalition commanders and, likewise, embraced by others. As a MiTT leader, I really only

succeeded when I was able to coach both Iraqi and coalition leaders into developing an integration of purpose; going back to the basics, regarding intelligence preparation of the battlefield and foot patrols, including battlefield enablers within shared battlespace; and building a plan to achieve clarity of thought regarding counterinsurgency. One of the big challenges when conducting COIN operations was to integrate coalition and Iraqi units to achieve unity of effort.

### **Abolish the “Jim Crow” Laws of COIN**

Coalition units must demonstrate leadership to the ISF by their example when conducting combat operations. Referring to the American Reconstruction Era series of laws that kept facilities, areas, and resources “separate, but equal” regarding race in the United States, the “Jim Crow Laws” for a counterinsurgency refers to the separate nature of employment by both coalition and Iraqi units, particularly in Baghdad. This concept worked poorly in its 75 years of practice in the United States, and it worked even worse in Baghdad. Though many coalition units and Iraqi units shared the battlespace of many areas, they seldom worked together for any long period of time, if at all. Coalition units, desiring to execute raids, special humanitarian support missions, NAC meetings, and the like requiring combined partnership to achieve perceived legitimacy, would periodically require me to provide the requisite Iraqi force for the mission set.

Otherwise, daily patrolling was generally executed in a “separate-but-equal” fashion with both coalition and Iraqi units doing their own separate patrols in the same nasty neighborhoods of Baghdad.

I believe this occurred for two reasons: first, U.S. forces lacked adequate troop strength to truly “partner” with Iraqi forces consistently to achieve combined purpose; and second, U.S. forces frequently changed areas of operation to fight the elusive enemy. Destroying the enemy became the number one priority for coalition forces, as opposed to securing and stabilizing a population center in troubled neighborhoods. This “whack-a-mole” tactic merely frustrated coalition forces and left Iraqi Army units without consistent coalition support, training, and resources.

Coalition units and Iraqi units seemingly lacked unity of command, and therefore had no unity of effort. My MiTT and I acted as the coalition representatives with the Iraqis and by default became the liaison officers (LNOs) between coalition and Iraqi forces. Being an LNO for seven different U.S. battalions in my year’s time as a MiTT chief detracted from my primary job as an advisor and trainer. Coalition and Iraqi Army forces would leave their separate large FOBs and orbit their battlespace separately. With the exception of large, top-down planned cordon and searches, this was the norm for a long time. However, not all coalition battalions fought COIN in this manner. Lieutenant Colonel Van Smiley’s 1st Battalion, 23rd Infantry Regiment fought COIN as a combined effort with the Iraqis and engaged the population to assist in security efforts. Its operations taught me a lot about what a coalition unit could do with the Iraqi Army, given how a unit changes the way it thinks and operates. Furthermore, with the latest surge plan occurring at the end of February 2007, the number of U.S. units and their employment has greatly changed to be more conducive to fighting a counterinsurgency by integrating elements of coalition force, Iraqi Army, and police. As I was leaving west Baghdad, the new security plan envisioned a unity of command between Iraqi Army, police and coalition forces in dedicated partner relationships: a step in the right direction indeed.

Once on the ground, MiTTs are now getting assigned to coalition units to assist in helping the coalition and Iraqi

commanders integrate a common purpose into their operations. In my final three months in Baghdad, I was lucky enough to be a part of a coalition brigade combat team that understood this. Coalition and Iraqi forces began living together in combat outposts to plan and execute missions together, saturate the Iraqi neighborhoods that provide safe harbor for insurgents, and learn from each other while doing daily patrols. Through cooperation with Iraqi Army and police, coalition forces were able to identify the most dangerous neighborhoods and “wall” them in with concrete barriers and wire. Iraqi and coalition forces would together control access to these neighborhoods by guarding them and working closely with the neighborhood council leadership. Controlling the borders, a COIN principle, can be applied to the sectarian nature of the Baghdad muhallas. After all, Iraqis define themselves through the communities in which they live, rather than the city from which they come. The combination of combined combat outposts and walling-in neighborhoods started to become very effective at securing the Iraqi people; gaining their trust; and, in doing so, denying terrain to the enemy.

At the end of my tour, I found myself assisting in patrol planning and integrating the Iraqi Army and police into coalition efforts. My team and I were able to teach LTC Sabah’s battalion staff how to execute a very rudimentary problem-solving method, akin to the military decision-making process (MDMP), to effectively prosecute daily and weekly missions. Iraqi operations officers began to battle-track, and Iraqi intelligence officers started to glean analysis from recent enemy significant activities. MiTTs can assist with the abolishment of what I term the “Jim Crow Laws” of COIN by bringing commanders from all forces together with a shared vision and purpose.

### **Do IPB & Go On Foot**

The IED threat, the biggest killer of coalition and Iraqi forces in Iraq, can be defeated. The latest crew systems and additional armor kits do great things to disrupt a majority of remote initiation devices and prevent penetration of much shrapnel; however, technology and armor cannot always defeat well-hidden command wire systems and well-aimed EFPs. The best way to defeat this threat is good old-fashioned IPB (intelligence preparation of the battlefield) and developing a plan that pits your advantage against an enemy’s disadvantage. Identify who the enemy is, where he wants to kill you, and bypass his kill zones or interdict his ability to emplace them. Go on foot. The enemy IED cells that target coalition and Iraqi Army units are small teams that number fewer than five individuals, given an average kill zone. These bad guys are predictable for when and where they strike with IEDs. They are, however, no match for a squad of well-trained and heavily armed infantrymen maneuvering on them from a direction they least expect. A bunch of insurgents in sweat pants and tennis shoes with AK-47s are no match for our infantrymen, and they are no match for many Iraqi Army units as well.

However, believe it or not, many coalition, and now unfortunately Iraqi Army forces, desire to execute what some call “movements-to-explosions” in west Baghdad. Instead of getting out on a foot patrol and maneuvering along unlikely mobility corridors and lateral routes to execute patrols, they instead travel in their armored vehicles, with limited visibility, down known and highly visible avenues of approach. The enemy knows our

allies’ patterns. They know we are painfully predictable when it comes to using our beloved armored vehicles. They are also successful at blowing those vehicles up and causing coalition and Iraqi deaths and injuries because of them.

The 4th Battalion received 15 M1114s in July 2006. Ever since that time, they have been tied to their vehicles and seldom ventured out of foot patrols to execute reconnaissance and combat patrols. They perceive the sniper threat and small arms threat to be too great to risk such an adventure. In some cases, the training of simple squad battle drills was lacking, and it shook their confidence to operate on foot independent of coalition forces (hence the friction I received when I first attempted to get them to execute night foot patrols with my team). The 4th Battalion, unfortunately, learned this by watching some U.S. forces, who merely orbited their AO, waiting to either be engaged by the insurgents with small arms fire or hoping to not encounter an IED as they drive around for 8 to 12 hours at a time.

In my experience in west Baghdad, many U.S. units discovered that their submariner reliance on M1114s was, in reality, causing greater risk from an IED attack than actually dismounting and maneuvering into an area from an alternate direction. In this manner, they maximize surprise, visibility, and ability to see and engage the enemy first. The fear introduced to enemy and civilians alike when they see coalition and Iraqi squads and platoons in wedge and column formations, moving in a disciplined manner, is also a great advantage we give up when we go on a “mounted only” patrol. Units, like the 1st Battalion, 325th Airborne Infantry Regiment, that inherited dangerous areas saturated by JAM, executed foot patrols only and disrupted much of the enemy militia’s lines of communication and ability to emplace IED kill zones. Now that many coalition units execute foot patrols in many of the most dangerous areas of their battlespace, the challenge many MiTT leaders and I had to contend with was breaking the Iraqi security forces of their reliance on vehicles for their sole protection.

Foot patrols earn themselves greater trust by the people living in the contested mulhallas. Going on foot slows down the patrol. Locals, who at one time, saw only security forces drive by them now see Iraqi and coalition forces walking by them, talking to them, and asking questions about threats to them and their families. Information flyers with critical contact information can be easily



*Soldiers with the 4th Battalion, 1-6th Iraqi Army Division prepare to depart an area after a mission.*



distributed. Critical neighborhood watch programs that place Iraqi units, like the 4th IA Battalion, in the lead can be reinforced by constant saturation of pedestrian patrolling. By demonstrating concern for their welfare, many civilian fence-sitters may choose to trust coalition and Iraqi forces and may, in turn, share intelligence about enemy forces in the area. Concerned civilians start to volunteer to become informants and sources for enemy movements, and can open their shops and allow their kids to play in the streets with confidence that there is always an Iraqi or coalition force nearby that can respond quickly. Civilians who act as auxiliaries for the enemy forces become frightened to act, and are therefore neutralized. In essence, the foot patrols deny terrain to the enemy, both urban and civilian, something which mere mounted patrols alone cannot do.

As a MiTT leader, I fought constantly with LTC Sabah to order more dismounted patrols for his battalion. Additionally, the Iraqi S2 disdained the IPB process and chose to focus on source operations only. With dedicated coalition units that patrol on foot with their 4th Battalion partners and intelligence officers willing to assist my trainers to demonstrate IPB techniques, I enjoyed an easier sales pitch for these ideas. Identifying the terrain and enemy capabilities and predicting enemy courses of action greatly assisted units to avoid and counter IEDs. Area denial and information collection increase when units routinely engage the population in a personal and sincere manner: going on foot is the way to win civilian support for their army.

### **Battlefield Enablers: Invite Everyone to the Party**

As a MiTT advisor, you will find many interesting units and organizations operating within your battlespace. Not only will you see Iraqi Army, police, special police and coalition forces in your area, but you will start to see various “alphabet soup” intelligence agencies, news media, civilian reconstruction teams, and maybe even some U.S. State Department folks working in the same area. As a MiTT advisor, you must take the lead to help get these organizations work together, or at the very least, be aware of each other.

The U.S. ODA teams all have differing missions and may not want to share or work with MiTTs whatsoever. Ironic as it may

seem, the training of indigenous populations, a onetime Special Forces core competency, didn’t appear to be a focus for them. That being said, most of their strategic intelligence they glean requires the cooperation of trusted Iraqi security forces to help collect, corroborate and provide action on intelligence. By approaching the ODA team in a manner that was mutually beneficial to us and my Iraqi battalion, the SOF Soldiers agreed to help train portions of our Iraqi battalion in reconnaissance, marksmanship, and combative physical training. These were instructor skill sets my MiTT team lacked and excited the Iraqi jundi to finally get an opportunity for some good, hard training to build up their confidence. In exchange for source and intelligence sharing, as well as going on targeted raids and reconnaissance missions, the 4th Battalion, 1-6 IA, got the opportunity to re-zero their weapons and re-blue their infantry skills by doing some hard training with our SF brothers on the same FOB. Iraqi morale increased, bonds were forged, and the ODA team got to build better intelligence networks and work relationships with our IA battalion.

As a MiTT advisor, you will see plenty of coalition organizations in the area that can assist you with intelligence. Even though you may have a partnered unit with its own digital command post of the future (CPOF) and intelligence of its area, you still must fight for intelligence about your AO, the ISF with which you’re working, and the surrounding civilian personalities who dwell in your battlespace. There is so much information available and so many different organizations there collecting it that not many intelligence fusion cells exist to “piece the intelligence picture together.” Regarding the various “special units” that operate in Baghdad, not many are going to contact you and offer assistance. Some of these organizations included cross-teams of FBI and other U.S. law-enforcement personnel, as well as the many intelligence agencies that go by different names in Iraq. It’s amazing how many of these special coalition intelligence/ law enforcement task forces can share information with you once you merely ask them for assistance. It always helps to bring a certain aspect of intelligence that would interest them in the process. As a MiTT advisor, you are in an interesting role to not only train, but also

to collect intelligence concerning your Iraqi security forces. My team and I witnessed extensive enemy insurgent infiltration, weapons smuggling, and other criminal activities associated with our Iraqi sector. Such firsthand information is valuable to many of these organizations and can be used by your MiTT to assist in building packets and case files for these special organizations. In exchange for this information, they can and will share information regarding targets, intelligence, and human factor information, such as sectarian infiltration routes and ethnic cleansing areas of focus. This information helps you understand where the enemy is, define enemy kill zones, and determine how the enemy is trying to target you and your team. It also assisted me in focusing operations for the 4th Battalion to be successful. Take the lead as a MiTT leader and invite all these organizations to play in your AO. I learned this late in my tour and wish I could have taken advantage of this sooner. There is too much information at stake to not take advantage of this idea.

### **Introduce Positive Reinforcement**

Using medals and certificates of valor and achievement of our own creation, my team and I introduced positive motivation to the 4th Battalion jundi. So much of the discipline used by the Iraqi commanders was centered upon negative reinforcement. Taking a week’s pay, dressing down soldiers in public, firing them outright, and threatening jundi were all commonplace. In a culture that reveres strength and disdains weakness, I first had to demonstrate to the Iraqi leadership that I was strong and used an uncompromising, no-nonsense approach to win rapport with LTC Sabah and his commanders. Once this was accomplished, I turned my attention to showing the Iraqi command a different way to get jundi to perform their jobs well. I started complimenting good behavior and rewarding those Iraqi jundi who executed the standard. I honored them and reprimanded them when they deserved it. I had a creative MiTT S2 captain who invented medals for valor and extreme valor on his computer. We sent these designs to a U.S. manufacturer and had them made especially for our Iraqis. The cost came out of our own pockets, but it was more than worth it. The jundi were instantly overwhelmed with pride and longed for

more praise by working harder. The Iraqi jundi pined for recognition and were motivated by these never-before-seen awards. I was not partnered with a coalition battalion at the time, and we did not have a means in which to request U.S. Army Achievement Medals and Army Commendation Medals for the deserving Iraqis. Many MiTTs now are assigned to U.S. formations and can now recommend official medals for their deserving Iraqi counterparts.

These medals were an opportunity for me and the MiTT team to recognize publicly the heroism and sacrifice demonstrated by these often neglected Soldiers. These medals, once presented by a U.S. officer personally to them, became a legitimate foreign award that could be worn on their uniforms. Presented to them in mass formations, we showed LTC Sabah how to reward accordingly and provided him an opportunity to address and compliment his soldiers *en masse*. Eventually, LTC Sabah's S1 began creating the battalion's own certificates of achievement, and LTC Sabah began holding formations on his own to honor his jundi. Using a combination of positive reinforcement and negative reinforcement, LTC Sabah saw his battalion's morale increase exponentially. Using good solid leadership, we showed the Iraqi leadership one way to provide purpose, direction, and motivation to their jundi.

### **Define a Training & Operations Model to Fit Them**

The Iraqi Army needs a training concept. Currently, training is done halfheartedly or not at all. The Iraqi Army, falling under the Ministry of Defense, is required to work 15 days straight and then allows Iraqi jundi five days off to go home, pay their families, and execute tribal obligations. This work/release cycle is nonnegotiable to all Iraqi leadership. As such, the Iraq Army engages in a Fight-Fight-Fight-Leave training strategy. In practice, 25 percent of the 4th Battalion was gone on leave. All four rifle companies and its HSC company were reduced to 75-percent manning to fight. This left no room for training and maintenance. Training occurred "on-the-job." Except for basic training and combat, Iraqi jundi never get a dedicated opportunity to fire their weapons for marksmanship practice. Maintenance was nearly never done to standard or even treated seriously. Over time, uniforms, equipment and jundi become tired, ineffective, and eventually worn out. Though some coalition units are making use of joint patrols to train individual, collective, and leader tasks they, in fact, have codified. Most of the Iraqi Army lacks a means by which to achieve balance in combat, training, maintenance, and rest. My answer to this would be to develop and implement a training and operational cycle akin to our own in the U.S. Army, but do it on their terms.

Based on the four-rifle company MTOE, it is possible to develop a training and operational cycle that still meets the constraint of 25 percent jundi on leave. This cycle would be based on a 20-day cycle, with company rotations occurring every five days and meets the Ministry of Defense requirement for five days off for every 15 days of consecutive work. Additionally, it is possible to also have one IA company dedicated to training, maintenance, and limited missions as well. Calling it a Fight-Train-Leave-Fight rotation, the Iraqi Army could implement a system much like our Green-Amber-Red training/operational cycle. The fight or "green" companies would be manned 100 percent and would execute continuous fighting for five days straight. Another company, the

train or "amber" company, would execute command maintenance on all their assigned equipment and execute individual task training such as first aid, marksmanship and communication skills for five days. The remaining leave or "red" company would be 100 percent on leave for five days. The IA HSC company would still rotate jundi home and would have 25 percent of the support personnel and staff gone at any given time. One of the "green" companies would get stuck with 15 consecutive days fighting at 100-percent strength, but after that the cycle would right itself. The specialty platoons within the HSC company would also rotate through training and maintenance along with the IA rifle companies. The lack of jundi out in the fight would be augmented by greater participation by Iraqi police into the patrol schedule. The tactical footprint also becomes increased with the advent of dedicated U.S. units partnered with the Iraqi companies on the "green" fight status.

Based on an agreed upon mission essential task list (METL), a task list for all individual, collective, and leader training would need to be developed and approved for use by the Ministry of Defense (MOD). Currently, neither MOD, nor the Iraq Assistance Group, officially recognizes any such Army Training and Evaluation Program (ARTEP) manuals for Iraqi Army specific training. The METL is depicted differently depending on whom you ask. The Iraq Assistance Group and coalition BCTs have differing opinions concerning what ought to be the Iraqi Army METL. Much of the training we provided our Iraqi battalion came from directly from U.S. doctrine, or from guidance from the much generalized Transition Readiness Assessment, a monthly review of Iraqi units, much akin to our unit status report (USR) reporting. Many coalition brigades are forced to improvise the training by the seat of their pants. Some were successful. Some were not.

One such successful brigade that developed a METL for the Iraqi units it worked with was the 2nd Brigade (Dagger), 1st Infantry Division. Colonel J.B. Burton mandated that a METL be developed, cross-walked, and refined to incorporate individual, collective and leader tasks tailored to the Iraqi Army. Once completed, this METL served as a model for all training conducted in a combined effort with coalition, transition teams, and Iraqi Army units within the 2/1 ID AO. Because no formal training/operations cycle was in existence, collective training was to occur during actual combat and reconnaissance patrols. One example COL Burton used was to train Battle Drill #6: Enter and Clear a Room. A coalition patrol and an Iraqi patrol would move to an Iraq muhalla, pay an Iraqi civilian money for use of his house, and practice techniques for breaching a house, and battle drills for a few hours. Not only did the jundi get trained by the Americans in a combat environment, but the presence of both forces in zone garnered the confidence of the Iraqi locals. The Iraqi jundi learned the art of room clearing and tactical site exploitation from the Americans in a hands-on fashion. This type of training was extended to tactical checkpoints, ambushes, raids, and close target reconnaissance. By doing this, the coalition units partnered with the 4th Battalion, 1-6 IA Division, were provided clear tasks and purposes, were motivated to not only "baby-sit" their Iraqi counterparts, but to train them in functional combat roles to secure their own neighborhoods. It was a creative and effective technique to train the Iraqis while conducting combat operations.



The role of the MiTT teams in this process is one of scheduling, patrol oversight, and Iraqi staff training and battle command training. I was fortunate to be the “microscope” into the 4th Battalion for my partnered coalition unit. My team and I assisted in the refinement of the IA METL and associated battle tasks; prepared the Transition Readiness Assessment every month to provide feedback for the Iraqi training progress; and assisted with the scheduling of missions, patrols, and training for the Iraqi command and staff. Eventually, I was able to coach LTC Sabah into providing his own form of commander’s intent to his subordinates and was able to assist his S3 in planning a TCP and patrol matrix that facilitated his unit’s training with our coalition partners. My MiTT staff trainers were able to focus on developing IPB and maintenance and logistics systems and training a very basic model of MDMP and orders production. Earlier in my tour as a MiTT chief, I was unable to focus my team in this way because of all the coverage we provided the Iraqi platoons and companies. Now, with a dedicated U.S. partner that had a vested interest in training, I was able to train LTC Sabah, his commanders and his staff using the full knowledge and skill sets of my team. I reported directly to Lieutenant Colonel James Nickolas, the 2nd Battalion, 12th Cavalry Regiment commander, whose battalion was partnered with the 1-6 IA Brigade. I, in a sense, became a third field grade officer for his battalion’s efforts to secure its portion of western Baghdad. My MiTT had a great relationship with 2-12 CAB, and we were able to accomplish much in the way of COIN in my remaining two months of my tour.

Currently, no training and operational cycle exists regarding the whole Iraqi Army force. Even though it is a great idea that can be applied to the whole force, it requires the approval of the Ministry of Defense to implement it. The top-down hierarchy of the Iraqis forces this issue to be addressed in this manner. It takes the efforts of our Multi-National Corps – Iraq (MNCI) and Multi-National Force – Iraq (MNFI) commanders, in my opinion, to coax the ISF to adopt this technique. It can only benefit everyone concerned to do so. Not only would they achieve balance regarding combat, training, maintenance and rest, but their institutional knowledge of war-



*Lieutenant Colonel Sabah Gati Kadim Al-Fadily confers with Lieutenant Colonel James Nickolas, commander of 2-12 Combined Arms Battalion, during a combined search.*

fighting would increase over time, thereby reducing coalition presence over time.

### **In Closing**

The fight in west Baghdad will improve with time. Combining Iraqi Army units, police units, and coalition units in unified action is the way to go. The MiTTs can expedite the training and implementation of this unified action by raising Iraqi Army awareness and levels of competency. Before coalition units and MiTT teams can begin to leave the fight, Iraqi units must be able to mimic the basics of a COIN doctrine many MiTTs and coalition units are just now beginning to understand and implement. The MiTT’s focus should be placed on leading by example, using all the coalition assets in a given area, and developing a training cycle to maximize the balance and effectiveness of their Iraqi counterparts.

My experience as a MiTT team chief was an overall positive one. It challenged my resolve, my patience, and my ability to lead not only Americans in combat, but Iraqis as well. It was an extremely dangerous business. A Soldier of mine was killed, as were many U.S. coalition Soldiers, and countless Iraqi soldiers. Scores more were wounded. Stability had its price, and payment was all too often.

I believe I learned almost as much about how not to fight a counterinsurgency in my year’s time there as I learned how to fight one. Upon my return to the United States, I picked up the new FM 3-24, *Counterinsurgency*, and found it to be almost

counterintuitive. I had learned by doing: trial and error. I was pleased to see most of my assumptions and ideas turned out to be the correct ones in which to fight in a COIN environment. I also feel optimistic that our forces in Iraq are now getting COIN savvy and are fighting this war using appropriate techniques and doing it in a way that makes the Iraqis better.

MiTT may have “happened” to me without my choice, but I am glad it had. As I look forward to being an operations officer and executive officer in my own right, I can look back at my experiences to build upon when I return someday to Iraq. I know a lot more about the nature of the war there. I understand the suffering and the civil insurrection going on in their culture. I know some things about how to make their army better, for their country’s sake. Transition teams can be extremely useful if used to the end to make the Iraqi security forces the heroes in this fight. After all, it will be only through *their* definition of achieving victory that our own military may someday achieve the same and come home.

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**Major David Voorhies** recently returned from Iraq where he served as a military transition team chief advising the 4th Battalion, 1st Brigade, 6th Iraqi Army Division. He was previously assigned as a small group instructor with the Infantry Captains Career Course, U.S. Army Infantry School, Fort Benning, Georgia. He graduated from the U.S. Army Military Academy at West Point in 1995. His previous assignments include serving as a company commander and battalion S-1 with the 1st Cavalry Division from 2000-2003.

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## COMBAT-FOCUSED COMBINED ARMS TRAINING

CAPTAIN WILLIAM J. DOUGHERTY AND STAFF SERGEANT REED MATHIS

In the confusion of battle, simplicity often decides success or failure. That statement is especially true when it comes to the connected issues of calls for fire (CFF) and close combat attack (CCA). Non-fire support personnel are by definition the greatest consumers of indirect fire support. Non-aviation personnel are equally by definition the greatest customers for aerial close fires. Those two groups — the non-aviation and the non-fire support personnel — are the same folks. This article suggests methods for both CFF and CCA that are equally simple to train and to remember.

### Polar Target Location and Creeping Fires Adjustment

Polar target location is the simplest method for training non-fire support personnel in procedures. The creeping fires method is the simplest way to adjust those fires. There are several other ways to accomplish either or both tasks simultaneously; however, they are best left to fire supporters. A trainer's main goal must be

putting a "T" for trained status for the training audience on any given task. Attempting to train on grid, polar and shift from a known point and the various methods of adjustment wastes training time; a non-fire support trainee ends up "drinking from a fire hose." At the end of the day, the trainee may be familiar on all three methods, but he will have mastered — and be comfortable in using — none. Training time these days is precious. We must make the most of it.

So, what makes polar and creeping fires efficient methods? First of all, when used together these two techniques provide the safest and most easily trained method of employing indirect fires. Secondly, the polar method of target location provides a background and methodology for using other fire support assets such as attack aviation and AC-130 gunships. You can "nest" training with follow-on training for CCA, adding to your training evolution. The third reason is that both methods use technology common to almost all Soldiers, especially small unit leaders. Basic

*Soldiers with the 1st Battalion, 320th Field Artillery fire in support of the 1st Battalion, 502nd Infantry Regiment, out of Muhumidiyah, Iraq.*

2nd Brigade, 101st Airborne Division  
Public Affairs Office





needs are a global positioning system (GPS) and an ability to guesstimate range. Although not necessary, a laser range finder will improve the quality of the “polar” plot by adding a more accurate range, and the GPS takes the guesswork out of determining location. You can pretty much assume that a team leader will have a GPS; it is quite likely his Soldiers do as well, given the availability of inexpensive and accurate civilian GPS systems.

A GPS is what makes the polar method the preferred choice for CFF. Polar increases the speed of the initial target location and the adjustment. It reduces the potential for fratricide, provides others with the location of the target in respect to the observer’s location, and is easy to train.

The polar method also allows the observer to quickly look at and report his current location to generally within 30 meters, use his compass to determine direction to the target and either “guesstimate” range or use a laser range finder. All this can be done rapidly either as a team or individually, day or night.

In comparison, the grid method involves determining a map spot (inherently inaccurate) or inputting data into a Precision Lightweight GPS Receiver (PLGR) (This involves pushing multiple buttons where each push on a button increases the potential for a mistake, and the datum input are polar measurements anyway). “Shift from a known point” requires a known point, the observer’s ability to visualize where the known point actually is, and math.

During limited visibility, these tasks increase in difficulty but to a lesser degree with polar. Under the stress of close combat, these tasks again increase in their perceived complexity. Acquiring polar data is the least complex of the three methods and closely resembles the standard infantry report of direction, distance, and enemy description given by a team leader to a squad leader.

Polar increases the speed of adjustment because observer target (OT) direction is sent in the initial CFF. OT direction is required before the first adjusting round. Soldiers are notorious for forgetting this task. During grid missions, the observer often does not send the OT direction, and the fire direction center (FDC) must request

it from the observer or, in the case with mortars, default to the gun target (GT) line. In low-stress classroom training, non-fire support personnel forget to send direction more than 50 percent of the time. Even fire support Soldiers forget this essential task. The chaos of close combat makes missing this critical task even more likely. Imagine the additional seconds or minutes wasted when an FDC must remind the observer about the need for a direction.

The observer then has to get out his compass, reacquire the target and send the OT direction transmission. These seconds count because the enemy is now alerted to our use of indirect fire by the impact of the first round.

The polar method reduces the chances of fratricide, especially when used with creeping fires to adjust. It also provides the most positive control of the initial round’s impact location. If the observer can accurately locate himself (usually with a highly accurate GPS), then he can reasonably be assured that the first round will impact at the direction and distance transmitted from his location. Using the grid method, the observer can be reasonably assured the round will impact in the vicinity of the grid transmitted. It is harder to be sure of the accuracy of the grid transmitted as it relates to both target and his location.

Using the polar method also makes it easier to verify in combat that the observer is ensuring the first round impacts at the unit standard distance of first round from friendlies or the appropriate risk estimate distance (RED). Polar also allows FDC personnel to make appropriate shell/fuze decisions based on the observer’s location to the initial rounds predicted impact and/or the target. If observers fail to request a delay fuze or a converged sheaf, the FDC can take the appropriate action to mitigate risk. This is especially important when non-fire support personnel are calling for



Captain William J. Dougherty

*Staff Sergeant Reed Mathis (left) and Specialist Stidham, both of the 1st Battalion, 502nd Infantry Regiment, stand next to a mortar firing position in Iraq.*

fire support in the confusion of combat.

Grid and shift from known point missions provide the FDC the target location but do not provide the distance between the observer and the first round’s predicted impact location. Polar missions provide the FDC with the information to help the observer conduct a safe mission. The use of creeping fires further adds to the safety of the polar method. The creeping fires method represents the most likely adjustment method in combat expected for light infantry. Indirect fires for light forces rarely exceed 600 meters and in most cases will occur within extreme danger close distances in support of meeting engagements, ambushes, and defense of combat outposts. Creeping fires is the doctrinal method of adjusting fires within danger close distances; adjustment of subsequent rounds can be no more than 100 meters.

Polar missions inherently provide higher command posts and headquarters immediate situational awareness on where forces in contact are located. This can be especially important as decisions are made to bring other fire support assets to bear against the enemy. Again, grid only provides the target location and not the observer’s location. Of course, friendly information will be passed eventually or even before a fire mission, but the polar mission guarantees it will be sent. Attack aviation assets monitoring a fire support

net are also provided situational awareness of friendly locations should they be brought into the fight and have essentially been given the data required for their own attack aviation CCA.

Soldiers instinctively like the polar method because it is easier to grasp. Whenever non-fire support personnel can choose their method of target location they almost invariably attempt the polar method because it is the easiest to understand and execute.

One argument against the polar mission is that it takes longer for an FDC to determine firing data. This is true because of the need to input the observer's location into fire control computers or on the firing chart. When looked at from just the perspective of the FDC determining firing data, then technically polar missions do take longer. When the polar mission is looked at from the perspective of an observer and especially a non-fire support observer, then a polar mission is faster and more likely to produce a safe first-round impact. With a polar mission, the observer does not have to check a map spot or input polar data into a PLGR, FDCs and leaders who are battle tracking have greater situational awareness, and observers get a better "warm and fuzzy" about the initial round's impact location. A polar mission places more of the button pushing, figuring and shell/fuze decisions onto the FDC. This is the proper place for those tasks when you consider a non-fire support Soldier (or a young forward observer) calling for fire in close combat with failing or no visibility. He may be freezing trying to push buttons on a PLGR or lying prone while being shot at. The FDC, if properly located, is removed from the chaos of the direct firefight to allow for accurate computational procedures to take place. Those involved in the chaos of the direct fire fight should be given the tools and training to keep the CFF as simple and safe as possible.

### **Proper Format for Call for Fire Using Close Combat Attack and Friendly Marking**

All team leaders and above should also know exactly the CFF format for CCA. This is an easy task, one made more achievable

*An OH-58A Kiowa provides close air support to Soldiers from the 2nd Battalion, 35th Infantry Regiment during a mission in Iraq.*

Staff Sergeant Samuel Bendet, USAF



through the use of the polar method because it automatically includes the vital OT direction. Most personnel who have had formal CCA training understand the essential information that goes into the CFF. What they forget is the proper format.

If your initial response to that is "so what," then you need to reconsider. It is true that no pilot would refuse a CCA because the format is incorrect, but do you want the pilot trying to sort out garbled information while dodging enemy fire? Do you want to wait the extra time required for the pilot to make those adjustments before you get the fires you need? The quickest — and the safest — way to get those fires is to use the proper format correctly. The format is therefore important. If ground personnel send the CFF the same way every time, it increases the efficiency, speed, and safety of the fire mission. The reality of a CCA is ever-increasing chaos. The enemy will be shooting at the observer and the helicopters. Friendly forces will be trying to sort friendly and neutral locations even as they mark that of the enemy with a platoon's worth of lasers, small arms fire, or other marking methods. A standard CFF transmitted correctly will increase chances of success. CCA is the most likely fire support asset we will employ in Iraq; the CFF should be known by all leaders.

### **Summary Recommendations**

None of what was offered above was new, and CCA TTPs have been around since the inception of true indirect fire support and aerial fires. Longevity in a military sense is a strong indicator of both relevance and importance. We have known since WWII just how lethal an infantryman could be when he could bring in



accurate and timely fire support whether by cannon, rocket, mortar, or aerial means. We also learned just how dangerous an infantryman could be when fire support gets screwed up. In summary, this article closes with some simple recommendations to combat leaders at all levels.

### On CFF

- o When training non-fire support personnel in CFF, the techniques learned should only be the polar method of target location and the creeping fires method of adjustment. Limiting instruction to these two techniques provides a focus for training objectives, which is especially important given that CFF training probably does not occur as often as it should.

- o Train more on CFF. Achieve a “T” status on polar and creeping fires for squad leader and above throughout a battalion. Once this is achieved, move on to a higher level but keep techniques simple that show how to move under the suppression of indirect fires. Example: section/battery left/right.

- o Develop a battalion combat focus written exam that incorporates the risk estimate distance for indirect fires in combat. The required RED knowledge should be focused for 155, 105 and 120s, and 60s that are at two-thirds system range at a .01 percent probability of injury. Again, this provides focus on likely assets at probable ranges using acceptable risks that will

be used in high intensity combat.

- o Purchase more (IFATS) systems so that there is one in each battalion; more IFATS could make the first three recommendations possible. The cost of the systems is significant, but the payoff would far outweigh the investment.

- o Recommend to the U.S. Army Infantry Center at Fort Benning that it change the expert infantryman badge (EIB) fire support task to the polar method of target location using the creeping fires method of adjustment. The conditions should allow the observer to use a GPS, have a compass and guesstimate range (this used to be an EIB task). The standard should not be completely based on target location but on where the observer places the first round in an extreme danger close situation. This would involve knowledge of REDs and or a unit SOP on distance from friendlies of the initial rounds impact. Then the observer creeps the rounds back onto the target.

### On CCA

- o Develop a battalion combat focus written exam that incorporates the 160th Special Operations Aviation Regiment standard CCA CFF and techniques of

executing a CCA. Knowledge of the CCA CFF, to standard, is an achievable goal.

- o Continue to focus on CCA in dry, live, and maneuver-type training situations so that all leaders understand this valuable fire support asset.

- o Recommend the Infantry Center add a “Conduct a CCA CFF” task for EIB. Conditions should incorporate a target, radio, compass and personnel to role play the pilot.

- o Standards should have a +/- for the direction to target and +/- for the range to target and accurate target description. The format of the CCA CFF is sent correctly. This recommendation could spur an Army-wide standard for CCA that would reduce friction and retraining time for PCS'd personnel or when different units support each other in combat.

- o Battalions need a standardized marking system. The purchase of the double A strobe should become a priority, and VS17 panels should be an inspectable item for leaders and vehicles.

- o Glint tape provides the pilots situational awareness on friendly locations. Glint wears out with exposure to the sun. Propose that this tape be made ready for use with the new combat uniform.

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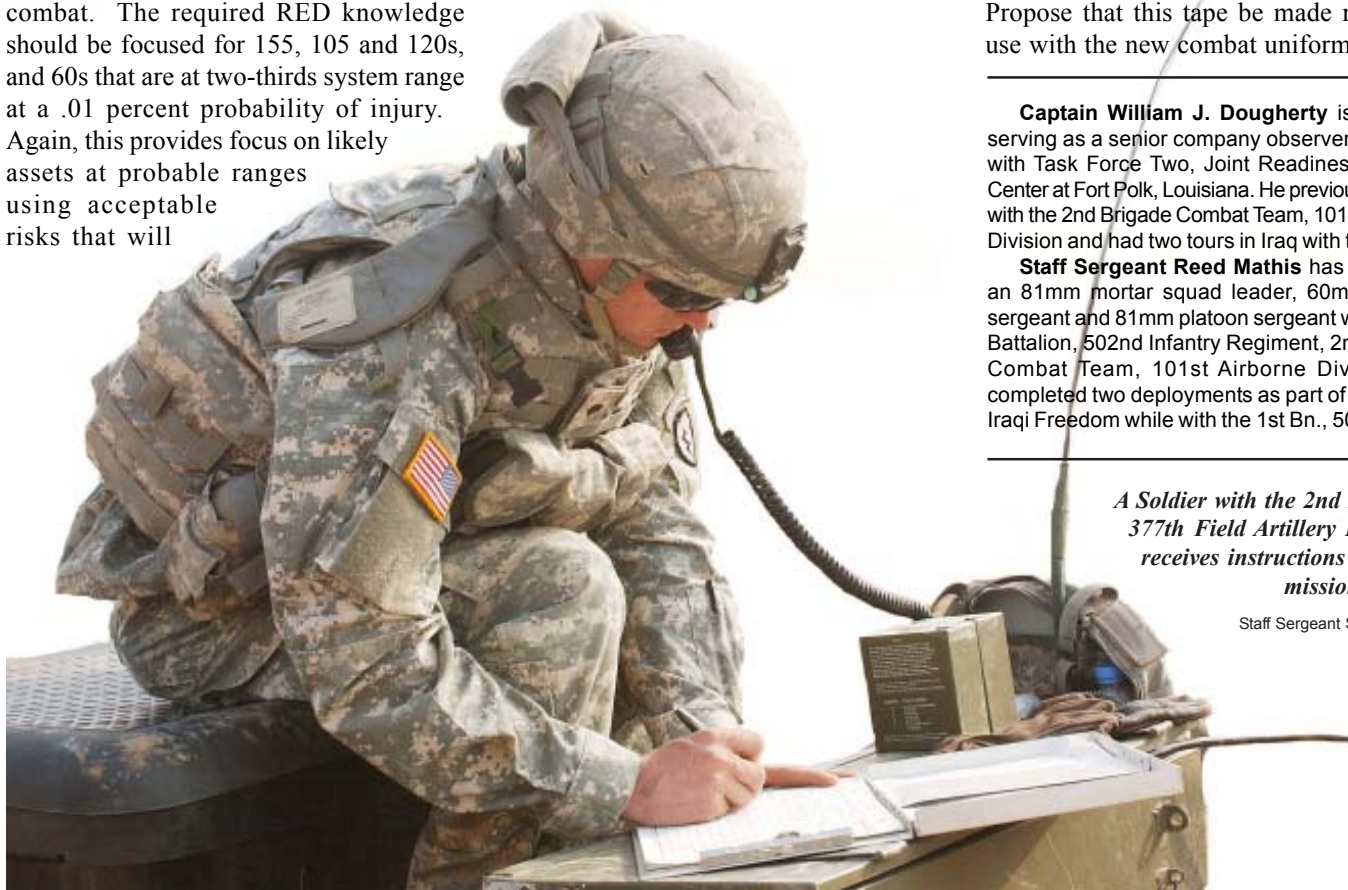
**Captain William J. Dougherty** is currently serving as a senior company observer controller with Task Force Two, Joint Readiness Training Center at Fort Polk, Louisiana. He previously served with the 2nd Brigade Combat Team, 101st Airborne Division and had two tours in Iraq with the unit.

**Staff Sergeant Reed Mathis** has served as an 81mm mortar squad leader, 60mm section sergeant and 81mm platoon sergeant with the 1st Battalion, 502nd Infantry Regiment, 2nd Brigade Combat Team, 101st Airborne Division. He completed two deployments as part of Operation Iraqi Freedom while with the 1st Bn., 502nd Inf.

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*A Soldier with the 2nd Battalion, 377th Field Artillery Regiment, receives instructions for a fire mission in Iraq.*

Staff Sergeant Sean A. Foley



# Center For Army Lessons Learned L2I ANALYSTS ASSIST WITH INFORMATION REQUESTS

ROBERT A. CHARLES AND GREGORY VALRIE



The Center for Army Lessons Learned (CALL) has strategically located a network of Lessons Learned Integration (L2I) analysts throughout the continental United States and abroad. The concept is for this network of military analysts to expedite the flow of information/lessons learned which is critical during the global war on terrorism. The L2I initiative is foremost about people networking and collaborating together rather than individuals searching to find information. If you are not already aware, a team of L2I analysts is currently assigned to Fort Benning, Georgia. The three-man cell arrived at Fort Benning in late August 2006 and were located within the Combined Arms and Tactics Directorate (CATD) in Building 4, Room 445. The primary function of the L2I analysts is to support both the United States Army Infantry Center (USAIC) and Fort Benning. Throughout the past several months we have discovered that there is a tremendous number of Soldiers who are not familiar with CALL or the L2I program.

## KNOWLEDGE IS POWER

During several CALL briefings and CALL Web site train-the-trainer classes that were given to Soldiers at Fort Benning, the L2I analysts discovered an alarming pattern — many Soldiers were not informed about CALL, an organization that has been in existence since 1985. This may be due to the fact that the Center for Army Lessons Learned is located at Fort Leavenworth, Kansas. In October 2006, a survey was conducted at the United States Army Sergeants Major Academy (USASMA) by fellow L2I analysts (Scott Gould/Colin Anderson). The survey, which covered 113 students (sergeants through sergeants first class who were attending Phase II Battle Staff NCO Course) revealed:

- 50 percent of these Soldiers had no previous knowledge or use of CALL;
- 74 percent of these Soldiers had never used any of CALL's services; and
- 98 percent of these Soldiers had never submitted a request for information (RFI).

A series of Center for Army Lessons Learned briefings were created to educate Soldiers on CALL, and these briefings have been given to Soldiers in the Warrior Leaders Course (WLC), Basic NCO Course (BNCOC), Advanced NCO Course (ANCOC), CATD, as well as officer and NCO Professional Development classes. If your unit would like to receive the Center for Army Lessons Learned brief or the train-the-trainer briefing on how to

utilize the CALL Web site, contact the Infantry Center L2I analysts using the contact information listed on page 46.

## CALL PRODUCTS

Since September 11, 2001, the Center for Army Lessons Learned has produced 451 publications. CALL publishes several categories of publications including:

**Handbooks** — “How-to” manuals on specific subjects (e.g., *Soldiers' Handbook: The First 100 Days*, *Base Defense: Tactics, Techniques, and Procedures*)

**Newsletters** — Publications that address a specific subject (e.g., convoy operations, etc.)

**Special Studies/Editions** — Publications related to a specific operation, exercise, or subject. These publications generally provide information on topics ranging from a country's history in relation to current events, cultural do's and don'ts, language, and environmental cautions, to tactics, techniques and procedures (TTPs) and emerging doctrine.

**JOIB (Joint Operations Integration Branch) Bulletins** — Publications that showcase articles which encompass all aspects of war fighting at the operational to strategic level.

**CTC Quarterly Bulletins and Trends** — Periodic publications that provide current lessons, TTPs, and information from the Combat Training Centers.

**News From the Front** — News From the Front is a bimonthly online publication that contains information and lessons on exercises and real-world events.

**CTC Tips For Success** — Tips extracted from reports compiled at the Center for Army Lessons Learned from recent rotations at the National Training Center (NTC), Joint Readiness Training Center (JRTC), Joint Multinational Readiness Center (JMRC), and Battle Command Training Program (BCTP).

**Training Techniques** — Online publications that provide training techniques and procedures collected or sent to the Center for Army Lessons Learned by units, commands, Combat Training Centers, Soldiers and leaders.

## DISSEMINATION OF INFORMATION

The L2I analysts disseminate information/lessons learned on a daily basis. This information primarily consists of observation/insight/lesson (OIL) and TTPs. The analysts “push” this information to Infantry Center units and directorates through e-mail, compact discs, and paper copies. The primary search for information for daily dissemination of information is conducted through a search on the internal L2I SharePoint Site. This Web site is available for



access by L2I analysts only. All information on the site has been screened by the Center for Army Lessons Learned Hub and validated prior to the release of information.

**REQUEST FOR INFORMATION**

The most common way for L2I analysts to support the Infantry Center is by answering requests for information. An RFI occurs whenever a Soldier has a military question that they cannot find the answer to. The Soldier should contact an L2I analyst who will research the question and also notify the L2I network of military analysts which expedites the information gathering process. Generally, the RFI is answered within 72 hours or less. It is important to note that any Soldier can initiate an RFI. The Center of Army Lessons Learned Web site (<http://call.army.mil>) is a great source of information for Soldiers of all ranks. There is a phenomenal amount of information available on a broad range of military subject areas.

Fort Benning L2I analysts contact information:

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**Robert A. Charles** is a retired Infantry first sergeant with more than 22 years of service. His assignments included serving with the 82nd Airborne Division, 10th Mountain Division, 3rd Ranger Battalion, 25th Infantry Division, 507th Parachute Infantry Regiment, and the Infantry Training Brigade with the 2nd Battalion, 58th Infantry Regiment and 1st Battalion, 19th Infantry Regiment. He is now employed as a contractor for Eagle Systems & Services, Inc., where he serves as a military analyst at the U.S. Army Infantry Center, Fort Benning, Georgia.

**Gregory Valrie** is a retired Armor first sergeant with more than 24 years of service. He is a veteran of Operation Iraqi Freedom 1 where he served with 2nd Battalion, 69th Armor Regiment as a tank platoon sergeant (C Company), and OIF 3 where he served as a first sergeant of a tank company (C Company) with 1st Battalion, 15th Infantry Regiment. He is now employed as a contractor for Military Professional Resources Incorporated (MPRI), where he serves as a military analyst at the U.S. Army Infantry Center, Fort Benning.

# COMBATIVES!

## Do We Train As We Fight?

CAPTAIN JOSH COLLINS

*This article first appeared in the Summer 2007 issue of the Infantry Bugler.*

An Infantry Soldier enters a building and is immediately confronted by an angry, unarmed man who yells defiant obscenities in his native tongue. The Soldier closes the distance and tells the man to get on the ground. The two collide. The Soldier takes him to the ground as he has been trained to do, but something goes wrong. The man flails and resists and the Soldier's teammates descend upon the entangled pair. As they struggle, the resistant noncombatant's hand finds its way to a fragmentation grenade on the Soldier's equipment. The unthinkable happens.

**The Current Army Combatives Program**

The purpose of combatives training as identified in Chapter 1-2 of FM 3-25.150 (*Combatives*) is to prepare Soldiers "to use different levels of force in an environment

where conflict may change from low intensity to high intensity over a matter of hours. Many military operations, such as peacekeeping missions or noncombatant evacuations, may restrict the use of deadly weapons. Hand-to-hand combatives training will save lives when an unexpected confrontation occurs." The next paragraph states that, "More importantly, combatives training helps to instill courage and self-confidence."

In terms of accomplishing the greater purpose, the Army Combatives School does just that. During Phase I training, it presents a comprehensive program of Gracie Jiu-Jitsu that is easy to learn, effective for rules-based ground fighting and requires minimal resources for training. This accomplishes the greater purpose of instilling courage and self-confidence, but ironically does not address the lesser purpose, which is more combat-oriented.

Level II and III training at the Combatives School elevate drastically in intensity. Level III teaches advanced fighting techniques and styles, such as striking, kicking, knife fighting, stick fighting and



Specialist Christa Martin

*Staff Sergeant Jay Hilliard, left, assists Iraqi Army soldiers during combatives training in Mosul.*

more advanced grappling. The school successfully creates confident, tough Soldiers. However, the realistic operational skill sets — weapons retention while controlling a noncombatant or captured combatant, nonlethal techniques in crowd control, and traffic control point procedures for removing unwilling passengers from their vehicles — are not addressed. The Level III program addresses some close quarters battle (CQB)-related combatives tactics, but the premise is still the same — grappling.

As Soldiers, the combative drills we adhere to and the methodologies by which we train prepare us for today's battlefield. The premise behind our combatives training is the belief that may fights end up on the ground. The training is hampered, however, by the fact that we train without the equipment we use on the battlefield. The dangers of sticking to a "go-to-the-ground" mentality are only learned when the Soldier finds himself in a personal defense situation with more than one assailant, or worse yet on the ground with a noncombatant who is not encumbered by 60 pounds of gear. Ultimately, we are not preparing for combat if we do not simulate the combat environment during training.

### **Combatives on the Modern Battlefield**

We train in the art of hand combatives for at least three reasons: to prepare to defend ourselves in unarmed (hand-to-hand) combat as a form of personal protection, to instill an aggressive spirit and the Warrior Ethos and to execute CQB in a way that mandates Soldiers use nonlethal force as a means to control the actions of a noncombatant.

If we agree that the most beneficial aspect of a combatives program is its potential value in the CQB arena, then we must create a program that fits the tactics and techniques used for CQB. Training in both stand-up and ground-fighting methods provides a base for opponent takedowns, prisoner control, pressure point control tactics (PPCT), and weapons retention. The majority of training should focus on the stand-up approach while maintaining mobility and centering on the use of explosive aggression. Though most fights and prisoner control situations will end with someone on the ground, they all begin standing up, as does CQB.

### **A CQB-Focused Combatives Program**

Combining the combatives and CQB training during simunition exercises (using paint ball rounds) is not a new concept. Incorporating exercises that provide accurate advanced MOUT techniques (AMT) environmental simulation with human (role player) response adds a new dynamic to the training. These exercises, called Absolute Combatives Training Scenarios (ACTS), require role players to interact, each outfitted in combatives protective equipment, called High Gear. ACTS replicates the AMT environment by incorporating combatants and noncombatants who are aggressive, resistant, passive or immediately compliant. The Soldier reacts, discriminates, and responds based not only on whether the target is a threat (weapon present), but on the demeanor and behavior of noncombatants. Putting both bad guys and good guys into the same protective gear eliminates the "red man suit" artificiality, which exists anytime a Soldier comes to a room where

someone is wearing this gear and immediately shifts into a combatives mode. This type of discrimination (as it relates to a noncombatant) is uniform-based, as opposed to a more realistic behavior-based assessment.

During these exercises, Soldiers are able to practice combatives techniques in tandem with their CQB tactics. In role player education, genuine human reaction is crucial. Consequently, this type of training not only amplifies our tactical expertise, but also is cost effective (initial cost of the High Gear suits). Founded upon lessons learned during successful contingency operations around the world, ACTS create a fluid environment where the Soldier will shift gears based on threat, situational

*Staff Sergeant Gaylord Reese, bottom, attempts a submission hold on Specialist Robert Johnson during combatives training in Iraq. The Soldiers are with the 5th Battalion, 20th Infantry Regiment.*

Specialist Christa Martin





awareness and target demeanor.

Army-taught jiu-jitsu provides the Army an inexpensive and efficient way to train hand-to-hand techniques; however, does jiu-jitsu alone satisfy the criteria for feasible control options during a military operation while wearing 50-60 pounds of Kevlar vest, ammunition and equipment? We must train as we fight.

**The Combatives Environment**

The combatives environment, as it relates to the Soldier, is defined as the use of one’s total body, armed or unarmed, to defend against, control, manipulate or eliminate the threat of a hostile opponent by physically imposing one’s will onto another. Merging sound combative principles and techniques with more realistic training, (i.e. combatives training in full gear), leads to a better chance for success in a true life situation.

The fundamentals for “the stand-up approach” are the groundwork for training. The first priority of a victorious fighter is to become proficient in the initial phase of any fight — the standing phase. More importantly, a combatives situation that goes to the ground during CQB is not one in which a Soldier must fight alone; CQB is a team sport.

When the combatives environment includes armed opposition, as in CQB, it is imperative for Soldiers to stay on their feet. Even where the threat is eliminated, there still may be a need to control a frightened hostage or resistant noncombatant. Many of the same principles from unarmed hand combat transpose into armed hand combat, i.e. the instinctive use of straight, fast and effective blows to move someone out of the path or to put him on the ground. Defensive principles change slightly according to specific tactics used and with respect to the particular armor that is worn.

The most powerful aspect of CQB is team momentum. Combatives decisions made during the forward attack toward an opponent will maintain the momentum. The dynamics of team momentum entail speed, surprise, and violence of action. If capture is the intent, a combatant must close with the victim and swarm him, using the appropriate takedown or control mechanisms.

With ever-changing and more difficult missions, Soldiers must be prepared to face new challenges. Today’s Soldier is the complete warrior, capable of highly sophisticated operations, precision shooting and relentless hand combat. While concentrating on becoming a skilled, stand-up fighter, he should always prepare for the possibility of a fight going to the ground. Keeping a strong defensive posture from a mobile offensive platform and reacting instinctively with fast and effective combinations will keep him on his feet. There is no other choice for a Soldier during CQB, and certainly no other choice when he is by himself in a personal protections situation.

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**Captain Josh Collins** has 17 years of active duty service, with the past 11 years spent in the special operations community. He was an amateur boxer for 12 years before turning professional. He currently teaches combatives to fellow infantrymen.

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**AMT/CQB-Focused Combative Program of Nonlethal Force**

(With the secondary intention of developing personal protection skills)

**Removing noncombatants from the Soldier’s path during CQB**

- Weapon-muzzle strikes/rakes
- Palm strikes
- Forearm blast/SPEAR techniques (Threat Confrontation Management Systems - TCMS by Tony Blauer)
- Kicks

**Takedown/capture or subdue**

- Teamwork
- With primary weapon (pain compliance)
- SPEAR techniques (TCMS)
- Asp (pain compliance and disablement)
- Stun and grab
- Leg kicks/sweeps
- Two-man high/low tackle

**Prisoner control/cuffing**

- Teamwork
- Head control
- PPCT (pain compliance)
- Joint manipulation
- Ground fighting/control in kit and weapons retention

**Crowd control (MOUT)**

- Maintaining reactionary gap
- Joint manipulation
- The surreptitious strike/attention getter (ball slap)
- SPEAR techniques (TCMS)
- Takedowns
- Ground fighting/control and cuffing

**Personal protection measures**

- Street-fight psychology (types of attacks/attackers)
- Confrontation management
- Situational awareness (tell-tale signs of imminent danger)
- Stand-up approach (boxing/kickboxing)
- Maintaining effective distance
- SPEAR techniques (TCMS)
- Ground-fighting
- Close-quarter tactics (biting, eye-gouging, head butts, etc)
- Knife fighting (a pocket knife can be carried most anywhere)
- Asp/stick fighting (an asp can be carried most places)

# HOW TO CHOOSE PROPER RUNNING SHOES

CHRIS KUSMIESZ

*This article first appeared in the Army Physical Fitness Research Institute's April 2007 newsletter.*

Choosing the proper running shoe can make the difference between enjoying running or hating it, running in comfort or in pain, and staying injury-free or incurring a multitude of injuries. Trying to select a single pair of running shoes from numerous brands and models can be intimidating. Ensuring that you buy the proper shoe for your foot type and running gait can be extremely confusing. The following article will help guide you in your search to find the best running shoe for you.

## Understand Pronation

Whenever you talk about running shoes, the term “pronation” is bound to come up. Pronation is the normal biomechanical process that occurs during running that allows the body to naturally absorb shock as each foot strikes the ground. A normal running gait begins with the foot contacting the ground on the back outside corner of the heel. The foot then rolls inward or “pronates” to absorb shock. The runner’s weight then transfers to the ball of the foot, the heel lifts up and finally the toes push off. Many runners pronate too much which is called “overpronation” or not enough which is called “underpronation.” Wearing the appropriate running shoes can help to improve your running gait and eliminate or at least minimize lower extremity pain and injuries.

## The Wet Foot Test

Determining your running gait is best achieved by having a qualified expert such as a sports medicine physician, physical therapist or an exercise physiologist analyze your running with a video gait analysis (VGA) program. If you don’t have access to a professional gait analysis, the “wet test” is a much simpler method that will give you a general idea of your foot shape and your degree of pronation.

### Wet Foot Test Procedures:

1. Wet the bottom of your feet and step on any surface that will leave an imprint of your feet. A brown grocery bag or colored construction paper works well for this test.
2. Compare the imprint left by your feet to the three most common foot imprints found below.
3. The imprint will let you see how high or low your arches are as well as your degree of pronation.
4. This information combined with your shoe wear pattern will allow you to better determine the best shoe for you.

**Neutral (Normal) Pronation:** A neutral running gait involves a slight amount of pronation. The foot contacts the outside of the heel, rotates inward toward the mid-foot, then your weight is transferred to the ball of the foot. The least amount of injuries are associated with this running gait. These runners usually have a medium or normal arch height.



**Overpronation:** The foot is overly flexible and rotates excessively inward toward the mid-foot. This is the most common type of running gait seen. The amount of overpronation can range from slight to severe. These runners tend to have flat or low arches.



**Underpronation:** The foot is very rigid and lacks the normal amount of pronation. The foot does not rotate inward resulting in the runner’s body weight staying toward the outside edge of the foot. Many injuries are associated with this running gait because of the poor shock-absorbing biomechanics. This running gait is much less common. These runners tend to have high arches.



## Neutral Runners

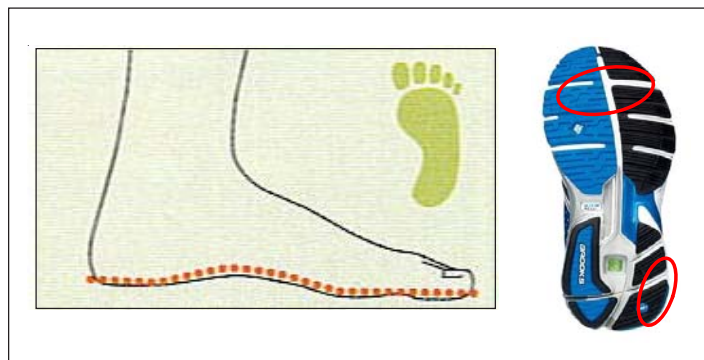
**Normal Arch Height:** A normal/medium arch is generally associated with normal pronation and a neutral running gait.

**Wear Pattern:** Wear on lateral heel and medial forefoot.

**Shoe Shape:** “Semi-curved” — The bottom of semi-curved shoes have a slight curve toward the midline. These shoes generally have a blend of flexibility, cushioning and stability.

**Best Shoes: Stability Shoes** — These shoes provide a mixture of cushioning and medial support under the arch. These shoes usually have a semi-curved shape. Runners with a normal arch height and a slight amount of overpronation wear these shoes.

Figure 1 — Normal Arch





**Overpronators**

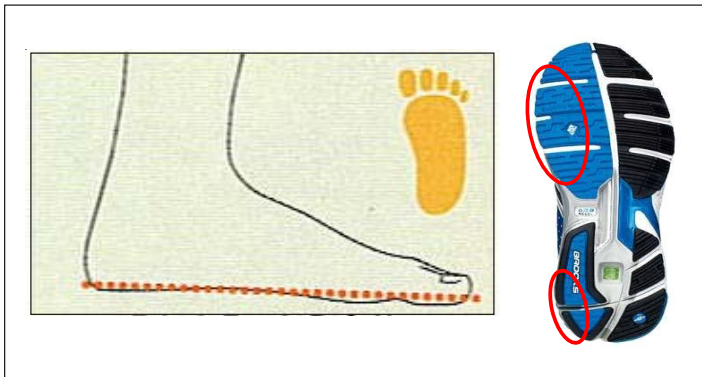
**Flat/low Arch Height:** A flat/low arch is usually associated with overpronation.

**Wear Pattern:** Medial heel and forefoot

**Shoe Shape:** “Straight” — The bottom of straight shoes have little or no curvature which helps provide maximum stability.

**Best Shoes:** Motion-Control Shoes — These shoes provide the maximum amount of stability to control excessive overpronation. These shoes usually have a straight shape. Runners who have a moderate to severe amount of overpronation wear these shoes.

Figure 2 — Low Arch



**Underpronators**

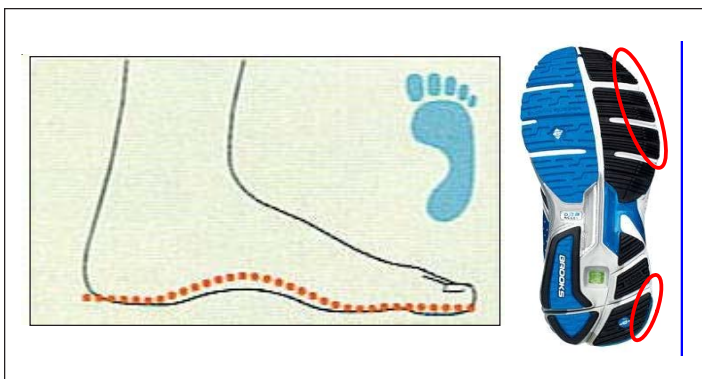
**High Arch Height:** A high arch can be associated with a neutral gait or underpronation.

**Wear pattern:** Lateral heel and forefoot

**Shoe Shape:** “Curved” — The bottom of curved shoes have a greater degree of curvature toward the midline which allows for maximum flexibility and encourages pronation.

**Best Shoes:** Cushioned Shoes — These shoes provide the least amount of stability and encourage foot motion. These shoes usually have a curved shape. Individuals who have a neutral running gait and high arches wear these shoes. The name of this shoe type should be call a “neutral” shoe since all running shoes provide cushioning.

Figure 3 — High Arch



**10 Tips for Selecting the Proper-fitting Running Shoes**

1. Get the proper shoe length: Allow for a thumb’s width (about a 1/2 inch) between your longest toe and the front of the shoe. If you have ever had black toe nails or blisters on the front of your toes, it is most likely caused by running in shoes that are not long enough for your foot.

2. Get the proper width: You should be able to easily wiggle your toes in the toe box. If your toes are cramped together or you feel the shoes rubbing on either side, then you need a wider running shoe. If the upper part of the shoe is bulging over the sides of the sole, then the shoe is too narrow.

3. Get a snug-fitting heel: The back of the shoe (the heel cup) should conform to the shape of your heel and provide a snug fit and prevent your foot from slipping.

4. Running shoes should feel comfortable immediately: Running shoes do not require a “break-in” period. The shoes should feel comfortable the first time you put them on your feet. If the shoes feel tight or stiff, then you should avoid them and try on a different pair, size, brand or model.

5. Look for flexible shoes: Running shoes should flex easily in the toe box region. If they do not flex with ease, it can add extra stress and strain to your lower extremities. To test a shoe’s flexibility place the shoe lengthwise between the palms of your hands and apply even pressure. Get a sense for how much force is needed for the shoe to bend. If it requires a great amount of force, avoid that pair of shoes.

6. Test fit arch support/orthotics: If you wear arch supports or orthotics in your running shoes, be sure to bring them along when you try on new running shoes. If the new shoes are constructed slightly different than your current pair, the arch support or orthotic may not fit correctly in the shoe. It’s best to find this out in the store as opposed to when you get the new pair of shoes home.

7. Shop for new running shoes in the late afternoon/early evening: Feet tend to swell slightly at the end of the day. A pair of running shoes will have a slightly tighter feel at night as opposed to in the morning.

8. Wear appropriate socks: Try on new shoes with the socks that you normally run in. Dress socks and nylons are much thinner than running socks and will give the shoe a different fit and feel.

9. Take a test run: It’s hard to get a true feel for running shoes without actually running in them. Most good sporting good stores and specialty running shoes shops will allow and even encourage you to take a test run before purchasing the shoes.

10. Seek further guidance: If you feel you need more help selecting an appropriate pair of running shoes, ask a qualified professional for advice. Podiatrists, sports medicine physicians, physical therapists, athletic trainers and exercise physiologists may be able to provide you information to make the shoe-buying process a little clearer. In particular, if you are an avid runner or if you are recovering from an injury, then consider consulting with APFRI regarding your shoe selection.

# Book Reviews



***The Secrets of Inchon: The Untold Story of the Most Daring Covert Mission of the Korean War.* By Commander Eugene Franklin Clark, USN. New York: Berkley, 2002, 326 pages, \$14.95. Reviewed by Colonel Mike Davino.**

Although the Korean War is often referred to as “the forgotten war,” even those readers with a casual knowledge of military history are familiar with the amphibious assault at Inchon. General of the Army Douglas MacArthur famously remarked the daring operation was “a 5,000-to-1 gamble.” To reduce those daunting odds, obtaining detailed knowledge of the enemy and terrain in the target area was essential to set the United Nations up for success. How that information was gained, and the men and women who collected it, is the subject of this book.

On the surface, then-Lieutenant Eugene Clark at 39 years old seemed to be an unlikely choice to lead a reconnaissance mission deep behind enemy lines. A yeoman who sought a commission in World War II to escape a desk job, Clark was attached to MacArthur’s Far East Command staff in Tokyo at the outbreak of the Korean War. Complicating matters, Clark was tasked to assemble his team and complete his mission less than three weeks before the September 15, 1950, invasion date. However, this exceptionally resourceful and intrepid officer had extensive experience with both combat and amphibious operations in WWII as well with covert operations in post-war China.

Transported to the objective area by a British warship and supported by a Korean Navy patrol craft, Clark’s pick-up team of Korean commandos was soon compromised. In what sometimes reads like an action novel, Clark vividly describes fighting for the information the Navy and Marines needed to accomplish their mission. Adventure follows adventure in a dramatic series of gun battles, air strikes, hand-to-hand combat, interrogations, raids, and a sea battle between junks. In spite of

the enemy opposition, Clark gathered the critical elements of information required and relayed them to headquarters in Tokyo.

Not surprisingly, Clark’s success in providing information to his superiors in Tokyo is rewarded with even more tasks. Yet Clark and his men press on, using Benzedrine to help get by on just a couple hours sleep each day. In an almost incredible finish, before they departed for home, Clark led his band of raiders on an audacious mission to turn on the light in the Wolmi-do lighthouse to guide the invasion fleet on its approach to the Inchon channel.

The book is not without its flaws — the main one being the lack of maps. Only two are included and unlike the incredibly comprehensive text, neither map has any useful details to help the reader understand the distances and locations that make Clark’s mission even more difficult. Also, an index would have been handy to help readers keep track of the numerous people and places Clark depicts.

Despite these problems, *The Secrets of Inchon* merits reading. It provides great insight into the challenges of operating with indigenous forces. More significantly, it is a classic firsthand account of how an ingenious and persistent leader can accomplish his mission even when faced with almost inconceivable impediments.

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***Contract Warriors, How Mercenaries Changed History and the War on Terrorism.* By Fred Rosen. New York: Alpha Books, 256 pages, \$16.95. Reviewed by Major Keith Everett.**

The first three chapters make a promising start in introducing the reader to the world of private military companies, with exciting accounts of successes and failures of modern day mercenaries in various parts of the world. Then the author makes a perplexing leap into a patchwork collection of historical anecdotes of mercenaries through the ages. Although

interesting, the collection of mercenary stories in the middle three chapters leaves a doubt as to the author’s purpose alluded to in the title. We come back to the modern world quite suddenly in chapter seven and are seemingly back on track; then the author attempts to forge a hodgepodge collection of information from the internet into the end of his book.

Rosen explains how organizations like Executive Outcome changed the mercenary business. Executive Outcome received mineral rights and a percentage of the oil and diamond trade of Angola and Sierra Leone. The author zeros in on the exploits of retired British Colonel Tim Spicer in Papua New Guinea. Spicer developed a new concept of a private military company by calling his outfit a military contracting company. Although Spicer’s efforts in Sierra Leone and Papua New Guinea were notable fixtures, his efforts were reborn in Iraq. Rosen quotes figures on the amount of money spent by the Bush administration on government contractors without a single note on where these figures came from. “It is estimated...” does not cut it. The lack of credible sources is a shame, as the military contracting method of getting various dirty jobs done in a combat zone is here to stay. Primary sources appear to be self-serving Web sites of the private military companies.

The jumping around from modern to ancient back to modern anecdotes makes for a lot of head scratching trying to relate it to how mercenaries changed the world. The ancient history as used, is more of a distraction than supporting Rosen’s thesis of mercenaries changing the world. For example, Hannibal, Spartacus and El Cid are explored, but the way they changed history is only suggested. The ancient history seems to be added as filler and recent anecdotes would have been more effective within the parameters of modern mercenaries affecting the world. The author at times jumps from Italy to India, then Japan outlining mercenary activity around the globe. Some stories did not need



to be told at all, such as that of Dutch mercenary William Hessing or the Ronins. The stories are interesting, but the transition along the way makes you blink at the confusing chain of thought.

Chapter six was a somewhat rambling chapter with anecdotes of mercenaries serving in the Spanish-American War, Egypt fighting Ethiopia, the Irish Battalion fighting in the Mexican War, and mercenaries fighting for Britain at Gallipoli during WWI. A quick gloss over of the modern age turned into a chapter that is not effective at all in explaining the use of mercenaries today. The work could have used an editor cutting out chapters four, five, and six to bring the work more in line with the author's thesis.

The strength of the book rests with the description of the activities, problems, accomplishments, and failures of Blackwater, Control Risks Group, and other private military contractors mentioned. The thesis' focus of how the use of mercenaries changed history is not clear. Adding Richard Marcinko's advertisement for mercenary training Marcinko-style and calling it an afterword appeared as an attempt to gain credibility. W. Thomas Smith's portion of the afterword was tacked on in apparently the same lively spirit. You need to look elsewhere for either a history of mercenaries or an account of how mercenaries changed history.

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***Commanding the Army of the Potomac.* By Stephen R. Taaffe. University Press of Kansas, 2006. 284 Pages, \$34.95.** Reviewed by Command Sergeant Major (Retired) James Clifford.

Continuing the "Modern War Studies" series by the University Press of Kansas, *Commanding the Army of the Potomac* by Stephen R. Taaffe offers a better understanding of one of America's least successful but best known armies. As states seceded after the election of Abraham Lincoln, the United States Army consisted of just 16,000 men stationed in far flung constabularies on our frontiers. Of the small professional officer corps, only two leaders had any experience leading large formations in combat. One of those would surrender his forces in Texas and throw in

with the Confederacy. The other was a sedentary bureaucrat whose old age and infirmities prevented active leadership on the field of battle. About one half of the rest would resign to join the rebellion leaving just a few loyal stalwarts to lead a rapidly expanding army.

The premise of this book is that the successes and failures of the Army of the Potomac rested heavily on the skills of the 36 officers who served as either permanent or long-term temporary corps commanders during the life of this organization. This is a survey of those officers. Taaffe places each in one of four overlapping categories: McClellanites, Lincolnites, opportunists, and a small but important cadre of those that merited promotion. Each of these categories is fully explored to determine their effect on the Army of the Potomac.

The author tells the story in a generally chronological pattern, presenting each category within chapters on four Army commanders: McClellan, Burnside, Hooker, and Meade. The final and longest chapter covers the period in which Ulysses S. Grant served as general-in-chief of all the Union armies but was most influential in the daily operations of the Army of the Potomac. As such the reader learns as much about the Army commanders as about the corps commanders serving under them. This is a fine comprehensive story of the Army of the Potomac, especially for those not so well-read on the topic.

Knowledgeable students of the eastern theater may find this book to be too general for their purposes. The drawbacks include the superficial analysis of each corps commander; too much emphasis on the army commanders, President Lincoln and politicians; and a distracting discussion of the Army of the James and its commander, Benjamin Butler, that covers nearly one quarter of the book. Additionally, the lack of any recognition that these corps commanders were either civilians or low-ranking officers at the outset of the Civil War leaves a gap in the understanding of the leadership challenges inherent in a rapidly expanding army at war.

Also missing was any context between the 36 officers who served as corps commanders. The author's point is that

most of these men ultimately failed in many respects while in command. A chart would have enabled the reader to better evaluate these conclusions. Considering that each commander left his position for different reasons — some positive, some negative — a chart would have enhanced the reader's understanding. This visual device comparing these men would have been useful in understanding and evaluating the premise of the book.

Despite these observations this is a very good book for the casual Civil War student. It brings forth topics worthy of consideration and presents them in a highly readable format that will enhance the reader's understanding of the Army of the Potomac and whets one's thirst for further, more in-depth study.

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***Norway 1940: The Forgotten Fiasco - A Firsthand Account of the Disastrous British Attempt to Block the German Invasion of Norway in April 1940.* By Joseph Kynoch. Shrewsbury, England: Airlife Publishing, 2002, 174 pages, \$26.95.** Reviewed by Brigadier General (Retired) Curtis Hooper O'Sullivan.

To those who followed the news in 1940, Norway is hardly forgotten. It was the only show on the road at the time and was a first in many respects, though World War II had been going on since the incident at the Marco Polo Bridge on July 7, 1937. It had come closer to home to Europeans with the invasion of Albania by Mussolini on April 7, 1939, and there was no doubt after Hitler attacked Poland September 1 of that year. That blitz was followed by what was called the "phony" war on the western front. During that time, Der Fuehrer became alarmed at the non-neutral acts of the British in Norwegian waters and were concerned it might be the prelude to their occupation of that nation. As early as February 1940, Hitler decided on a preemptive invasion of Norway, which was launched April 9, 1940 — precipitating a quick counterinvasion by the Allies.

The Germans made the first airborne operation in history and the first amphibious landing since Gallipoli, which succeeded despite the alleged superiority of the Royal Navy. The latter did a poor job of

improvising their own landings, with consequent problems for the troops ashore. The author was among these. He was a private in a territorial battalion who had been called up only seven months before. The book is largely his personal odyssey that is intermingled with accounts by comrades and such. He attempts to give enough background to show how his experiences fit into a slightly larger picture. This is his story and is not intended to be a history of the campaign. The maps and sketches are useful for his purpose. The pictures are a cut above most in such works in giving a graphic portrayal of conditions.

The verdict is still out whether this was truly a “fiasco.” That’s defined as “a ludicrous or humiliating failure or breakdown.” There’s no question that the operation was a failure or that there was confusion in its conduct, but it was waged gallantly. On the bright side, the Nazis didn’t achieve all they’d hoped. They had hoped for a major contribution to their economic new order. That didn’t materialize, and Norway actually became a liability. Considerable forces were tied down there. They may have been aware that Churchill seriously advocated a return appearance and obviously were aware of the deception threats there before Operation Overlord (along with Pas de Calais). Overall, it is a good choice for anyone who wants a boots-on-the-ground look at Norway in 1940.

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*A Soldier leads his squad during a cordon and search operation in Iraq April 2. The Soldiers were with the 5th Battalion, 20th Infantry Regiment, 3rd Stryker Brigade Combat Team, 2nd Infantry Division.*

### CORRECTION

In the January-February 2007 issue of *INFANTRY*, we failed to identify that the article “Dealing with the Iraqi Populace: An Arab-American Soldier’s Perspective” written by Sergeant Mounir Elkhamri had previously run in *Military Review’s* January-February 2007 issue. We apologize for any inconvenience.

Staff Sergeant Stacy L. Pearsall, USAF